Yeneu

PROJECT FOR PERFORMANCE OF REMEDIAL RESPONSE ACTIVITIES AT UNCONTROLLED HAZARDOUS SUBSTANCE FACILITIES—ZONE 1

[redacted]

R-585-10-3-2

A SITE INSPECTION FOR THE HEIZER CREEK PREPARED UNDER

TDD NO. F3-8308-29
EPA NO. WV-158
CONTRACT NO. 68-01-6699

FOR THE

HAZARDOUS SITE CONTROL DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

JUNE 28, 1985

NUS CORPORATION
SUPERFUND DIVISION

SUBMITTED BY	REVIEWED BY	APPROVED BY
Michael Cramer	William Wentworth	
MICHAEL CRAMER	WILLIAM WENTWORTH	GARTH GLENN
GEOLOGIST	ASSISTANT MANAGER	MANAGER, FIT III

Site Name: Helzer Creek
TDD No.: F3-8308-29

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APPENDICES

SECTION I

1.0 INTRODUCTION

1.1 Authorization

NUS Corporation performed this work under Environmental Protection Agency Contract No. 68-01-6699. This specific report was prepared in accordance with Technical Directive Document No. F3-8308-29 for the Heizer Creek site located in Poca, West Virginia.

1.2 Scope Of Work

NUS Corporation was tasked to perform a site inspection/sampling of Heizer Creek. The site inspection was conducted on September 15, 1983.

1.3 Summary

Heizer Creek is a landfill of approximately 1 acre in size. This landfill was operated by the city of Nitro from the late 1950s until the early 1960s. The Monsanto Company's Nitro Plant used the landfill in 1958 and 1959 for the disposal of an estimated 170,000 cubic feet of unknown plant trash and wastes. State officials believe that wastes present at the site may include 2,4,5-T manufacturing wastes and floor sweepings, in addition to municipal wastes.

Recent samples obtained by FIT III indicate the presence of methylene chloride in an on-site spring and off-site wells, all of which are used as potable supplies. A Quality Assurance Review and a Toxicological Evaluation of this data are included in sections 6.0 and 7.0 of this report, respectively.

SECTION 2

2.0 THE SITE

2.1 Location

The Heizer Creek landfill is located in east central Putnam County, West Virginia, approximately 1/2 mile northeast of Poca. The site is accessible from Heizer Creek Road.

2.2 Site Layout

The Heizer Creek landfill is located on the eastern face of a small hollow overlooking the Pocatalico River. The site is about 1 acre in size and was operated using open dumping and burning disposal methods.

During the site reconnaissance, FIT III members observed 8 drums in varying degrees of decay. A black, tar-like substance was also observed at the site. The site was overgrown with vines, tall grasses, and trees.

2.3 Ownership History

The site is currently owned by the city of Nitro and was operated by the city from the late 1950s until the early 1960s.

2.4 Site Use History

The site was used for the dumping of municipal wastes and plant wastes from Monsanto's Nitro Plant. EPA Form 8900-01, filed by the Monsanto Company, indicates an estimated 170,000 cubic feet of waste were disposed of at Heizer Creek.

2.5 Permit and Regulatory Action History

No known permits were held for the Heizer Creek site. No known regulatory action has occurred to date.

2.6 Remedial Action To Date

To date, no remedial action has been taken at the Heizer Creek site.

SECTION 3

3.0 ENVIRONMENTAL SETTING

3.1 Water Supply

The population in the immediate site area is dependent upon private domestic wells for their drinking water supplies. The town of Poca is supplied by the West Virginia Water Company, which draws its water from the Elk River. This intake is more than 3 miles from site in Charleston.

3.2 Surface Waters

An unnamed tributary to the Pocatalico River is an ephemeral stream through the site. The stream flows from north to south through the site and beneath Heizer Creek Road to a nearby resident's backyard. This stream was dry on the day of the site visit. A spring is located at the entrance to the site access road. This on-site spring, with a depth of 3.5 feet and a width of 6 feet, was sampled. This spring, according to a local resident, will be used as drinking water when a resident puts his trailer on land adjacent to the disposal area.

3.3 Geology and Soils

The site lies in the central Allegheny Plateau physiographic province. Soils of the area are of the Gilpin-Upshur-Vandalia Association, which is characterized by silt loams with moderately slow to moderate permeability. No boring logs or site-specific subsurface information are available. This area has been extensively deep and strip mined for the Pittsburgh coal seam. Mining activities have either covered, disturbed, or removed much of the native soil in the vicinity of the site. The site lies at or just below 2 deep mine openings and, therefore, may have a considerable depth of mine wastes disposed on native soils. As a result, depth to bedrock cannot be determined accurately.

Rocks in the area are of the Pennsylvania-aged Upper Conemaugh Group and lower Monongahela Group. (The Pittsburgh coal seam is located at the top of the Conemaugh Group.) Both groups consist of cyclic sequences of red and gray shale, siltstone, and sandstone with limestones and coal beds. In Putnam County, the Conemaugh Group ranges in thickness from 480 to 650 feet, and the Monongahela Group ranges in thickness from 230 to 320 feet.

3.4 Groundwaters

As noted in section 3.3, there are no on-site monitoring wells or boring logs; therefore, no site-specific groundwater information is available.

Available data on a well located approximately 1,800 feet west of, and at about the same elevation of, the site indicate that the 127-foot deep well produces from rocks of the Conemaugh Group. A 60-foot water level was reported in the well. Assuming that the 25-foot casing depth is a mean indicator of bedrock depth, the water level is below the top of bedrock and therefore under confined conditions. The Conemaugh Group is the principal aquifer in the Kanawha River Valley in Putnam County, probably due to its high percentage of sandstone units.

Two home wells, located 1/4 mile southwest and downslope of the site, were sampled by FIT III. The 2 wells lie within the designated 100-year flood prone area of the Pocatalico River. The Jaspear well is a hand dug, 42-foot well with a water level of about 25 feet below grade. The location of the well in the flood prone area, along with its depth, the fact that it is hand dug, and the water depth in relation to the river, suggest that the well produces from alluvial materials under water table conditions. Depth to bedrock in this area is unknown. Flow direction in alluvial based groundwater systems is typically toward the river. The Ingraham well, located less than 200 feet to the west of the Jaspear home is reportedly 90 feet deep.

Hydrologic interconnection between the confined bedrock flow system and the flow system contained within the alluvial sediments of the Pocatalico River cannot be determined with available information.

3.5 Climate and Meteorology

The average annual temperature of the Poca, West Virginia area is 54°F. Average annual precipitation is about 44 inches. The prevailing winds are generally from the southwest with average wind speed at 9 miles per hour in March.

3.6 Land Use

The site is currently inactive and partially wooded. A cemetery is adjacent to the eastern border of the site. Immediately west of the site is a mobile home site which, according to a neighbor, was intended for use as of September 16, 1983. North of the site is a wooded area, and south of the site is residential.

3.7 Population Distribution

The population residing within a 1-, 2-, and 3-mile radius of the site is as follows:

1-mile radius	779 persons
2-mile radius	1,345 persons
3-mile radius	4,590 persons

3.8 Critical Environments

There are no known critical habitats of endangered species, as defined by the HRS Users Manual, in the vicinity of the site.

SECTION 4

4.0 WASTE TYPES AND QUANTITIES

The Monsanto Company's Nitro Plant reportedly disposed of an estimated 170,000 cubic feet of plant trash and wastes at the Heizer Creek site. Reportedly, waste which was known to be toxic at the time of dumping (1958 to 1959) was not taken to this site for disposal. Methods of disposal are reported to have been burning, drum burial, and landfilling.

Mr. Robert Sherman of Raymond City, near Poca, stated that he hauled approximately 8 to 10 truck loads of waste from the Monsanto, Nitro Plant; his truck bed was 8 by 12 feet. State representative Pam Hayes, West Virginia Department of Natural Resources (WV DNR), indicated that these wastes may have included floor sweepings from an area of the plant which may have been contaminated by 2,4,5-T manufacturing wastes.

SECTION 5

5.0 FIELD TRIP REPORT

5.1 Summary

On Thursday, September 15, 1983, FIT III personnel Michael Cramer, David Walker, Garth Glenn, and Michael Nalipinski visited the Heizer Creek site in Poca, West Virginia. The weather at the time of the inspection was fair and warm. There were 6 aqueous and 9 solid samples collected during the site inspection.

5.2 Persons Contacted

5.2.1 Prior to Field Trip

Pam Hayes
WV DNR
Water Resources Division
1260 Green Briar Street
Charleston, WV 25311
(304) 348-5935

Art Ashley
Mayor, City of Nitro
(304) 755-0701

5.2.2 At The Site

Robert Ingraham, Local Resident
P.O. Box 269
Poca, WV

5.2.3 After the Field Trip

Robert Sherman, Waste Hauler
Raymond City, WV
(304) 755-0571

TDD Number F3-8308-29
EPA Number WV-158

5.3 SAMPLE LOG

Site Name HEIZER CREEK

TRAFFIC REPORTS Organic	Inorganic	High Hazard	SAMPLING LOCATION	PHASE	SAMPLE DESCRIPTION	DATE	TIME	pH	COMMENTS/OBSERVATIONS
C-3336	MC-1390		JASPER'S HOMEWELL	AQ	47' DEEP 15' TO WATER 60 YEARS OLD HOMEWELL IRON TASTE	9-15-83	0940		LOW CONCENTRATION
C-3341	MC-1395		INGRAHAM HOME WELL	AQ	15 YEARS OLD 90' DEEP HOMEWELL IRON TASTE		1230		LOW CONCENTRATION
C-3335	MC-1389		SPRWG ONSITE	AQ	NEAR ACCESS ROAD		1155		LOW CONCENTRATION
C-3339	MC-1393		TRIB TO POND	AQ			1145		LOW CONCENTRATION
C-3340	MC-1394		TRIB TO POND	Sed			1145		LOW CONCENTRATION
C-3338	MC-1392		POND SED	Sed			1155		LOW CONCENTRATION
C-3337	MC-1391		POND AQ	AQ			1030		LOW CONCENTRATION

6000 #

TDD Number F3-8308-29
EPA Number WV458

5.3 SAMPLE LOG

Site Name Heizer Creek

TRAFFIC REPORTS Organic	Inorganic	High Hazard	SAMPLING LOCATION	PHASE	SAMPLE DESCRIPTION	DATE	TIME	pH	COMMENTS/OBSERVATIONS
C-3350	MC-1414		BLANK	AQ	BLANK	9-15-83	1000		
C-3351	MC-1408		BLANK	SOLID	BLANK				LOW CONCENTRA
C-3352	MC 1409		S-1 NEAR TOP OF HILL MATERIAL DARK, BLACK AND CRUNCHY	SOLID	TOP OF DRUM AREA		0930		LOW CONCENTRATIC
C-3353	MC 1410		S-2 SAMPLE TAKEN 3FT BELOW S-1. WHITE POWDERY, CRYSTALLINE INSIDE, LATEX-LIKE TEXTURE OUTSIDE. CLOTH MIXED WITH MAT'L. SAMPLE TAKEN FROM FIBER PAK.	SOLID	WHITE CRYSTAL Powder		0935		MEDIUM CONCENTRA
C-3354	MC-1411		S-3 WHITE, Powdery. 10 FEET below S-2	SOLID	Rusted drum Powder		0945		MEDIUM CONCENTRA
C-3355	MC-1412		S-4 white, powdery, gray MATERIAL NEAR TOP OF SOUTH edge of Pile	SOLID	South edge Soil		0955		Low CONCENTRATION
C-3356	MC-1413		S-5 20 FEET below S-2 IN A CRUSHED Fiber PAK	SOLID	EXTREMELY HARD BROWN RESIN		1000		LOW CONCENTRATIC
C-3357	MC-1415		S-6 20 FEET below S-2 ADJACENT TO S-5	SOLID	SOFT BROWN OILY MATERIAL		1005		MEDIUM CONCENTRATIO
C-3358	MC-1416		S-7 SAMPLED From WASTE AREA 2 FEET SQUARE CLAYEY MATERIAL	SOLID	LIGHT Yellow MATERIAL		1010		MEDIUM CONCENTRATIO
C-3977	MC-1418		LEACHATE SOIL	SOLID			1105		LOW CONCENTRATION
C-3953	MC 1417		LEACHATE AQ	AQ			1100		LOW CONCENTRATION
C-3978	MC 1419		S-8 ON STEEP BANK ABOVE CREEK	Solid	DRUM LIGHT Brown		1120		Medium CONCENTRA

AR100080

5.4 Site Observations

- The site itself is a steep banked hollow. The waste appears to have been dumped from the top of the hillside.
- No HNU readings above background were recorded.
- A black, powdery, coal-like material was observed in the northern portion of the site.
- The hilltop dump area was covered by an asphalt-like material.
- The site was overgrown with heavy vegetation.
- Household trash was noted throughout the hollow.
- Eight drums were observed on site.
- Various animals were observed on site.
- The remains of an access road are visible at the site.
- There is no security fence to prevent unauthorized dumping; however, the site is no longer accessible to vehicles due to vegetative growth and poor condition of the access roads.
- An unnamed tributary to Pocatalico River was dry during the site visit. Only small pools of water were seen on the streambed.
- A minor leachate area at the top of the hollow was noted and sampled. This area was surrounded by household trash.
- An intermittent streambed ran approximately 200 yards from the road to a man-made lake. This man-made lake is behind the Jaspears home and a section of the Pocatalico River, which local residents have dammed for recreational use.

- The man-made lake was very shallow for at least 15 feet offshore, with a large amount of organic debris.

- The Ingraham well is located approximately 75 feet to the northwest of the Jaspears well.

- The top of the Ingraham well is on a hillside, approximately 40 feet higher than Jaspears well.

- An on-site spring was sampled. FIT III was informed that the future inhabitants of a house trailer to be located on the site planned to use this spring as a potable water supply. According to a local resident, the trailer was to placed on the site, and inhabited on the day after the FIT III visit.

5.5 PHOTOGRAPH LOG

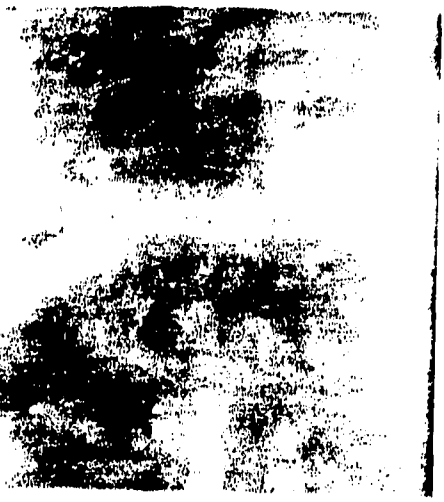

Photo 1 - S-1 waste sample near top of hill. Material was dark, blac and crunchy.

Photo 2 - S-2 3 feet below S-1, white powdery, crystalline mater

Photo 3 - S-2 location photo.

Photo 4 - S-3 drum sample 10 feet below S-2.

Photo 5 - S-5 brown resin material 20 feet below S-2.

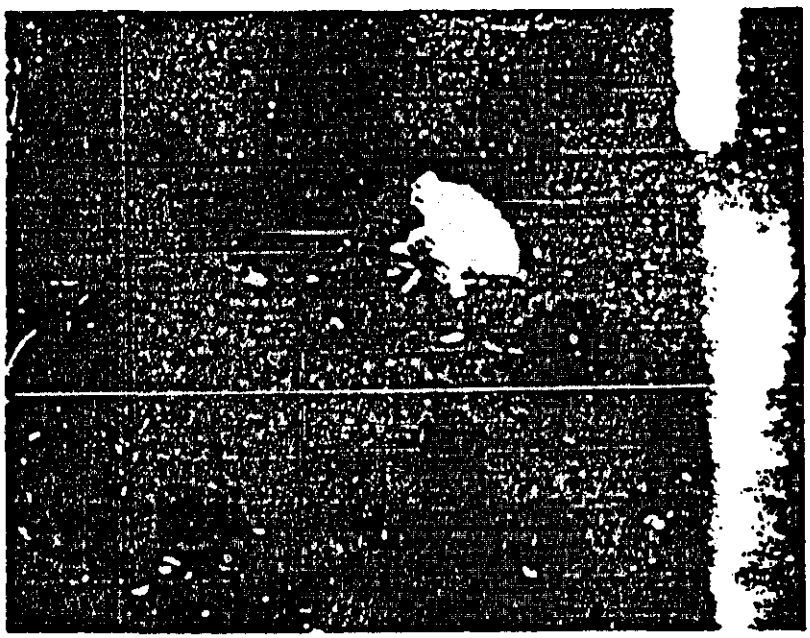

Photo 6 - S-4 white powder, grey material.

Photo 7 - S-6 brown soft, oily material 20 feet below S-2.

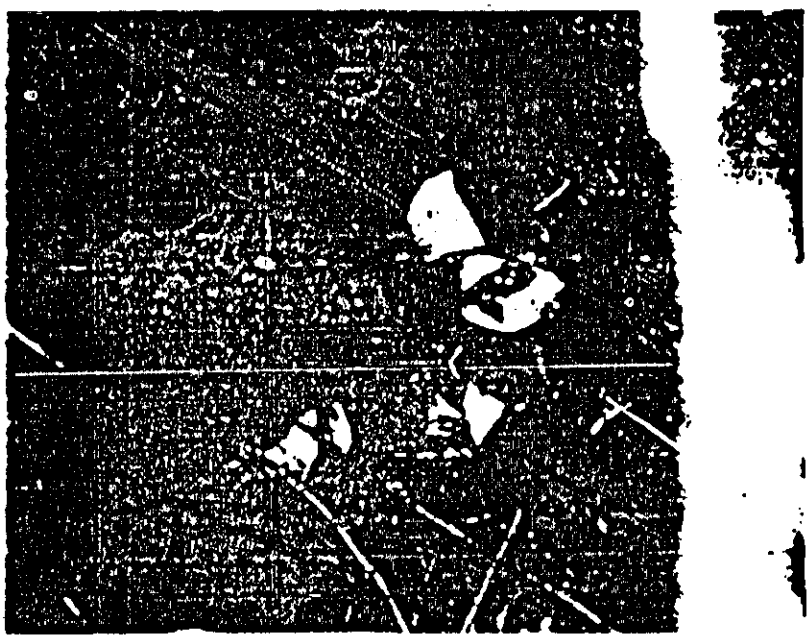

Photo 8 - S-7 light yellow, clay material.

Photo 9 - leachate aqueous sample.

Photo 10 - leachate sediment sample.

Photo 11 - Dammed river water behind Jaspears' house.

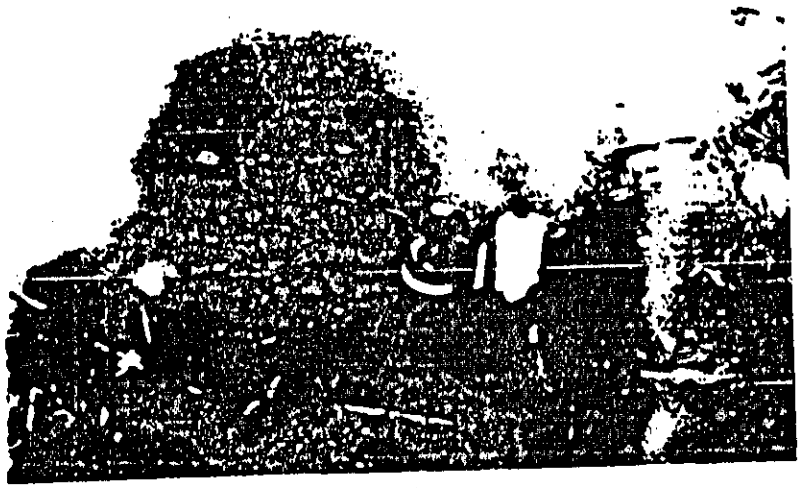

Photo 12 - View showing sample taken at dammed river - Polatalico River.

Photo 11 - Dammed river water behind Jaspears' house.

Photo 12 - View showing sample taken at dammed river - Polatalico River.

F3-8308-29

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

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
WV	158

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Heizer Creek	Heizer Creek Road (County Route 27)

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG. DIST.
Poca	WV	25159	Putnam	079	WV03

09 COORDINATES	10 TYPE OF OWNERSHIP (Check one)
LATITUDE 38° 29' 00" / LONGITUDE 81° 48' 30"	☐ 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
MONTH DAY YEAR	☐ ACTIVE ☒ INACTIVE	BEGINNING YEAR ENDING YEAR ☒ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)

☐ A. EPA ☒ B. EPA CONTRACTOR (Name of firm) NUS Corporation ☐ 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
Michael Cramer	Geologist	NUS Corp.	(215) 687-9510
09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO
Garth Glenn	Biologist	NUS Corp.	(215) 687-9510
Michael Nalipinski	Engineer	NUS Corp.	(215) 687-9510
David Walker	Geologist	NUS Corp.	(215) 687-9510
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Pam Hayes	Landfill Coordinator	WV DNR	(304) 348-5935
Art Ashley	Mayor Nitro, WV	Nitro, WV	(304) 755-0701
Bob Ingraham	Resident	Box 269, Poca, WV 25159	( )
Robert Sherman	Citizen	Raymond City, WV	(304) 755-0571
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	8:30 AM - 2:30 PM	Cool, fair

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO
Yener Soylemez	EPA	215 597-0804

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Michael Cramer	FIT III	NUS Corp.	(215) 687-9510	10 / 07 / 83 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
WV	158

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

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

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

TONS: ____
CUBIC YARDS: 170,000 feet
NO OF DRUMS: ____

03 WASTE CHARACTERISTICS (Check all that apply)

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

From Form 8900-01

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			The Monsanto Company, Nitro Plant, reportedly disposed of an estimated 170,000 cubic feet of plant trash and waste at the Heizer Creek site. Methods of disposal are reported to have been burning, drum burial and landfilling.
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
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
	methylene chloride		These substances	4,570	ppb
	substituted phenols		occurred in samples		
	phenols		obtained during site	226,000	ppb
	chlorinated benzenes		inspection by FIT III.	83	ppb
	N-nitrosodi Phenylamine			1,470,000	ppb
	cyanide			2,800	ppm
	lead			96	ppm
	cadmium			20	ppb
	arsenic			26	ppm

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 III Report F3-8308-29
State File WV-158

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE: WV	02 SITE NUMBER: 15R

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 35
02 [X] OBSERVED (DATE: 09-15-83) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Groundwater in home wells sampled during the FIT III site inspection showed contamination by methylene chloride.

01 [X] B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: unknown
02 [X] OBSERVED (DATE: 09-15-83) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Methylene chloride was identified in a spring sample collected by FIT III during the siteinspection/

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

None observed or reported

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

None observed or reported

01 [X] E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: _____
02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [X] ALLEGED
04 NARRATIVE DESCRIPTION

Alleged incident was reported to FIT by local residents, concerning skin irritation of a resident who came in contact with wastes.

01 [X] F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: 1 acre (Acres)
02 [X] OBSERVED (DATE: 09-15-85) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Drums and fiber packs were observed opened and siplled onto the ground.

01 [X] G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 35
02 [X] OBSERVED (DATE: 09-15-85) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

2 home wells and 1 spring used for drinking source have shown contamination.

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

Not observed or reported.

01 [X] I. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: unknown
02 [ ] OBSERVED (DATE: _____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Potential for injury by direct contact exists.

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION
01 STATE: WV | 02 SITE NUMBER: 158

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☒ J. DAMAGE TO FLORA — 02 ☒ OBSERVED (DATE 09-15-83) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
On-site vegetation was stress in area of dumping, where sampling was conducted.

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)
Not observed

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Not known or expected.

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES (Spills, Runoff, Standing liquids, Leaking drums) — 02 ☒ OBSERVED (DATE 09-15-83) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION
Waste is dumped into a ravine and not covered. Fiber packs are broken and drums are rusted and broken.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Not observed

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Not observed or expected

01 ☒ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
No permits issued at time of dumping

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
None

III. TOTAL POPULATION POTENTIALLY AFFECTED: 10

IV. COMMENTS
FIT III Site Inspection 9/15/83

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

EPA FORM 2070-13 (7-81)

AR100098

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
WV	158

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				
☐ 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		
☐ B. PILES		
☒ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☒ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)

- ☐ A. INCINERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify)

05 OTHER

☒ A. BUILDINGS ON SITE

Residential trailer on site

06 AREA OF SITE

1 (Acres)

07 COMMENTS

A residential trailer is parked at the access road to the site.

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.

Waste dumped into ravine, fiber paks and drums broken or rusted.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☒ YES ☐ NO

02 COMMENTS

No cover, no access restriction

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

FIT III Site Inspection, 9/15/83

EPA FORM 2070-13 (7-81)

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

EPA

I. IDENTIFICATION
01 STATE: WV | 02 SITE NUMBER: 158

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)	SURFACE	WELL	02 STATUS ENDANGERED	AFFECTED	MONITORED	03 DISTANCE TO SITE
COMMUNITY	A. ☐	B. ☐	A. ☐	B. ☐	C. ☐	A. _____ (mi)
NON-COMMUNITY	C. ☐	D. ☒	D. ☐	E. ☒	F. ☐	B. .17 (mi)

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: 25

03 DISTANCE TO NEAREST DRINKING WATER WELL: .17 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
3.5 (ft)	south	_____ (ft)	144 (gpd)	☒ YES ☐ NO

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

Jaspears well 42 feet deep, 17 feet standing water in well, domestic, potable, .17 mile to site. Ingraham well 90 feet deep, domestic, potable, .17 mile to site. The wells in the area of the site are reported to yield. 2 gpm.

10 RECHARGE AREA	COMMENTS	11 DISCHARGE AREA	COMMENTS
☒ YES ☐ NO	VIA precipitation	☒ YES ☐ NO	Springs in area

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
Intermittent stream on site	☐	0 (mi)
Pocatalico River	☐	.6 (mi)
	☐	_____ (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. 779 NO. OF PERSONS	B. 1,345 NO. OF PERSONS	C. 4,590 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION: .17 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE	04 DISTANCE TO NEAREST OFF-SITE BUILDING
373	.17 (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)

1 mile radius = 205 residences x 3.8 persons/res. = 779 persons/1 mr
2 mile radius = 205 residences + 149 res. = 354 res./res. = 1,345 persons/2 mr
3 mile radius = 854 + 205 + 149 = 1,208 res. x 3.8 persons/res. = 4,590 persons/3 mr

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION
01 STATE: WV | 02 SITE NUMBER: 168

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	
3 (ft)	unknown (ft)	unknown	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
12 (in)	2.5 (in)	45 %	SE-SW	45 %

09 FLOOD POTENTIAL: SITE IS IN no YEAR FLOODPLAIN

10 ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum): ESTUARINE — A. _____ (mi); OTHER — B. 1.75 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species): no (mi); ENDANGERED SPECIES: _____

13 LAND USE IN VICINITY

DISTANCE TO: COMMERCIAL/INDUSTRIAL — A. 0 (mi); RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES — B. 0.17 (mi); AGRICULTURAL LANDS: PRIME AG LAND — C. _____ (mi); AG LAND — D. >1 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

Site is in a natural hollow with mining (abandoned at present) operations on the sides of the hollow.

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

Flood prone quad sheet - Saint Albans WV. 1973.
Flood prone quad sheet - Bancroft, WV. 1973.
Hydrology of area, Eastern Coal Province, WV, U.S.D.I.G.S. WRI Open File Report 81-803

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
WV	158

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	2	Inorganic aqueous to JTC	
SURFACE WATER	4	Inorganic solid to U.S. Testing	
WASTE	8		
AIR		Organic aqueous to Envirodyne	
RUNOFF		Inorganic solid to Envirodyne	
SPILL			
SOIL	3		
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
HNU	None above background 0.2 ppm

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☐ AERIAL

02 IN CUSTODY OF NUS FIT III (Name of organization or individual)

03 MAPS ☒ YES ☐ NO

04 LOCATION OF MAPS NUS FIT III Site Inspection report, F3-8308-29

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

None

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

FIT III Site Inspection report, F3-8308-29

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
WV	158

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
City of Nitro				Nitro	WV	
N/A						
N/A						
N/A						

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE	12 CITY	13 STATE	14 ZIP CODE
N/A						
N/A						
N/A						
N/A						

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
N/A						
N/A						
N/A						

IV. REALTY OWNER(S) (If applicable; list most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
N/A						
N/A						
N/A						

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

NUS FIT III Site Inspection 9/15/83

EPA FORM 2070-13 (7-81)

AR100103

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
WV	158

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME N/A		02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE
05 CITY	06 STATE	07 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER	

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME N/A		11 D+B NUMBER
12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE
14 CITY	15 STATE	16 ZIP CODE

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME N/A		02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE
05 CITY	06 STATE	07 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD	
01 NAME N/A		02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE
05 CITY	06 STATE	07 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD	
01 NAME N/A		02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE
05 CITY	06 STATE	07 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD	

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME N/A		11 D+B NUMBER
12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE
14 CITY	15 STATE	16 ZIP CODE
10 NAME N/A		11 D+B NUMBER
12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE
14 CITY	15 STATE	16 ZIP CODE
10 NAME N/A		11 D+B NUMBER
12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE
14 CITY	15 STATE	16 ZIP CODE

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

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
WV	158

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
N/A	

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

05 CITY	06 STATE	07 ZIP CODE

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
Monsanto Co.		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
Nitro	WV				

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

IV. TRANSPORTER(S)

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

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
Phone No.-(304) 755-0571			

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
Raymond City	WV				

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)

NUS FIT III Site Inspection F3-8308-29.

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
WV	158

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
N/A

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
N/A

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
N/A

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
No, waste is still on site in drums

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
N/A

01 ☐ F. WASTE REPACKAGED — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
N/A

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
N/A

01 ☐ H. ON SITE BURIAL — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
N/A

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
N/A

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
N/A

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
N/A

01 ☐ L. ENCAPSULATION — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
N/A

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
N/A

01 ☐ N. CUTOFF WALLS — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
N/A

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
N/A

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
N/A

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
N/A

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
WV	158

II PAST RESPONSE ACTIVITIES (Continued)

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

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

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

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

01 ☐ V. BOTTOM SEALED — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
N/A

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

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

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

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

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
N/A

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

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
N/A

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

NUS FIT III SIte Inspection, 9/15/83

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
WV	158

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☐ NO

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

None

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

NUS FIT III Site Inspection, 9/15/83.

EPA FORM 2070-13 (7-81)

SECTION 6

6.0 LABORATORY DATA

6.1 Sample Data Summary

TDD Number E3-9308-29
EPA Number WV-34

SAMPLE LOCATION SUMMARY
TARGET COMPOUNDS

■ Organic ☐ Inorganic

Site Name MILLER CREEK
Date of Sample 15 SEP 93

Sample Number	Sample Description and Location	Phase	Units	Benzene	Methylene Chloride	1,1,1-Trichloroethane	Trichloroethene	Phenol	di-n-butyl phthalate	diethyl phthalate	bis(2-ethylhexyl)phthalate	Fluorene	4-BHC	B-BHC	Remarks
				Compounds Detected											
C-3350	BLANK	AQ	UG/L	<1				19.2	2K	<1		0.002			
C-3353	LEACHATE	AQ	UG/L		4520				3K◇	<1◇					
C-3341	[illegible]	AQ	UG/L		3430				10◇	2K◇					
C-3339	TRIBTO A-1	AQ	UG/L			7◇	<1◇		3K◇	1K◇	133	0.001◇			
C-3337	POND	AQ	UG/L						3K◇	2K◇		0.003◇	0.001◇		
C-3336	[illegible]	AQ	UG/L		3420	10◇			2K◇	1K◇	6◇				
C-3335	SPRING	AQ	UG/L		793				2K◇	1K◇			0.001◇		

NOTE: For a review of this data and non-target, tentatively identified compounds, please see the Analytical Quality Assurance section of this report.

◇ Denotes results of questionable qualitative significance based upon quality assurance review of data. K – approximate value; detected below quantitation limit

SAMPLE DATA SUMMARY
TARGET COMPOUNDS

TDD Number: F3-8308-29
EPA Number: WV-31

☒ Organic ☐ Inorganic

Site Name: Heizer Creek
Date of Sample: 15 Sep 83

Solid sample results reported as wet weight.

Compounds Detected

Sample Number	Sample Description and Location	Phase	Units	Trichloroethene	acetone	methylene chloride	chloroform	benzene	Toluene	2-hexanone	4-methyl-2-pentanone	Phenol	2,4-dimethylphenol	pentachlorophenol	4-methylphenol	2-methylphenol	Remarks
C-3978	S-8 Drum	Solid	ug/kg	9K ◊	121 ◊	276 ◊		4K ◊	4K ◊				188,000	K 8940 ◊	1,010,000		
C-3977	Leachate Soil	Solid	ug/kg					1K ◊									
C-3358	S-7 Light yellow material	Solid	ug/kg	6K ◊		59 ◊	4K ◊	6K ◊	21 ◊	195 ◊	106 ◊		799,000		1,380,000		
C-3357	S-6 Brown Oily material	Solid	ug/kg	2K ◊	437 ◊	53 ◊		1K ◊				K 226,000	251,000		3,070,000		
C-3356	S-5 Brown Brine	Solid	ug/kg			74 ◊		8K ◊	5K ◊				K 737,000		1,520,000		
C-3355	S-4 [illegible] Soil	Solid	ug/kg	15 ◊		1760 ◊	6K ◊	6K ◊	130	102 ◊	102 ◊	32,400	240,000		431,000		
C-3359	S-3 [illegible]	Solid	ug/kg					1K ◊				32 ◊	121K ◊				
C-3352	S-1 [illegible]	Solid	ug/kg	2K ◊	367 ◊	1539 ◊		4K ◊	10 ◊	42 ◊	22 ◊	4560K	33,300		60,400		
C-3353	S-2 White Crystal [illegible]	Solid	ug/kg	10K ◊	201 ◊				44 ◊				2,120,000K		5,460,000		
C-3354	Blank	Solid	ug/kg	1K		125		1K		29	18	81K					
C-3340	Tabita Rd Sed.	Solid	ug/kg					<1 ◊					454K ◊		697K ◊		
C-3338	Pond sed	Solid	ug/kg					1K ◊				226K ◊	213K ◊	43K ◊	375K ◊		
1001																	

NOTE: For a review of this data and non-target, tentatively identified compounds, please see the Analytical Quality Assurance section of this report.

◊ Denotes [illegible]ts of questionable qualitative significance based upon quality assuran[illegible]ew of data. K- approximate value; detected below quan[illegible]tion limit

Task number 3-8508-47
EPA Number WV-31

SAMPLE DATA SUMMARY
GC FORM

☒ Organic ☐ Inorganic

Site: ___
Date of Sample 25 Sep

Solid sample results reported as wet weight.

Compounds Detected

Sample Number	Sample Description and Location	Phase	Units	2,4,6 trichlorophenol	2,4,5 trichlorophenol	1,4 dichlorobenzene	1,2 Dichlorobenzene	1,2,4 Trichlorobenzene	Phenanthrene	Naphthalene	N-nitrosodiphenylamine	bis(2-ethylhexyl) phthalate	Chrysene		benzo(b) fluoranthene	benzo(k) fluoranthene	Remarks
C-3978	S-8 Drum	Solid	ug/kg														
C-3977	Leachate Soil	Solid	ug/kg			83 K ◊				61 K							
C-3358	S-7 Light [illegible]	Solid	ug/kg							57800 K							
C-3357	S-6 Brown [illegible]	Solid	ug/kg														
C-3356	S-5 Brown Resin	Solid	ug/kg								4,920						
C-3355	S-4 [illegible] Soil	Solid	ug/kg			249 K ◊			2640 K	1660 K	49,600						
C-3354	S-3 [illegible]	Solid	ug/kg			45 K ◊											
C-3352	S-1 [illegible]	Solid	ug/kg	9110	21,300	453 K ◊	64 K		2770 K	2160 K		87,400	912 K				
C-3353	S-2 [illegible]	Solid	ug/kg					36[illegible] K									
C-3361	Blank	Solid	ug/kg														
C-3360	Ditch [illegible] Sed.	Solid	ug/kg			34 K ◊			807	724 K			363 K		II 590 K	II 590 K	
C-33[illegible]	Pond sed	Solid	ug/kg			49 K ◊			1990	963			814		II 1800	II 1800	

NOTE: For a review of this data and non-target, tentatively identified compounds, please see the Analytical Quality Assurance section of this report.

◊ Denotes results of questionable qualitative significance based upon quality assurance review of data. II - indistinguishable isomers

K - approximate value; detected below quantitation limit

TDD Number F3-8308-29
EPA Number WV-31

SAMPLE DATA SUMMARY
TARGET COMPOUNDS

☒ Organic ☐ Inorganic

Site Name Heizer Creek
Date of Sample 15 SeP83

Soild sample results reported as wet weight.

Compounds Detected

Sample Number	Sample Description and Location	Phase	Units	2-Methylnaphthalene	Dibenzofuran	Benzo A Anthracene	Dimethyl Phthalate	Benzo Pyrene	Indeno(1,2,3-cd)pyrene	Pyrene	Benzo (ghi) Perylene	Fluorene	Acenaphthene	Pyrene	Fluoranthene	Anthracene	Remarks
C-3978	S-8 Drum	Solid	ug/kg						◇ 208,000 K								
C-3977	Leachate Soil	Solid	ug/kg	57K													
C-3358	S-7 Light Yellow mat'l	Solid	ug/kg														
C-3357	S-6 Brown Oily mat'l	Solid	ug/kg	96,600 K													
C-3356	S-5 Brown Resin	Solid	ug/kg														
C-3355	S-4 Sulfur Soil	Solid	ug/kg	2420 K					44,900						606 K	2270 K	
C-3354	S-2	Solid	ug/kg														
C-3352	S-1 Top of Drum Area	Solid	ug/kg		864K	711K			◇ 30,300					105K	260K	3100K	
C-3353	S-3	Solid	ug/kg														
C-3351	Blank	Solid	ug/kg														
C-33[illegible]	Trib to Pond Sed.	Solid	ug/kg	970	321K	296K		577K	◇ 2826	265K	392K	75K	29K	678K	804	125K	
C-33[illegible]	Pond sed	Solid	ug/kg	1280	421K	755K	◇ 19K	1274	◇ 1738	461K	572K	159K	26K	2250	2750	239K	

NOTE: For a review of this data and non-target, tentatively identified compounds, please see the Analytical Quality Assurance section of this report.

◇ Denotes values of questionable qualitative significance based upon quality assurance review of data.

K - approximate value; detected below quantitation limit

TDD Number S-9308-29
EPA Number WV-31

SAMPLES FOR TARGET COMPOUNDS
☒ Organic ☐ Inorganic

Site Name Hedges
Date of Sample 15Sep83

Solid sample results reported as wet weight.

Sample Number	Sample Description and Location	Phase	Units	Acenaphthylene	Carbon disulfide	Compounds Detected	Remarks
C-3378	S-8 [illegible]	Solid	ug/kg				
C-3377	[illegible] Seal	Solid	ug/kg				
C-3376	S-7 [illegible]	Solid	ug/kg				
C-3375	S-6 [illegible]	Solid	ug/kg				
C-3374	S-5 [illegible]	Solid	ug/kg				
C-3373	S-4 [illegible] Soil	Solid	ug/kg	812K			
C-3372	S-3 [illegible]	Solid	ug/kg				
C-3371	S-2 Top of [illegible]	Solid	ug/kg		2K		
C-3370	S-1 [illegible]	Solid	ug/kg				
C-3369	[illegible] Blank	Solid	ug/kg				
C-3380	[illegible] Soil	Solid	ug/kg	169K			
C-3381	Pond sed	solid	ug/kg	K 499			

NOTE: For a review of this data and non-target, tentatively identified compounds, please see the Analytical Quality Assurance section of this report.

◇ Denotes results of questionable qualitative significance based upon quality assurance review of data.

K- approximate value; detected below quantitation limit

TDD Number F3-9307-29
EPA Number WV-28

SAMPLE DATA SUMMARY
TARGET COMPOUNDS

☐ Organic ■ Inorganic

Site Name REIZER CREEK
Date of Sample 15 SEP 93

Compounds Detected

Sample Number	Sample Description and Location	Phase	Units	Aluminum	Chromium	Barium	Beryllium	Cobalt	Copper	Iron	Nickel	Manganese	Zinc	Calcium	Vanadium	Arsenic	Antimony	Selenium	Mercury	Tin	Cadmium	Lead	Cyanide	Remarks
9C-4007	Blank	Soil	MG/KG																					All values Below Detection Limits
9C-4352	Buried Soil	Soil	MG/KG	8500	12.8	94	0.8	6.2	18	15,700	19.3	253	38.5		16	1.9		0.1	4.3	19	0.7	2.05	59	
9C-4384	Buried Soil	Soil	MG/KG	21,650	13.2	83	0.9	4.29	16.3	16,900	18.7	328	58.5		155	2.2			0.35	37.5	0.9	18	9.04	
9C-4346	S9 South Dike Soil	Soil	MG/KG	7000	75	25.9	0.6	12.2	1790	9,200	38.5	104	262	10.8	275	13.6	1.0	0.8	1.85	16.5	2.0	96	3.52	
9C-4403	S-5	Soil	MG/KG	89	4.9					275	3.2 ◊	5.1	7.2			0.6			3.85		0.98	5.9	3.00	
9C-4404	S-4	Soil	MG/KG	24,000	23.9	18.2		6.0	406	7,900	22.4		118			6.9		0.2	42.2	95	1.5	67.5	86.2	Top of Drum Area
9C-4405	S-7	Soil	MG/KG	785					2.6 ◊	85		7.3	255						4.85	4.7	0.21	0.8	5.02	[illegible]
9C-4406	Immediate Soil	Soil	MG/KG	4900	2.9	79	0.7	10.8	47.6	15,550	305	695	352			266		0.5	2.3	2.5	2.33	11.8	302	
9C-4408	S3 Buried Drum Pit	Soil	MG/KG	242					2.6 ◊	235		6.3	9.4						7.95	4.0	0.05	2.3	360	Medium Concentration
9C-4409	Drum S8	Soil	MG/KG	96	1.0 ◊					305	2.2 ◊	39	4.4	13.3					4.2	7.7			10.7	Strong Concentration
9C-4410	S-2 [illegible]	Soil	MG/KG	18 ◊						5700		3.5	12.9						2.55				2.53	Medium Concentration
9C-4405	S6 [illegible]	Soil	MG/KG	9200	22.5	24	0.1	3.8	48.4	9,200	13	107	46.9	8.3	246	0.8			4.3	35	25	3.3	10.5	Medium Concentration
9C-4419	Blank	AQ	UG/L							53			42C								33			
9C-4338	Spike	AQ	UG/L	1980			6 ◊			1990		390												

NOTE: For a review of this data and non-target, tentatively identified compounds, please see the Analytical Quality Assurance section of this report.

◊ Denotes results of questionable qualitative significance based upon quality assurance review of data.

AR100116

TDD Number F3-8301-28
EPA Number WV-24

SAMPLE DATA SUMMARY
TARGET COMPOUNDS

☐ Organic ■ Inorganic

Site Name [illegible] Creek
Date of Sample 15 SEP 83

Components Detected

Sample Number	Sample Description and Location	Phase	Units	Aluminum	Chromium	Barium	Beryllium	Cobalt	Copper	Iron	Nickel	Manganese	Zinc	Boron	Vanadium	Arsenic	Antimony	Selenium	Mercury	Tin	Cadmium	Lead	Cyanide	Remarks
[illegible]	[illegible] well	AQ	ug/L	540			5 ◊			470	40 ◊	35	57c ◊						[illegible] ◊					
[illegible]	[illegible] Rd	AQ	ug/L	8?0						547o	66 ◊	1??	13c ◊					7 ◊	0.5 ◊					SEE QA
[illegible]	[illegible] Rd	AQ	ug/L	87o						4210	66 ◊	3oo	83c ◊					2 ◊						SEE QA
[illegible]	[illegible] Rd	AQ	ug/L																					SEE QA
[illegible]	[illegible] Rd	AQ	ug/L																					SEE QA
[illegible]	[illegible] well	AQ	ug/L							470	74 ◊	210	52 ◊					4 ◊						
[illegible]	Leachate	AQ	ug/L	19,3oo	47	4370	13 ◊	29o	25o	45,?oo	520	381o	75c ◊			3oo	27		0.25 ◊		20	72	22	

NOTE: For a review of the data and non-target, tentatively identified compounds, please see the Analytical Quality Assurance section of this report.

◊ Denotes results of questionable qualitative significance based upon quality assurance review of data.

AR100117

6.2 Quality Assurance Review

6.2.1 Organic Data: Lab Case 2062

6.2.1.1 Introduction

The findings offered in this report are based upon a general review of analytical results for 12 solid samples and 7 aqueous samples analyzed by one laboratory. Blank analysis results, surrogate spike results, matrix spike results, duplicate analysis results, GC confirmations, target compound matching quality, tentatively identified compounds, and quantitative calculations were examined in detail.

6.2.1.2 Qualifiers

It is recommended that this data package be utilized only with the following qualifier statements:

- The following results are qualitatively questionable:

Compounds	Samples with Questionable Results
trichloroethene	All positive results
chloroform	All positive results
2-hexanone	All positive results
4-methyl-2-pentanone	All positive results
acetone	All positive results
benzene	All positive results
1,1,1-trichloroethane	All positive results
methylene chloride	All positive solid sample results
toluene	All positive results except sample C-3355
carbon disulfide	Sample C-3352
phenol	Samples C-3338 and C-3354
2,4-dimethylphenol	Samples C-3338, C-3340, and C-3354
4-methylphenol	Samples C-3338 and C-3340
pentachlorophenol	Samples C-3338 and C-3978

Site Name: Heizer Creek
TDD No.: F3-8308-29

Compounds	Samples with Questionable Results
1,4-dichlorobenzene	All positive results
di-n-octyl phthalate	Sample C-3338
di-n-butyl phthalate	All positive aqueous sample results
diethyl phthalate	All positive results
bis(2-ethylhexyl) phthalate	Samples C-3336, C-3338, C-3340, C-3352, and C-3978
beta-BHC	Samples C-3335 and C-3337
delta-BHC	Sample C-3339
lindane	Sample C-3337

- The aforementioned results were designated questionable because there is evidence to doubt the presence of these compounds. However, if the above compounds are assumed to be present, their concentrations are not expected to greatly exceed their reported levels unless identified below.

- Although there is no direct evidence to question the presence of methylene chloride at the levels reported in the aqueous samples, it should be noted that positive results for methylene chloride are frequently artifacts of laboratory or sample bottle contamination. If methylene chloride is actually present in aqueous samples, then the actual concentrations may be slightly different than the levels reported.

- Due to a transcription error, the laboratory incorrectly reported chlordane as present in sample C-3978, and toxaphene as present in samples C-3340 and C-3352. These constituents are actually not present and have been deleted from the Sample Data Summary.

- In samples C-3340 and C-3355, the results for 4-methylphenol were incorrectly reported as 2-methylphenol. These results have been corrected in the Sample Data Summary.

- Results for N-nitrosodiphenylamine may actually represent the presence of either this compound, diphenylamine, or a combination of both compounds.

- Reported results for benzo(b)fluoranthene and benzo(k)fluoranthene may actually represent the presence of either one or both of these compounds.

- The laboratory neglected to qualify results as approximate for cases in which the concentrations detected were too low to be accurately quantified. The Sample Data Summary has been corrected for this error.

- Tentatively identified compounds of confident matching quality, which are not suspected artifacts or contaminants, are listed in the Support Documentation Appendix to this report. In particular, it has been noted that sample C-3353 contains approximately 35 percent tetrachlorobenzene.

- The laboratory incorrectly calculated the concentration of 2,4-dimethylphenol in sample C-3358; naphthalene, 2-methylnaphthalene, and 1,4-dichlorobenzene in sample C-3977. These results have been corrected in the sample Sample Data Summary.

- The actual concentration of toluene in sample C-3355 may be slightly different than the level reported in the data summary. In addition, this result has been corrected in the data summary for a laboratory calculation error. However, even the recalculated value may exhibit poor precision.

- Although the presence of several volatile fraction compounds were questioned in samples C-3352, C-3355, C-3977, and C-3978, if any of these compounds are actually present, their actual concentrations may be slightly different than the levels reported. (In addition, the result for 2-hexanone in sample C-3352 has been corrected in the Sample Data Summary for a laboratory calculation error. Thus, this result has three qualifications: the presence of this compound is questionable, the quantity was incorrectly calculated, and even the recalculated value may exhibit poor precision.)

- Although the presence of 1,1,1-trichloroethane was questioned in samples C-3336 and C-3339, if this compound is actually present, then the actual concentrations may be slightly different than reported.

- Although the presence of several acid compounds were questioned in samples C-3338 and C-3340, if these compounds are actually present, their actual concentrations may be significantly higher than the levels reported.

- The actual concentrations of naphthalene and 2-methylnaphthalene may be significantly higher than the levels reported in sample C-3977. Although the presence of 1,4-dichlorobenzene was questioned in this sample, if this compound is actually present, the actual level may be significantly higher than the reported concentration.

- The actual detection limits for the lighter VOA compounds chloromethane, bromomethane, chloroethane, and vinyl chloride may be significantly higher than the limits reported in all samples.

- The actual detection limits for some acid fraction compounds may be significantly higher than reported in samples C-3953, C-3338, and C-3340.

- The actual detection limits for some base/neutral compounds may be significantly higher than those reported in sample C-3977.

- The detection limits for fluorotrichloromethane and vinyl acetate were not reported by the laboratory. Actual detection limits for these compounds are slightly higher than those reported for other VOA compounds in all samples.

- 2,3,7,8-TCDD was not analyzed for.

6.2.1.3 Findings

- Trichloroethene, chloroform, 2-hexanone, 4-methyl-2-pentanone, acetone, benzene, 1,1,1-trichloroethane, methylene chloride, toluene, carbon disulfide, phenol, 2,4-dimethylphenol, 4-methylphenol, 1,4-dichlorobenzene, di-n-butyl phthalate, diethyl phthalate, and bis(2-ethylhexyl)phthalate were detected in field and/or laboratory blanks at levels sufficient to question the aforementioned results for these compounds.

- Although is was not detected in any blanks, the presence of di-n-octyl phthalate was questioned in sample C-3338 because this compound is a common lab contaminant and was found in this sample at less than detection limits.

- The positive results for pentachlorophenol were questioned due to possible instrument carryover from preceding higher level runs.

- The reported results for beta-BHC, delta-BHC, and lindane were questioned because these compounds were identified on GC columns by their single peak responses which may be subject to random chromatographic interferences.

- Methylene chloride results were not questioned in any aqueous samples because these results were all above 10 times the levels seen in blank analyses. However, the levels were substantially above the calibrated range of the instrument, so that results were qualified as approximate.

- Transcription errors involving chlordane and toxaphene are attributable to the laboratory neglecting to place a "U" next to the detection limit reported on the laboratory results sheets. In particular, no characteristic peaks were present in the sample chromatograms.

- 4-Methylphenol was accidently reported as 2-methylphenol in samples C-3340 and C-3355 because these compounds have identical mass spectra and similar, but differentiable retention times.

- N-nitrosodiphenylamine decomposes in the GC inlet to diphenylamine. Consequently, these compounds are indistinguishable in this anaylsis.

- Benzo(b)fluoranthene and benzo(k)fluoranthene have identical mass spectra and nearly identical retention times. Consequently, they cannot be differentiated by this analysis.

- Several calculation errors were discovered in the examination of raw data. These errors could have been minimized if the laboratory had utilized a computerized data system for production of quantitation lists, instead of calculating all values manually. (This also made verification of calculations more tedious.)

- Poor precision was indicated by abnormally high and low recoveries of surrogate compounds in the VOA analysis of samples C-3336, C-3339, C-3352, C-3355, C-3977, and C-3978.

- Very low recoveries were reported for acid fraction surrogate compounds in samples C-3338, C-3340, and C-3953. Similarly, very low recoveries were reported for some base/neutral fraction surrogate compounds in sample C-3977.

- The laboratory exceeded the maximum allowed holding times prior to analysis by 3 weeks for all VOA samples. Consequently, significant losses of the lighter VOA compounds may have occured.

- A fluorotrichloromethane standard was not available to the laboratory at the time of sample analysis. In addition, the laboratory's vinyl acetate standard was not prepared at a sufficient concentration to be detected in their analyses. Consequently, these compounds were not specifically searched for in the Sample Data Summary. However, these compounds would have been detected if they had been present in samples at a level high enough to require tentative identification via library searches.

- The laboratory reported results for dioxin as " not analyzed". In addition, no dioxin standard analyses were documented within the standards data package provided by the laboratory.

Site Name: Heizer Creek
TDD No.: F3-8308-29

6.2.1.4 Summary

The attached Quality Assurance Review has identified the aforementioned areas of concern. Please see the accompanying Support Documentation Appendix to this report for specifics on this Quality Assurance Review.

Report prepared by Russell J. Sloboda Date: November 15, 1984

Report prepared by Anthony N. Enweze Date: November 15, 1984

Photo 13 - On-site spring sample location.

Photo 14 - View showing samples at decon station.

6.2.2 Inorganic Data: Lab Case 2062

6.2.2.1 Introduction

The findings offered in this report are based upon a general review of all inorganic analytical data for 21 samples; 12 solid samples were sent to U.S. Testing Laboratories and 9 aqueous samples were sent to JTC Laboratories. In particular, blank analysis results, matrix spike results, duplicate analysis results, detection limits, calibrations, and ICP interference checks were examined in detail.

6.2.2.2 Qualifiers

It is recommended that this data package be utilized only with the following qualifier statements:

- The following results may be qualitatively questionable:

Constituents	Samples with Questionable Results
aluminum	MC-1410
chromium	MC-1419
beryllium	MC-1389, MC-1390, and MC-1417
copper	MC-1411 and MC-1416
nickel	MC-1390, MC-1391A, MC-1391B, MC-1395, MC-1413, and MC-1419
zinc	MC-1390, MC-1391A, MC-1391B, MC-1395, and MC-1417
selenium	MC-1391A, MC-1391B, and MC-1395
mercury	MC-1390, MC-1391A, and MC-1417

The aforementioned results were designated questionable because there is evidence to doubt the presence of these compounds at concentrations less than or similar to the levels reported. However, it can be assumed that concentrations significantly greater than the levels reported cannot be present.

Due to an indeterminate error involving either bottle labeling or sample preservation, the following qualifiers are necessary:

- Metals results reported by the laboratory and in the Sample Data Summary as MC-1391A and MC-1391B may not actually represent a duplicate of the sampling point designated as "pond aqueous." Although it is possible that both results are correctly reported, it appears equally possible that either A or B, but not both, actually represents the sampling point designated as "tributary to pond aqueous."

- Due to improper preservation, a cyanide analysis was not performed on the samples which were labelled MC-1391A and MC-1391B.

- Cyanide results reported by the laboratory and in the Sample Data Summary as MC-1393A and MC-1393B may not actually represent a duplicate of the sampling point designated as "tributary to pond aqueous." Although it is possible that both results are correctly reported, it appears equally possible that either A or B, but not both, actually represents the sampling point designated as "pond aqueous."

- Due to improper preservation, a metals analysis was not performed on the samples which were labelled MC-1393A and MC-1393B.

- Although there is no reason to suggest that any additional sample results are questionable, it was not possible to verify the positive results for arsenic, antimony, selenium, mercury, tin, cadmium, and lead which were within 5 times of the contract required detection limits (CRDL) in all solid samples.

- The actual detection limit for tin in sample MC-1389 may be slightly higher than reported.

- The laboratory incorrectly reported the concentration of cyanide in sample MC-1417. The corrected result has been incorporated into the Sample Data Summary.

- The actual detection limit for cyanide in samples MC-1393A, MC-1393B, and MC-1395 is slightly higher than the required 10 ug/l detection limit.

- The actual detection limit for tin in aqueous samples reported as "ND^B" is slightly higher than the CRDL of 20 ug/l. Similarly, aqueous sample results reported as "ND^B" for zinc indicate detection limits are slightly higher than the 10 ug/l required limit.

6.2.2.3 Findings

- Aluminum, chromium, beryllium, copper, nickel, zinc, and selenium were detected in field and/or laboratory blanks at levels sufficient to question the aforementioned sample results.

- A sample labeling or preservation error occurred with metals and cyanide bottles for samples MC-1391 and MC-1393. The laboratory received 2 separate bottles which were labelled MC-1391, preserved and marked for metals. Similarly, 2 separate bottles were labelled MC-1393 and preserved and marked for cyanide. However, the laboratory did not receive any bottles labelled MC-1391 which were preserved or marked for cyanide, nor did they receive any bottles labelled MC-1393 which were preserved or marked for metals. The laboratory was directed to perform analyses according to the type of sample preservation in order to generate valid results. Comparison of metals results for MC-1391A and MC-1391B does not prove or disprove the theory that both represent the same sampling point, because results are somewhat similar but not identical.

- For arsenic, antimony, selenium, mercury, tin, cadmium, and lead in the solid samples, the blank analysis results did not include reporting values greater than instrument detection limits, but less than the CRDL. Consequently, blank contamination at levels slightly less than the CRDL cannot be ascertained.

- A low recovery was reported for tin in the matrix spike of sample MC-1389.

- The cyanide result for sample MC-1417 was in error by a factor of 1,000 due to the use of incorrect units.

- An erratic baseline was observed for the cyanide autoanalyzer output in samples MC-1393A, MC-1393B, and MC-1395.

- Results for tin and zinc were reported by the laboratory as "ND^{B}" due to the presence of these elements at similar levels in laboratory preparation blanks.

6.2.2.3 Summary

The attached Quality Assurance Review has identified blank contamination, bottle labeling or preservation errors, matrix spike results, and inadequate reporting of raw data as the major areas of concern. Please see the accompanying Support Documentation Appendix for specifics on this Quality Assurance Review.

Report prepared by Anthony N. Enweze _____ Date: October 30, 1984

Report prepared by Russell J. Sloboda _____ Date: October 30, 1984

SECTION 7

7.0 TOXICOLOGICAL EVALUATION

7.1 Summary

Samples of waste materials and drum contents revealed substantial concentrations of potentially toxic and, in some cases, carcinogenic phenols, substituted phenols, chlorinated benzenes, N-nitrosodiphenylamine, and cyanide. The concentration of 4-methylphenol (cresol) reported on site is sufficiently high to possibly be corrosive if contacted directly. A sample taken from a seep originating on site revealed notable concentrations of the potential carcinogen methylene chloride (a common laboratory contaminant), cyanide, lead, cadmium, and arsenic. Current information also suggests that no substantial inhalation hazard exists in the vicinity of the site.

Measurable levels of methylene chloride were also reported in the Jaspears and Ingraham domestic wells as well as a spring apparently used for potable water. The concentrations of methylene chloride reported in these water sources would not be expected to pose substantial non-carcinogenic threats, but long-term consumption of water contaminated with the reported concentrations of methylene chloride may result in an increased risk of cancer. An assessment of the level of risk is not available at the time of this evaluation, as the carcinogenesis bioassay is still undergoing critical review. Resampling of domestic water sources may be indicated in this case to confirm or rule out the presence of methylene chloride.

Off-site samples (including groundwater) revealed the previously noted methylene chloride and cyanide (sediments only). None of the other contaminants reported at substantial concentrations on the Helzer Creek site were reliably detected in off-site aqueous or sediment samples.

7.2 Support Data

7.2.1 Scope of Contamination

One or more samples of discolored materials and stained soils on the Helzer Creek site revealed substantial concentrations of organic contaminants such as 4-methyl phenol (up to 1.38 percent), 2,4-dimethyl phenol (about 0.8 percent), 1,2,4-trichlorobenzene (up to about 0.37 percent), and lower levels of 2-methylnaphthalene (about 96 mg/kg), 2,4,5-trichlorophenol (about 21 mg/kg), di-n-butyl phthalate (about 87 mg/kg), and phenol (about 226 mg/kg). One sample revealed virtually pure tetracholorobenzene (about 35 percent), a tentatively identified compound.

A seep sample on site revealed notable levels of methylene chloride, arsenic, lead, and cadmium. Samples from 2 domestic wells and a spring (possibly used for potable water) revealed notable concentrations of methylene chloride.

An aqueous and sediment sample taken from an area of ponded water in the Pocatalico River revealed low levels of a few polynuclear aromatic hydrocarbons and cyanide which were also reported on the Helzer Creek site. None of the priority pollutants measured on site at substantial concentrations were reliably reported in either the ponded aqueous or sediment samples. (Low levels of a few of these contaminants were reported in the pond; these results were deemed questionable following Quality Assurance Review.) Ponded water and sediment samples also revealed low levels of other contaminants, including pyrene, fluoranthene, indeno(1,2,3-cd)pyrene, and benzo(ghi)perylene that were not reported in on-site surface samples.

7.2.2 Toxicological Considerations

Samples from the Jaspears and Ingraham domestic wells and a spring believed to be utilized for potable water revealed notable levels of the common laboratory contaminant methylene chloride. Reported concentrations of this contaminant were as follows: Jaspears well, 3,620 ug/l; Ingraham well, 3,130 ug/l; spring, 793 ug/l. A seep located northeast of the wells and spring revealed 4,570 ug/l methylene chloride. Methylene chloride was also reported in several on-site solid samples, but was determined to be questionable by Quality Assurance Review.

Methylene chloride is a common laboratory contaminant and is often reported in field blanks as well as in environmental samples. Reported values for methylene chloride in these cases are usually determined to be questionable by Quality Assurance Review. In the Helzer Creek aqueous sample data, there is no direct evidence to question the presence of methylene chloride and these results were considered to be valid following Quality Assurance Review.

Methylene chloride is used in the manufacturing of paint and varnish removers, insecticides and fumigants, solvents, cleaners, pressurized spray products, and fire extinguishers. This solvent has been detected in finished drinking water and in the troposphere. Methylene chloride is a volatile compound and generally does not persist in moving surface waters. When indroduced into enclosed groundwater, however, this solvent can remain for extended periods of time.

Exposure to methylene chloride produces an elevation of blood carboxyhemoglobin in humans, although blood carbon monoxide content is not directly related to the exposure concentration of methylene chloride.[1,2] No adverse effects have been reported in rats maintained on drinking water containing methylene chloride.

The reported minimal-effect acute dose in rats has been utilized along with a safety factor of 1,000 by the Safe Drinking Water Committee (SDWC) to develop 24-hour and 7-day Suggested No-Adverse-Response Levels (SNARL) for methylene chloride in drinking water. Assuming a daily consumption of 2 liters, the 24-hour and 7-day SNARLs for methylene chloride are 35,000 and 5,000 ug/l, in excess of concentrations reported in sampled domestic wells.[3] These SNARLs suggest that consumption of water from the Ingraham and Jaspears wells and the spring would not pose short-term hazards. It is important to note that these SNARLs do not consider carcinogenic potential.

A recent National Toxicology Progress (NTP) bioassay determined that methylene chloride may be carcinogenic in both mice and rats.[4] Risk assessments for carcinogenic potential associated with methylene chloride in drinking water are not available as yet, pending additional review of the NTP bioassay. No evidence of a carcinogenic response to methylene chloride in humans has been found. In view of the potential carcinogenic risk associated with methylene chloride, and the rather substantial concentration reported, resampling of the Ingraham and Jaspears wells and the spring may be advisable to confirm or rule out the presence of methylene chloride.

No other contaminants were reliably reported in the Ingraham or Jaspears wells or the spring at concentrations of toxicological concern. A low level of 1,1,1-trichloroethane was reported in the Jaspears well; 7 ug/l of beryllium was reported in the spring. Both 1,1,1-trichloroethane and beryllium have exhibited carcinogenic potential in laboratory animals; however, the presence of these substances in well and spring samples was determined to be questionable by Quality Assurance Review.

Iron and/or manganese concentrations above those considered acceptable in public water supplies were also reported in both wells and the spring. Concentrations were as follows: iron, 470 ug/l in both the Ingraham and Jaspears wells and 1,480 ug/l in the spring; manganese, 210 ug/l in the Ingraham well and 380 ug/l in the spring. These concentrations exceed Secondary Maximum Contaminant levels of 300 and 50 ug/l recommended for public water supplies. It is important to note that these criteria have been recommended to minimize taste and odor problems and they have no toxicological significance.

Substantial concentrations of several substituted phenols, chlorinated benzenes, phenol, and N-nitrosodiphenylamine were reported in solid samples taken on the Heizer Creek site. Solid samples were taken from open and crushed metal and fiber drums as well as from waste material observed on the ground. The range of concentrations of the above noted contaminants were as follows: 4-methylphenol (cresol), 60,600 to 13,800,000 ug/kg (1.38 percent); 2,4-dimethylphenol (xylenol), 33,300 to 7,980,000 ug/kg (0.8 percent); phenol, about 4560 to 226,000 ug/kg; N-nitrosodiphenylamine, 18,600 to 1,470,000 ug/kg (0.15 percent); 1,2,4-trichlorobenzene, about 3,670,000 ug/kg (0.37 percent); 2,4,6-trichlorophenol, 9110 ug/kg. One sample from a fiber drum (C-3353) also revealed 357,000,000 ug/kg (about 36 percent) of a non-priority pollutant, tentatively identified compound, tetrachlorobenzene. According to Quality Assurance Review, this fiber drum sample appeared to be virtually pure tetrachlorobenzene in crystalline form.

Substituted phenols such as cresol, xylenol, and trichlorophenol are used as intermediates in the production of chemicals, dyes, plastics, and pesticides. These compounds generally exhibit moderate toxicities via the oral route. Direct contact with the highest reported concentrations of these contaminants on the Heizer Creek site may lead to systemic absorption and should be avoided. Cresol (methylphenol) in particular is very corrosive to all tissues and may cause burns if not removed promptly and completely. In cases of extensive exposure to high concentrations, death may result if cresol is not quickly removed from the contaminated area of the body. Repeated or prolonged exposure to low concentrations may result in a skin rash or discoloration as well as chronic systemic poisoning. Symptoms of chronic poisoning include vomiting, difficulty in swallowing, salivation, diarrhea, loss of appetite, headache, and dizziness.

The 2,4,6-isomer of trichlorophenol (TCP) has been reported as carcinogenic to male rats and both sexes of mice, although no evidence is available to indicate that 2,4,6-trichlorophenol is carcinogenic to humans.[5] The 2,4,6-isomer of TCP was reported in one sample on site, and the extent of potential 2,4,6-TCP contamination cannot be determined. While it is unlikely that incidental contact with the concentration of 2,4,6-TCP reported in sample no. 3352 would result in a significantly increased risk of cancer, it may be noted that prolonged dermal exposure to substantial 2,4,6-TCP concentration may lead to increased systemic absorption and a proportionately increased carcinogenic risk.

The presence of measurable concentrations of organic vapors on site was not noted during the site inspection. Phenol and substituted phenols generally do not present acute inhalation hazards due to their low vapor pressures and disagreeable odors. Noticeable odors would also be expected to provide warning of incipient exposure to these contaminants.

Substantial concentrations of tri- and tetrachlorobenzene were also reported in drum and waste samples. 1,2,4-Trichlorobenzene and tetrachlorobenzene (tentatively identified, exact isomer unknown) were reported at respective concentrations of about 3,670,000 ug/kg (0.37 percent) and 357,000,000 ug/l (36 percent).

It is interesting to note that 2 contaminants reported on the Helzer Creek site, 2,4,5-trichlorophenol and tetrachlorobenzene (specifically the 1,2,4,5-isomer) are used in the manufacture of the herbicide, 2,4,5-trichlorophenoxy acetic acid (2,4,5-T), a contaminant of concern on this site. No 2,4,5-T was reported in any sample taken on the Helzer Creek site. A highly toxic compound, 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD), is often present as a contaminant of 2,4,5-T. No analysis for TCDD was performed on the Helzer Creek samples by the contract laboratory. Results of a subsequent sampling for dioxin are in the possession of EPA Region III.

Tri- and tetrachlorobenzenes exhibit moderate oral toxicity.[6] Exposure to halogenated benzenes may induce the mixed function oxidase enzyme system of the liver, which in turn can enhance the metabolism of a wide variety of drugs, pesticides, and other xenobiotics. This enhanced metabolism may result in increased or decreased toxicologic and/or pharmacologic activity of numerous compounds.

It is also expected that tri- and tetrachlorobenzene would be absorbed dermally to some extent in the event of direct contact. Limited information is available on the toxicity of tri- and tetrachlorobenzene via dermal routes. In chronic skin irritation studies, trichlorobenzene was not irritating, although some degreasing action took place after prolonged contact. Prolonged contact (3 weeks) resulted in some skin inflammation.[6] Corresponding toxicity information is not available for tetrachlorobenzene, although it may be reasonable to assume that it would possess toxicological properties similar to trichlorobenzene.

Neither tri- nor tetrachlorobenzene is significantly volatile. In view of the lack of HNU readings obtained on site, it is likely that the presence of these contaminants on site does not pose a significant inhalation hazard.

Substantial concentrations of N-nitrosodiphenylamine (18,600 to 1,470,000 ug/kg or 0.15 percent) were also reported in drum and waste samples. Nitrosamines are widespread in the environment and can be toxic to both animals and humans. Warning properties for nitrosamines are poor as these compounds are not especially irritating to skin and eyes. Nitrosamines are photoreactive and it is unlikely that concentrations in ambient air would exceed a few ppb, except very near sources of direct emissions.[7]

A large number of nitrosamines, including N-nitrosodiphenylamine, have exhibited evidence of carcinogenicity in laboratory animals. In view of the possibility of dermal absorption, it may be prudent to minimize direct contact with the N-nitrosodiphenylamine reported on the Heizer Creek site.

Given the substantial concentrations of the previously discussed contaminants (methylene chloride, 4-methylphenol, 2,4-dimethylphenol, chlorinated phenols, and N-nitrosodiphenylamine), the potential for transport of these contaminants off site exists. Contaminants such as nitrosamines are soluble in water and they are readily leached through the soil profile by percolating water. This leaching may ultimately lead to contamination of groundwater underlying the site with a potential carcinogen. Groundwater contamination with contaminants such as trichlorophenol that are less soluble than N-nitrosodiphenylamine is less likely.

Surface transport (in water or sediment) of phenol, substituted phenols, chlorinated benzenes, and N-nitrosodiphenylamine off the Heizer Creek site may provide a means for the introduction of these contaminants into the food chain.

With the exception of methylene chloride (reported in Ingraham and Jaspears wells and the spring), none of the above noted contaminants was reliably reported in groundwater, the tributary to the pond, or in the pond itself. Low levels of phenol and substituted phenols (4-methyl- and 2,4-dimethylphenol) were reported in the tributary and/or pond sediment sample, but were determined to be questionable by Quality Assurance review.

Lower levels of several polynuclear aromatic hydrocarbons (PAH) were also reported in one or more drum or waste samples. Concentrations of individual PAHs ranged from about 61 to about 96,000 ug/kg; PAHs reported included 2-methylnaphthalene, benzo(a)anthracene, fluoranthene, anthracene, phenanthrene, and naphthalene. PAHs are common urban contaminants, and the general population is exposed to them by a variety of routes. The concentrations of PAHs reported on the Heizer Creek site should not pose significant toxic threats via likely exposure routes.

Unlike the previously discussed phenol, chlorinated benzenes, and nitrosamines, which were reported at substantial concentrations on site but not off site, low levels of PAHs were reported in tributary and pond sediment samples. PAH concentrations reported in tributary or pond sediments were comparable to or even exceeded those reported on site in some cases (benzo(a)anthracene, pyrene, fluoranthene, phenanthrene, and chrysene). Low levels (26 to 2750 ug/kg) of several additional PAHs such as benzo(a)pyrene, indeno(1,2,3,cd)pyrene, benzo(ghi)perylene, and fluorene were reported in both tributary and pond sediment samples, but not on the Heizer Creek site. The relatively low PAH levels reported on site, the comparable PAH concentrations reported off site, and the additional PAH contamination reported in downstream samples all may suggest that PAHs were not specifically disposed of on the Heizer Creek site.

Concentrations of metals reported in waste and drum samples on site were generally within ranges reported in non-polluted soils. Cyanide, normally not a constituent of natural soil, was reported at concentrations ranging from 2.51 to 2,800 (0.28 percent mg/kg). Cyanides are chemicals that generally have high acute toxicity, but an unusually low degree of subacute or chronic toxicity. For this reason, it seems unlikely that the cyanides reported on site would pose significant threats to human health. Cyanides also have a low degree of persistence in the environment, and they are not accumulated or stored in any mammalian species that has been studied. Cyanides also do not appear to be mutagenic, teratogenic, or carcinogenic.

Cyanide at a concentration of 22 ug/l was reported in the seep sampled on the Heizer Creek site. This seep flows to an intermittent streambed, which ultimately flows to the ponded area of the Pocatalico. Thus, cyanide apparently has a means for migrating off site in this case. Current sample results indicate 9.04 and 59 mg/kg of cyanide in the tributary and pond sediment samples. No cyanides were reported in water overlying either of these samples or in domestic well samples.*

*Note that due to an error in bottle labeling or sample preservation, two sets of inorganic and cyanide results have been reported for both the pond aqueous and tributary to pond aqueous samples. This error will not substantially affect this toxicological evaluation as no contaminants were reported in any of the 4 samples at concentrations of toxicological concern.

Site Name: Helzer Creek
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Cyanide in surface waters can be toxic to freshwater aquatic life (proposed freshwater criteria: 4.2 ug/l of free cyanide). Current sample results indicate no substantial threat to aquatic life in the ponded water; however, continued migration of cyanide off the Helzer Creek site may lead to measurable concentrations of this potentially toxic substance in the ponded area of the Pocatalico River.

Other inorganic contaminants reported in the seep aqueous sample at concentrations of note include arsenic (340 ug/l), cadmium (20 ug/l), and lead (78 ug/l). The reported concentrations of these contaminants exceed those considered protective of aquatic fauna; however, the seep is not intended to support aquatic life. None of these contaminants was reliably reported in the aqueous samples taken off site.

Prepared by: _____ Date: January 29, 1985
Elizabeth Quinn, Toxicologist

Site Name: Heizer Creek
TDD No. F3-8308-29

LIST OF SOURCES

1. Stewart, R.D., T.N. Fisher, M.J. Hosko, J.E. Peterson, E.D. Baretta, and H.C. Dodd. 1972. Experimental human exposure to methylene chloride. Arch. Environ. Health 25:342-348.

2. Stewart, R.D., T.N. Fisher, M.J. Hosko, J.E. Peterson, E.D. Baretta, and H.C. Dodd. 1972. Carboxyhemoglin elevation after exposure to dichloromethane. Science 176:295-296.

3. National Academy of Sciences. 1980. Drinking Water and Health, volume 3. Safe Drinking Water Committee, National Academy of Sciences, Washington, DC p.128.

4. National Toxicology Program. 1982. Bioassay of Methylene Chloride for Possible Carcinogenicity. (Final Report in Preparation). Bethesda, MD. U.S. Department of Health and Human Services, Public Health Service, National Institutes of Health.

5. U. S. Environmental Protection Agency. 1980. Ambient Water Quality Criteria for Chlorinated Phenols (Office of Water Regulations and Standards). EPA 440/5-80-032. NTIS No. PB81-117434.

6. U. S. Environmental Protection Agency. 1980. Ambient Water Quality Criteria for Chlorinated Benzenes (Office of Water Regulations and Standards). EPA 440/5-80-028. NTIS No. PB81-117392.

7. U. S. Environmental Protection Agency. 1980. Ambient Water Quality for Nitrosamines (Office of Water Regulations and Standards). EPA 440/5-80-064. NTIS No. PB81-117756.

APPENDIX A

4

1. COST CENTER:

ACCOUNT NO.:

REM/FIT ZONE CONTRACT
TECHNICAL DIRECTIVE DOCUMENT (TDD)

2. NO.: F3-8308-29

3. PRIORITY:
- ☐ HIGH
- ☒ MEDIUM
- ☐ LOW

4. ESTIMATE OF TECHNICAL HOURS: 160

4A. ESTIMATE OF SUBCONTRACT COST:

5. EPA SITE ID: WV-158

5A. EPA SITE NAME: Heizer Creek

6. COMPLETION DATE: 3 weeks after QA of Lab data

7. REFERENCE INFO.:
- ☒ YES ☐ NO
- ☐ ATTACHED
- ☐ PICK UP

See PA TDD# F3-8212-

8. GENERAL TASK DESCRIPTION: Perform SI of subject site

9. SPECIFIC ELEMENTS:
1) Review background information
2) Submit sampling plan to EPA for approval
3) Coordinate Lab analysis
4) Conduct on and off-site inspection and sampling
5) Take samples according to standard protocol
6) Complete HRS

10. INTERIM DEADLINES:

11. DESIRED REPORT FORM: FORMAL REPORT ☒ LETTER REPORT ☐ FORMAL BRIEFING ☐

OTHER (SPECIFY):

12. COMMENTS:

13. AUTHORIZING RPM: (SIGNATURE)

14. DATE: 8/22/83

15. RECEIVED BY: ☐ ACCEPTED ☐ ACCEPTED WITH EXCEPTIONS ☐ REJECTED

(CONTRACTOR RPM SIGNATURE)

16. DATE: 8/22/83

AR100143

Sheet 1 White – FITL Copy
Sheet 2 Canary – DPO Copy
Sheet 3 Pink – Contracting Officer's Copy (Washington, D. C.)
Sheet 4 Goldenrod – Project Officer's Copy (Washington, D. C.)

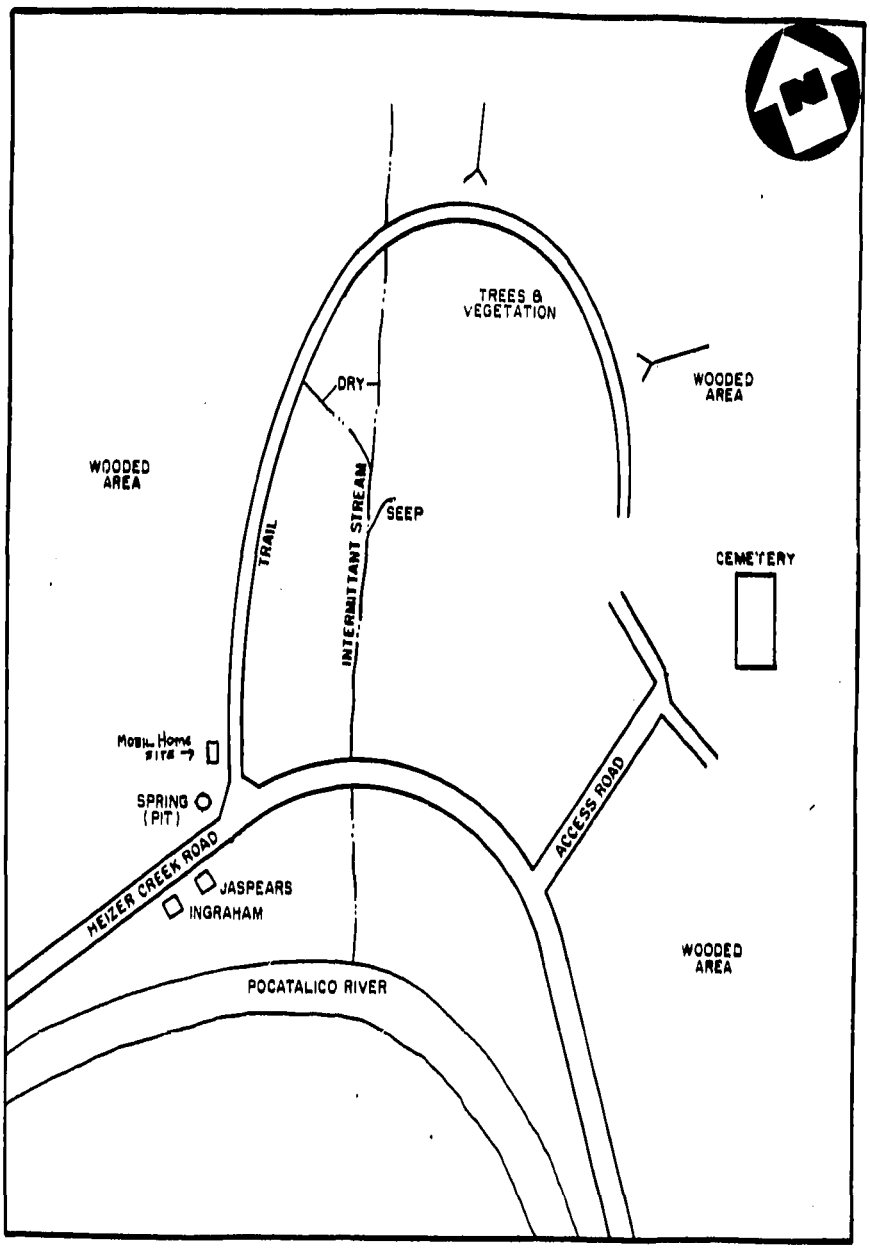
APPENDIX B

SOURCE: (7.5 MINUTE SERIES) USGS SAINT ALBANS, W.VA. QUAD.

SITE LOCATION MAP
HEIZER CREEK, POCA, W.VA.
SCALE 1:24000

FIGURE 1

NUS CORPORATION
A Halliburton Company



SITE SKETCH

HEIZER CREEK, POCA, W. VA.

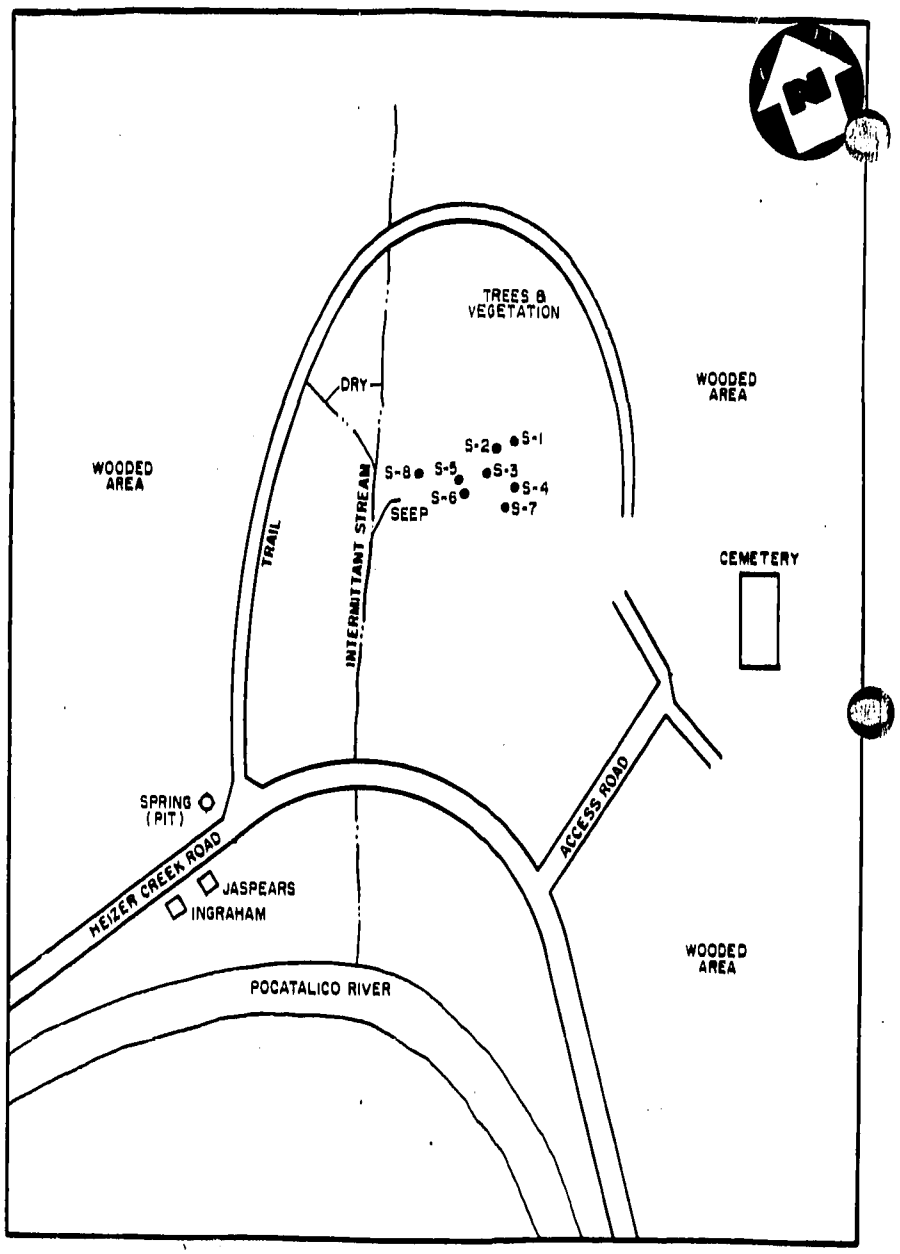
(NO SCALE)

FIGURE 2

AR100146

NUS CORPORATION

A Halliburton Company



SAMPLE LOCATION MAP
HEIZER CREEK, POCA, W. VA.
(NO SCALE)

FIGURE 3

NUS CORPORATION
A Halliburton Company

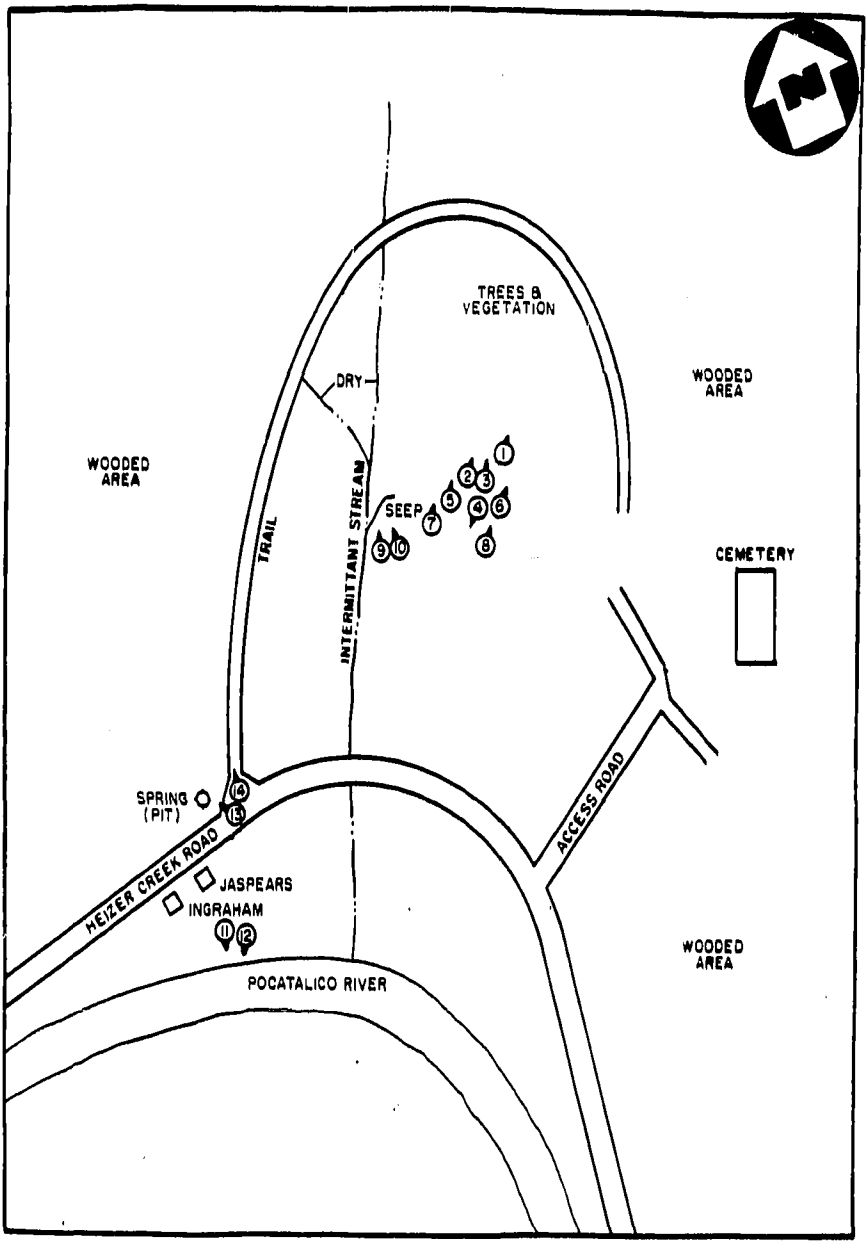


PHOTO LOCATION MAP
HEIZER CREEK, POCA, W. VA.
(NO SCALE)

AR100148

FIGURE 4

NUS CORPORATION
A Halliburton Company

APPENDIX C

PROJECT NAME: HAZEL CREEK
TDD NO: F3-8308-29

EPA SITE NO.: WV-31
REGION: III

QUALITY ASSURANCE REVIEW OF ORGANIC ANALYSIS LAB DATA PACKAGE

Case No.: 2062
Contract No.: 68-01-6785
Contract Laboratory: ENVIRODYNE
Applicable IFB No.:
Reviewer: ANTHONY N ENWERE
Review Date:

Applicable Sample No's.: C3377, C3344, C3355, C3357, C3356, C3343, C3354, C3352, C3353, C3351, C3340, C3338, C3350, C3353, C3341, C3339, C3337, C3336 and C3335.

The organic analytical data for this case has been reviewed. The quality assurance evaluation is summarized in the following table:

Reviewer's Evaluation*	Fraction				
	VOLATILES	ACIDS	BASE/ NEUTRALS	PCB/ PEST.	TCDD
Acceptable					
Acceptable with exception(s)	✓1,2,6,7,9	✓1,2,6,7,8	✓1,2,6,8	✓11,5	
Questionable					
Unacceptable					✓10

* Definitions of the evaluation score categories are listed on next page.

This evaluation was based upon an analysis of the review items indicated below:

- ● DATA COMPLETENESS
- ● BLANK ANALYSIS RESULTS[1] (Includes Carryover Runs)
- ● SURROGATE SPIKE RESULTS[2]
- ● MATRIX SPIKE RESULTS[3]
- ● DUPLICATE ANALYSIS RESULTS[4]
- ● EVALUATION OF CONFIRMATIONS[5]
- ● QUANTITATIVE CALCULATIONS[6]
- ● TARGET COMPOUND MATCHING QUALITY[7]
- ● TENTATIVELY IDENTIFIED COMPOUNDS[8]
- ‡ ⊖ CHROMATOGRAPHIC SENSITIVITY CHECKS
- * ⊖ DFTPP AND BFB SPECTRUM TUNE RESULTS
- * ⊖ STANDARDS
- * ⊖ CALIBRATION CHECK STANDARDS
- ⊖ INTERNAL STANDARDS PERFORMANCE[9]

Data review forms are attached for each of the review items indicated above.

† No errors noted, no form attached.

⊖ Spot Check performed.

Comments: 10- TCDD Not screened for. However this option was not deleted by request.
11-Pest analysis showed single peak pesticides in aqueous samples by 2 col. GC. Results not confirmed, so not evaluated in detail. Also, lab reported several hits for chlordane & toxaphene which were not supported at all by comparison w/ standard chrom, and are due to forgetting to add "U" to D.L.

DATA EVALUATION SCORE CATEGORIES

ACCEPTABLE: Data is within established control limits, or the data which is outside established control limits does not affect the validity of the analytical results.

ACCEPTABLE WITH EXCEPTION(S): Data is not completely within established control limits. The deficiences are identified and specific data is still valid, given certain qualifications which are listed below.

QUESTIONABLE: Data is not within established control limits. The deficiences bring the validity of the entire data set into question. However, the data validity is neither proved nor disproved by the available information.

UNACCEPTABLE: Data is not within established control limits. The deficiences imply the results are not meaningful.

DATA COMPLETENESS	CONC./MATRIX	med/s	low/s	med/s	→	low/soil	low/soil	med/s	low/s	med/s	low/s		
FRACTION	TRAFFIC REPORT # C	3979	3977	3357	3357	3358	3359	3360	3362	3363	3371	3372	3373
	LAB I.D. #												
VOA I	RUN DATE/TIME	✓											
	TARGET COMPOUND TAB.	✓											
	TARGET COMPOUND D.L.	✓											
	TENT. I.D. COMPOUND TAB.	✓											
	SURROGATE RECOVERY	✓											
	GC SCREEN TABULATION	✓											
	GC/MS CHROMATOGRAMS	✓											
	TARGET CMPD. QUAN. LIST	MS											
	TARGET CMPD. SPECTRA	✓							FL				
	TENT. I.D. CMPD. Q.L.	✓											
	TENT. CMPD. LIB. SRCH.	✓											
	CHRO./SENS. CHECKS	✓											
	BFB/DFTPP TUNE DATA	✓											
	I.S AREAS CHARTS	N/A											
	I.S. REL. RESP. FORM	N/A											
	RF & AMTS.: CALIB. CHK.	✓											
	RF & AMTS.; 3-PT CALIB.	✓											
	Chromatograms: Calib.Chk.	✓											
	Chromatograms: 3-Pt. Calib.	✓											
	LINEARITY: 3-PT. CALIB	MS											
	RF COMPARISON	✓											
	SAMPLE/FIELD BLANK											✓	
	METHOD/INSTR. BLANK	✓											
	LAB DUPLICATE							✓					
	FIELD DUP/REP												
	MAT. SPK./M. STD.							✓					

COMMENTS: 1' – Missing spectra for 2-hexanone, 4-me-2-pentanone for Sol C3352. Not requested because they were questioned anyway.

DATA COMPLETENESS	CONC./MATRIX	LA/Aq												
FRACTION	TRAFFIC REPORT # C													
	LAB I.D. #													
VOA :	RUN DATE/TIME	✓												
	TARGET COMPOUND TAB.	✓												
	TARGET COMPOUND D.L.	✓												
	TENT. I.D. COMPOUND TAB.	✓												
	SURROGATE RECOVERY	✓												
	GC SCREEN TABULATION	✓												
	GC/MS CHROMATOGRAMS	✓												
	TARGET CMPD. QUAN. LIST	NLS												
	TARGET CMPD. SPECTRA	✓												
	TENT. I.D. CMPD. Q.L.	✓												
	TENT. CMPD. LIB. SRCH.	✓												
	CHRO./SENS. CHECKS	✓												
	BFB/DFTPP TUNE DATA	✓												
	I.S AREAS CHARTS	N/A												
	I.S. REL. RESP. FORM	N/A												
	RF & AMTS. : CALIB. CHK.	✓												
	RF & AMTS. : 3-PT CALIB.	✓												
	Chromatograms: Calib.Chk.	✓												
	Chromatograms: 3-Pt. Calib.	✓												
	LINEARITY: 3-PT. CALIB	NLS												
	RF COMPARISON	✓												
	SAMPLE/FIELD BLANK	✓												
	METHOD/INSTR. BLANK	✓												
	LAB DUPLICATE							✓						
	FIELD DUP/REP													
	MAT. SPK./M. STD.							✓						

COMMENTS :

DATA COMPLETENESS	CONC./MATRIX												
FRACTION	TRAFFIC REPORT # C	13798	39077	3785	2157	2136	3235	3354	1152	3363	7361	2340	3120
	LAB I.D. #												
BNA :	RUN DATE/TIME	✓											
	TARGET COMPOUND TAB.	✓											
	TARGET COMPOUND D.L.	✓											
	TENT. I.D. COMPOUND TAB.	✓											
	SURROGATE RECOVERY	✓											
	GC SCREEN TABULATION	✓											
	GC/MS CHROMATOGRAMS	✓											
	TARGET CMPD. QUAN. LIST	MS											
	TARGET CMPD. SPECTRA	✓											
	TENT. I.D. CMPD. Q.L.	✓											
	TENT. CMPD. LIB. SRCH.	✓											
	CHRO./SENS. CHECKS	✓											
	BFB/DFTPP TUNE DATA	✓											
	I.S AREAS CHARTS	MS											
	I.S. REL. RESP. FORM	MS											
	RF & AMTS. : CALIB. CHK.	✓											
	RF & AMTS. : 3-PT CALIB.	✓											
	Chromatograms: Calib.Chk.	✓											
	Chromatograms: 3-Pt. Calib.	✓											
	LINEARITY : 3-PT. CALIB	✓											
	RF COMPARISON	✓											
	SAMPLE/FIELD BLANK											✓	
	METHOD/INSTR. BLANK	✓											
	LAB DUPLICATE							✓					
	FIELD DUP/REP												
	MAT. SPK./M. STD.												
PEST. :	PESTICIDE TABULATION	✓											
	PEST. D.L. TABULATION	✓											
	PESTICIDE CHRO.	✓											
	PESTICIDE STD. CHRO.	✓											
	PESTICIDE STD. I.D.	✓											
	2nd COLUMN CONF.	N/A											
	GC/MS CONFIRMATION	NA											
	PESTICIDE DUPLICATE												L
	PESTICIDE SPIKE												✓
	PESTICIDE BLANK												
CDD	TCDD TABULATION	MS											
	TCDD DETECTION LIMIT	MS											
	TCDD CHRO./ E.I.C.P.	MS											
	TCDD BLANK												

DATA COMPLETENESS	CONC./MATRIX	6/A0											
FRACTION	TRAFFIC REPORT # C_	3550	3355	3354	3359	3357	3356	3353					
	LAB I.D. #												
BNA :	RUN DATE/TIME	✓											
	TARGET COMPOUND TAB.	✓											
	TARGET COMPOUND D.L.	✓											
	TENT. I.D. COMPOUND TAB.	✓											
	SURROGATE RECOVERY	✓											
	GC SCREEN TABULATION	✓											
	GC/MS CHROMATOGRAMS	✓											
	TARGET CMPD. QUAN. LIST	MS											
	TARGET CMPD. SPECTRA	✓											
	TENT. I.D. CMPD. Q.L.	✓											
	TENT. CMPD. LIB. SRCH.	✓											
	CHRO./SENS. CHECKS	✓											
	BFB/DFTPP TUNE DATA	✓											
	I.S AREAS CHARTS	MS											
	I.S. REL. RESP. FORM	MS											
	RF & AMTS.; CALIB. CHK.	✓											
	RF & AMTS.; 3-PT CALIB.	✓											
	Chromatograms: Calib.Chk.	✓											
	Chromatograms: 3-Pt. Calib.	✓											
	LINEARITY; 3-PT. CALIB	MS											
	RF COMPARISON	✓											
	SAMPLE/FIELD BLANK	✓											
	METHOD/INSTR. BLANK	✓											
	LAB DUPLICATE						✓						
	FIELD DUP/REP												
	MAT. SPK./M. STD.						✓						
PEST. :	PESTICIDE TABULATION	✓											
	PEST. D.L. TABULATION	✓											
	PESTICIDE CHRO.	✓											
	PESTICIDE STD. CHRO.	✓											
	PESTICIDE STD. I.D.	✓											
	2nd COLUMN CONF.	N/A											
	GC/MS CONFIRMATION	N/A											
	PESTICIDE DUPLICATE					✓							
	PESTICIDE SPIKE					✓							
	PESTICIDE BLANK												
TCDD	TCDD TABULATION	MS											
	TCDD DETECTION LIMIT	MS											
	TCDD CHRO./ E.I.C.P.	MS											
	TCDD BLANK	MS											

KEY TO DATA COMPLETENESS FORM

Abbreviation Used on Form	Description of Checklist Item
Conc./Matrix	Concentration category submitted in analysis request (low, med, hi) and matrix (sol., aq.)
Fraction	FBI in acid, base/neutral, acid/base/neutral, or volatiles analysis
Run Date/Time	Instrument run date (to be used for correlating calibration)
Target Cmpd. Tab.	Tabulated results for target compounds
Target Cmpd. D.L.	Detection limits for target compounds (actual/level indicated by screen
Tent. I.D. Cmpd. Tab.	Tabulated results for tentatively identified compounds
Surr. Rec.	Surrogate recoveries results
GC Screen Tab.	Tabulated GC screen results indicating required level of followup
GC/MS Chromatograms	Chromatograms of GC/MS analysis runs
Target Cmpd. Quan. List	Target compounds quantitation list, showing areas, ret. times
Target Cmpd. Spectra	Enhanced and unenhanced spectra of target compound hits
Tent. I.D. Cmpd. Q.L.	Quantitation list for tentatively identified compounds
Tent. Cmpd. Lib. Srch.	Spectra and library match spectra of tentatively identified compounds
Chro./Sens. Checks	EICP's and R.R.F.'s for chromatographic sensitivity checks
BFB/DFTPP Tune Data	Spectra intensity lists, and criteria comparison forms for BFB, DFTPP
I.S. Areas Charts	Internal standards area control charts and description of remedial action
I.S. Rel. Resp. Form	Internal standards relative response listings for each sample run
RF and amts.: Calib. Chk.	Tabulated response factors and amount injected for all cmpds. in calibration check
RF and amts.: 3-Pt. Calib.	Tabulated response factors and amount injected for all cmpds. in 3-point calibration
Chromatograms: Calib. Chk.	Chromatograms for calibration check standard
Chromatograms: 3-Pt. Calib.	Chromatograms for 3-point multilevel calibration standards.
Linearity: 3-Pt. Calib.	Tabulated correlation coefficient or relative standard deviation for calibration
RF Comparison	Tabulated comparison of calibration Response Factor with check standard
Sample/Field Blank	Equipment rinse or reagent water blank shipped with samples from field
Method/Instr. Blank	Method or instrument blank which is prepared at lab
Lab Duplicate	Sample which was split by lab for duplicate analysis
Field Dup/Rep	Sample which was split or collected twice in the field
Mat. Spk./M. Std.	Matrix spike or method standard (blind, or done by lab)
Pest. Tab.	Tabulated results for pesticides
Pest. D.L. Tab.	Tabulated detection limits for pesticides
Pest. Chro.	Chromatograms for pesticide screening
2nd Col. Conf.	Confirmation of pesticide results by using a second GC column and temperature
GC/MS Conf.	Confirmation of pesticide results by GC/MS analysis
Pest. Dup., Spk. Blk.	Pesticide duplicate, spike, and blank
Pest. Std. Chro.	Chromatogram of pesticide standard
Pest. Std. I.D.	Pesticide standard identification form
TCDD	2,3,7,8-tetrachlorodibenzodioxin
TCDD Tab., D.L., EICP, Blk.	TCDD tabulated results, detection limits, extracted ion current profile, blank

KEY TO SYMBOLS USED IN DATA COMPLETENESS TABLE

Symbol	Meaning	Symbol	Meaning
✓	Data item present	!	Incomplete data item
NA	Data item not applicable or not required	NC	Data item not clearly explained (units of conc., etc)
P	Data item within established control limits		
F	Data item outside established control limits	* or [number]	See footnote
MS	Missing item	XX/XX/XX XX:XX	Date/Time of run (calibration, etc.)

RUN CHRONICLE

	FRACTION: VOA			FRACTION: B/N/A			FRACTION: BNA		
	* = Run after standard								
	RUN ORDER	RUN ID/ DESCRIPTION	DATE / TIME	RUN ORDER	RUN ID/ DESCRIPTION	DATE / TIME	RUN ORDER	RUN ID/ DESCRIPTION	DATE / TIME
	B2	FRN 24343 [illegible] BLANK	10/[illegible] [illegible]		FRN [illegible] [illegible]	10/[illegible] [illegible]		DFTPP/Benzidine FRN 7795	[illegible]
	E2	FRN 24319 method Blank	10/13/83 9:34		FRN 7754 method Blank	10/5/83 20:39		DF/Bzdn 7784	10/5 P.m
	C2	Lvl Blank FRN 24358	10/18 11:16	B16	FRN 7822 med. method blank	10/18 0:34		D/B 7788	10/6 9:[illegible]
*	D3	Field Blank (AW) FRN 24337 (C3351)	10/14/83 13:23	A1	Field Blank (Sil) FRN 7803	10/6/83 21:17		D/B 7798	10/6 17:[illegible]
*	F2	Field Blank (AW) FRN 24332 (C3350)	10/14/83 20:55		Field Blank (AW) FRN 7793	10/6/83 13:08		D/B 7806	10/7 9:[illegible]
*	B9	Matrix Spike C3354 FRN 24350	10/17 21:16		C3354 Matrix spike 7797	10/6 16:35	B9	D/B 7815	10/7 1[illegible]
		Matrix Spike FRN 24322	10/[illegible] [illegible]		Matrix Spike FRN 7791	10/5/83 19:48			
		Matrix Spike - Dup FRN 24323	10/13/83 [illegible]		Matrix Spike - Dup FRN 7795	10/5/83 14:42			
	B10	C3354 Matrix spike Dup FRN 24355	10/17 22:19	A2	C3354 Dup. Matrix Spike FRN 7802	10/6 20:20			
	F1	Standard Low FRN 24331	10/14/83 23:55		STD - Low level FRN 7777	10/5/83 13:4[illegible]	VOA	Water samples run	
	A3	Standard (Low) FRN 24312	10/[illegible] 13:53		STD - med Level FRN 7789	10/6/83 9:35		27 and 28 days	
	H1	Std (med level) FRN 24326	10/13/83 [illegible]		STD - med. level FRN 7778	10/5/83 14:35		after receipt of samples	
	G1	STD - med. level FRN 24320	10/13/83 16:39		STD - High level FRN 7779	10/5/83 16:50			
	A2	STD - med level FRN 24313	10/[illegible] [illegible]	B11	STD - Med. Level FRN 7817	10/7/83 18:51	VOA	soils run 32	
	H2	STD - High level FRN 24327	10/13/83 [illegible]	B1	STD med Level FRN 7807	10/7/83 9:25		days 4½ weeks	
		STD - High level FRN 24311	10/13/83 [illegible]		STD - med Level FRN 7799	10/6/83 17:50		after receipt of sampling	
		[illegible]		B2	STD. Low level 7808	Lab indicated [illegible]			
*	A4	C3335 (AW) FRN 24315	10/13/83 [illegible]		C3335 (AW) FRN 7785	10/5/83 22:[illegible]		D.L.'s for light VOA	
No [illegible] *	G2	C3336 (AW) FRN 24321	10/13/83 11:55		C3336 (AW) FRN 7794	10/6/83 [illegible]		may be higher, but	
	*	C3337 AW FRN 24314	10/13/83 11:07		C3337 AW FRN 7794	10/6/83 [illegible]		otherwise positive	
		C3339 AW FRN 24324	10/13/83 [illegible]		C3339 AW FRN 7786	10/[illegible] 23:4[illegible]		results not questioned	
*	H3	C3341 AW FRN 24328	10/13/83 22:31		C3341 (AW) FRN 7783	10/[illegible] 21:38		by holding times for presence of compounds	
		~~C3352 BLANK FRN 24332~~	~~[illegible]~~		~~C3352 FRN 7793~~	~~10/6/83 [illegible]~~		(Blanks question all	
		C3953 AQ FRN 24315	10/[illegible] [illegible]		C3953 (AW) FRN 7792	10/5/83 [illegible]		VOA's except toluene in	
								Sample C3355. Consequently	
	D6	C3338 (Sol) FRN 24374	10/18/83 [illegible]	B3	C3338 (Sol) FRN 7809	10/7/83 18:22		Blank results are cause	
**	D5	C3340 (Sol) FRN 24373	10/18/83 15:41	B6	C3340 (Sol) FRN 7812	10/7/83 4:35		for questioning VOA results	
** B5	2 Runs After STD	C3352 (Sol) FRN 24346	10/17/83 16:03	B4	C3352 (Sol) FRN 7810	10/7/83 [illegible]			
* B4	After STD	C3353 (Sol) FRN 24345	10/17/83 14:40	B14	C3353 (Sol) FRN 7820	10/7/83 22:00			
	B6	C3354 (Sol) FRN 24347	10/17/83 17:19	A2	C3354 FRN 7804	10/6/83 22:14			
	C8	C3355 (Sol) FRN 24364	10/18/83 20:43	B7	C3355 (Sol) FRN 7813	10/7/83 15:45			

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RUN CHRONICLE

FRACTION: [illegible]			FRACTION: B/[illegible]A			FRACTION:		
* = Run after standard								
RUN ORDER	RUN ID/ DESCRIPTION	DATE / TIME	RUN ORDER	RUN ID/ DESCRIPTION	DATE / TIME	RUN ORDER	RUN ID/ DESCRIPTION	DATE / TIME
* B11	[illegible]	[illegible]	B13	[illegible]	[illegible]	4		
D7	[illegible]	[illegible]	B8	[illegible] FRN [illegible]4	10/1[illegible] 10:55	1		
D8	[illegible] FRN [illegible]	[illegible]	A3	[illegible]	[illegible]	5		
* C4	[illegible]	10/1[illegible]	B12	[illegible]	[illegible]	3		
* C10	[illegible]	10/1[illegible]	B10	[illegible]	[illegible]	2		
	VOA OFB's:							
A1	FRN 24308	10/12 9:30						
E1	24318	10/13 8:38						
	24325	10/13 16:16						
B1	24342	10/17 11:30						
–	(multi spr.) 24350	10/17 21:16						
C1	24356	10/18 11:30						
–	24364 (370)	10/18 21:50						
D0	24368	10/19 10:21						
D1	VOA Lab Blank 24369	10/19 10:53						
	VOA solid STDS:							
B7	High STD 24348	10/17 18:54						
C9	High STD 24365	10/18 21:50						
(B3) *	Med. STD 24344	10/17 13:22						
C3	Med. STD 24359	10/18 12:53						
D2	Med. STD 24370	10/19 12:02						
B6	Low STD 24349	10/17 19:54						
C5	Low STD. 24361	10/18 15:22						

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BLANK ANALYSIS RESULTS FOR TARGET COMPOUNDS

FRACTION	TYPE	CONC	MATRIX	SAMPLE #	SOURCE OF H_2O	CONTAMINANTS (CONCENTRATION / DETECTION LIMIT)
V/A	LAB BLANK	LOW	SOLID	24313 10/17 12:09	Lab	1,1,1-Trichloroethane (11 ug/kg / 5) 1 chloroform (3 ug/kg / 5) 1 methylene chloride (5 ug/kg / 5) 1 toluene (3 ug/kg / 5) 1 carbon disulfide (11 ug/kg / 5) 1
B/N/A	LAB BLANK	LOW	SOLID	7801	Lab	Diethyl phthalate (3 ug/kg / 800) 1 di-n-butyl phthalate (2 ug/kg / 800) 1 bis-(2-ethylhexyl) phthalate (32 ug/kg / 800) 1
V/A	METHOD BLANK	LOW	AQUEOUS	24319	Lab	Chloroform (4 ug/L / 5) 1 methylene chloride (5 ug/L / 5) 1 toluene (2 ug/L / 5) 1 carbon disulfide (2 ug/L / 5) 1 benzene (2 ug/L) 1
B/N/A	METHOD BLANK	LOW	AQUEOUS	7782	Lab	bis(2-ethylhexyl) phthalate (6 ug/L / 10) 1 di-n-butyl phthalate (4 ug/L / 10) 1
Pest.	Method Blank				Lab	B-BHC (.005 ug/L / .005) 1
V/A	field Blank	LOW	AQUEOUS	C.3350	NUS	Benzene (.7 ug/L /) 2 chloroform (2 ug/L / 5) 2 Methylene chloride (24 ug/L / 5) 2 toluene (4 ug/L / 5) 2
B/N/A	Field Blank	low	AQEOUS	C.3350	Lab	Phenol (14.2 ug/L /) 1 bis(2-ethylhexyl) phthalate (1.8 ug/L /) 2 diethylphthalate (.9 ug/L /) 2
B/N/A	field Blank	lo	Solid	C.3351 (3)	Lab 34 mg/kg 1,4-dichlorobenzene	Phenol (81 ug/kg) [0.5 ug] bis(2-ethylhexyl) phthalate (308 ug/kg) [1.0 ug] di-n-butyl phthalate (2 ug/kg) [0.15 ug] diethylphthalate (1 ug/kg) [0.07 ug]

LABORATORY REPORTED FIELD BLANK DATA IS COMPARED WITH THE SAMPLE DATA IN A TABULATION FORM WITHIN SAMPLE ANALYTICAL DATA SUMMARY. TENTATIVELY IDENTIFIED COMPOUNDS IN BLANKS ARE LISTED ON A SEPARATE

COMMENTS:

(1) RESULT REPORTED BY LABORATORY AND CONFIRMED BY REVIEWER.

(2) RESULT INFERRED FROM QUANTITATION LIST, DIAGNOSTICS, CHROMATOGRAM AND/OR SPECTRA.

(3) Run also as matrix spike containing 1,4-dichlorobenzene, but instrument level not high enough to call blank a ghost

BNA Detection limits were not consistent between water & soil:

For waters, 1 l → 2 ml, 2 µl inj. & 10 ppb for all compounds

For soils, .025 kg → 4 ml, 2 µl inj & DL's varied from 150 to 800 µg/kg for different compounds

Calculation for soil blank was $\frac{\text{area}}{\text{area IS}} \times \frac{\text{RF}}{\text{wt}} \times \frac{1}{.025} = \text{conc.}$ as reported by Lab.

Soils 3338, 3340 followed this calculation 3352 additionally multiplied result by 2.

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BLANK ANALYSIS RESULTS FOR TARGET COMPOUNDS

FRACTION	TYPE	CONC	MATRIX	SAMPLE #	SOURCE OF H2O	CONTAMINANTS (CONCENTRATION / DETECTION LIMI
VOA	Field Blank		Water	C3151 (3)	NUS (assumed) (5 gal in containers)	[illegible] (0.75 ug/kg / 5) 1 [illegible] (25 ug/kg / 5) 2 [illegible] (48 ug/kg / 5) 2 [illegible] (135 ug/kg / 5) 2 Toluene (75 ug/kg / 5) 2 [illegible] (2948/kg) 1 2-hexanone (18 ug/kg) 1 acetone (≈140 ug/kg) 2, (4)
Pest.	Field Blank		Water	C3357	NUS	B-BHC [illegible] 1
VOA	Laboratory cooler Blank (5)			FRNJ4330	Lab	MeCl2 (21 ppb) 1 acetone (19 ppb) CS2 (1 ppb) CHCl3 (2 ppb) 1,1,1 (1 ppb) toluene (4 ppb)
VOA	Lab Blank, solid			24358	Lab	methylene chloride ( ) 2 benzene (≈ 0.05 ug/L) 2 toluene (≈ 1 ug/L) 2 chloroform (≈) 2
VOA	Lab Blank, solid			24369	Lab	methylene chloride ( ) 2 chloroform (≈1) 2 benzene (≈1) 2 1,1,1-trichloroethane (≈1) 2 toluene (≈ 1 ppb) 2
BNA	Lab Blank, medium		solid	7822	Lab	4-methylphenol (5,200/10,000) 1 3,4-dimethylphenol (87,600/1000) 1 bis(2-ethylhexyl)phthalate (10,900/10,000) 1
Pest	Method Blank, Low Med		solid	2457	Lab	ND

LABORATORY REPORTED FIELD BLANK DATA IS COMPARED WITH THE SAMPLE DATA IN A TABULATION FORM WITHIN SAMPLE ANALYTICAL DATA SUMMARY. TENTATIVELY IDENTIFIED COMPOUNDS IN BLANKS ARE LISTED ON A SEPARATE

COMMENTS:

(1) RESULT REPORTED BY LABORATORY AND CONFIRMED BY REVIEWER.

(2) RESULT INFERRED FROM QUANTITATION LIST, DIAGNOSTICS, CHROMATOGRAM AND/OR SPECTRA.

(3) Run after a medium level VOA standard. Results for 2-hexanone & 4-methyl-2-pentanone suspected due to ghosting.

(4) acetone not reported by Lab, but spectrum provided (FID) appears to interfering mass 40 at 5 x above mass 43. Since (43+58) = 18% of RIC, and 40 = 83% of RIC, considered 1/6 of peak in RIC due to acetone. This is identical (peak height to I.S. peak height) in another sample run the same day which had 136 ppb acetone.

(5) Lab calculated wrong. See Quant. Calc page.

Instrument Carryover Effects (pg 2)

Possible Instances of Carryover Artifacts are Tabulated and Evaluated Below:

COMPOUND IN QUESTION	Initial Run (High Level) Run I.D.	Instrument Level *	Second Run Run I.D.	Instr. Level	Carryover Percent	Third Run Run I.D.	Instr. Level	Carryover Percent	Footnote Reference
2,4-dimethylphenol	C3352	104 ng	C3340	2.8 ng	2.7%	C3355	300 ng		
4-methylphenol	↓	189 ng	↓	4.35 ng	2.3%	↓	139 ng		
			Unknown						
2,4-Me$_2$ΦOH	3355	300 ng	3357	5 ng		3358	5.6 ng		
4-MeΦOH	↓	139 ng	↓	19 ng		↓	2.3 ng		
						(PETPP)			
2,4-Me$_2$ΦOH	Med. STD	100 ng	3378	60 ng		3356	3.1 ng		
4-MeΦOH	↓	↓	↓	3.4 ng		↓	1.7 ng		
Pentachlorophenol	↓	↓	↓	0.07 ng	**				
2,4-Me$_2$ΦOH	3356	3.2 ng	3353	2.7 ng		Med. Blk 3222	1.3 ng		
4-MeΦOH	↓	1.7 ng	↓	1.1 ng		↓	0.44 ng		
			200X Dilution			Unknown			
Extraction Contamination	Sample #	Med or Low extraction?	total ug 2,4-Me$_2$ΦOH	total ug 4-MeΦOH					
	C3338	Low	5.3 ug	9.4 ug	◇	Sample	2,4-dimeth	4-meth	
	C3340	Low	11.3	17.4	◇	Medium Blank	17 ug	26 ug	
	C3352	Low	833	1515					
	C3353	Med.	8050	11,900					
	C3354	Low	3.0	ND	◇	(C3338 Pentachlorophenol ghosts			
	C3355	Low	6010	10,800		0.27% pentachlorophenol			
	C3356	Med	2390	4840		seen in C3338, run after			
	C3357	Med	7716	19,690		100ng followed by 80ng standard			
	C3358	Med	23,900	41,700		both before analysis of C3338.			
	C3977	Low	ND	ND		0.67% of previous run, and			
	C3978	Med	2,240	3450		0.27% of 2 runs previous.			

COMMENTS: (Results which are concluded to be possible artifacts, etc.)

BNA Run order: Field Blank, std. (C3351), C3354, C3977 (End of Day) (10/6) ← Nonghosting

On 10/7: Med. STD, unknown, C3338, C3352, unknown, C3340, C3355, C3357, Med. DETPP, C3358, Med. STD, C3978, C3356, C3353, unknown, Med. Method Blank.

* = Instrument Level = ⟨area/conc. I.S. × RF⟩ × 40 = nanograms RF 2,4-diMeΦOH = .317, RF 4-MeΦOH = .139

(UNKNOWN) = unknown run in between two samples

⇒ Ghosting not likely. Must assume sample to sample cross contam. during extraction. Investigated total Laboratory contamination for extractions; total ug contaminant in extracted sample; medium & low level extractions (see above tabulation)

(**) Results for Pentachlorophenol questioned due to possible ghosting (0.07% ghost C3338, 0.67% ghost C3338). Medium blank does not question any medium samples for phenols. Med. blank was 0.7% of highest Medium sample (total ug 2,4-dimeΦOH), and 0.6% 4-meΦOH. Since highest low sample was (C3355, 0.0% = 68 ug 4-meΦOH and 0.7% = 44.5 ug. Although low field blank did not show cross contamination by these cpds, results are questionable at this level (C3338, 40 and 54), because same sonicator extraction apparatus could produce similar cross contamination of low samples.

ARI00101

Instrument Carryover Effects (p1 of 2)

Possible Instances of Carryover Artifacts are Tabulated and Evaluated Below:

COMPOUND IN QUESTION	Initial Run (High Level) Run I.D.	Instrument Level *	Second Run Run I.D.	Instr. Level	Carryover Percent	Third Run Run I.D.	Instr. Level	Carryover Percent	Footnote Reference
2-hexanone	med VOA STD 24344		C3353	153		C3352	159		
4-methyl-2-pentanone	med VOA STD 24344		C3353	73		C3352	84		
2-hexanone	[illegible] VOA STD 24370		field blank C3357	33					
4-methyl-2-pentanone	[illegible] VOA STD 24370		field blank C3357	24					
2-hexanone	Low VOA STD 24361		(2 unidentified runs)			C3355	299		
4-methyl-2-pentanone	Low VOA STD 24361		(2 unidentified runs)			C3355	309		
2-hexanone	High VOA STD 24365		C3358	238					
4-methyl-2-pentanone	High VOA STD 24365		C3358	208					

COMMENTS: (Results which are concluded to be possible artifacts, etc.)

Laboratory raw data was footnoted for sample C3353; 2-hexanone and 4-methyl-2-pentanone were crossed out [illegible] on chromatogram and "PLC" was written in. (Probable lab contaminant). However, this was not done for C3352.

* (Instrument Level units = ug/L or ug/kg, assuming 5 grams or 5 mls sample)

Ghosting possible for all of these runs. However, insufficient information to determine C3355 due to preceding unidentified runs. C3355 Result questioned since in field blank, although it is suspected that one of preceding runs was also a standard.

BLANK ANALYSIS RESULTS FOR TENTATIVELY IDENTIFIED COMPOUNDS

ALL TENTATIVELY IDENTIFIED COMPOUNDS FOUND IN BLANK ANALYSES ARE LISTED BELOW:

SAMPLE #	FRACTION	SCAN #(S) Retention time	SPECTRUM MATCH INDICES TYPE	SCORE	TYPE	SCORE	ESTIMATED CONCENTRATION	COMPOUND NAME (UK: unknown, m(NLS = no... LIBRARY	COMMENTS ...M.
(C3351	VOA soil	13.2	MP	.776			46 ug/kg	n-pentane	
field blank)	BNA soil	4.8					2% IS @ 9.5	not library searched	
		14.7					1% IS @ 12.7	↓ ↓ ↓	
		20.6					1% IS @ 20.85		
		27.75					1% IS @ 27.2		
↓	↓	29.6					7% IS @ 30.2		
24343	VOA soil	46.7					250% IS @ 24.2	very broad peak (ghost) NO s	
		29.1					200% IS @ 24.2	very broad peak (ghost?) No se	
		14.8		.774			202 ug/kg	1,4-dioxane	
24358	VOA soil	14.8						1,4-dioxane	
		21.2					≈ 60% IS @ 20	unknown m(45;56;57; 73,88)	
		29					≈ 400% IS @ 24.2	very broad peak (ghost?) no search	
		55					≈ 800% IS @ 24.2	" " " " "	
24369	VOA soil						No chromatogram supplied		
7801	BNA soil	5.4					≈ 15% IS @ 9.7	No C18 SEARCH (NLS)	
		14.8					≈ 3% IS @ 12.85	NLS	
		15.25					≈ 3% IS @ 12.85	NLS	
		20.7					≈ 1% IS @ 21.05	NLS	
		30.25					≈ 8% IS @ 30.7	NLS	
7822	BNA Mal. soil						No peaks above 1-2% IS		
(C3350	VOA water						None		
field blank)	BNA water	3.3					19 ug/L	toluene	
		14.8					≈ 5% IS @ 12.8		
24319	VOA aqueous	14.5					19 ug/L	1,4-dioxane	
		26.3					≈ 500% IS @ 27.1	very broad peak (dumbbell?) NLS	
		43.7					≈ 250% IS @ 23.7	very broad peak (ghost?) NLS	
7742	BNA aqueous	3.7					≈ 15% IS @ 9.5	(probably toluene) NLS	
		9.0					≈ 5% IS @ 9.5	NLS	
		14.6					≈ 5% IS @ 12.7	NLS	
		18.6					≈ 1% IS @ 20.8	NLS	
		24.4					≈ 7% IS @ 27.3	NLS	

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CASE NO. 2062
LOW LEVEL ✓
WATER
QC REPORT NO: 1

CONTRACTOR Enviro[illegible]
MED. LEVEL

CONTRAC. no. [illegible]
HIGH LEVEL
OTHER (Specify)

[------- Volatile --------][-------------------- Semi-Volatile --------------------][Pesticide][Dioxin]

SMO Traffic No.	d8 Toluene (81-120)	BFB (57-137)**	d4-1,2 Dichloro Ethane (50-150)**	d5 Nitro Benzene (19-115)	2-Fluoro Biphenyl (17-125)	d14 p-Ter Phenyl (34-126)**		d5 Phenol (18-104)	2-Fluoro Phenol (26-116)	2,4,6-Tribromo Phenol (32-124)**	Dibutyl Chlorendate (41-121)**	1,2,3,4 TCDD (18-128)
3354MS	130*	121	102	71	68	179*		35	6*	60	—	N/A
Lab Blank	106	104	99	60	79	125		69	69	81	44	
3354MSD	102	105	83	81	72	71		55	82*	91	—	
3351	114	81	81	(3) <1*	9*(3)	102		87	74	100	46	
3354	114	118	76	69	72	38		87	71	88	52	
3927	(2) 155*	79	98	(5) <1*	(3) 8*	(6) 9*		49	35	55	134*	
3338	127*	85	88	58	42	136*		(4) 7*	(4) 119*	57	52	
3340	109	71	72	65	88	90		(4) 8*	(4) 12*	50	49	
3352	(2) 142*	74	119	92	113	28*		104	87	105	—	(6)
3355	(2) 72*	(2) 256*	116	66	193*	62		113*	65	170*	—	(6)
3353	116	56*	111	N/A	N/A	N/A		N/A	N/A	N/A	136*	
3356	112	77	88								—	(6)
3357	(1) 4*	(1) 1*	(1) 3*								—	(6)
3358	137*	71	95								—	(6)
3978	135*	246*	97								—	(6)
3338MS											86	
3338MSD											92	
Lab Blank (Med)											90	

*Asterisked values are outside of QC limits. — BC of Phenol in 3338 may be slightly higher than reported. BC of some B/N in 3927 may be significantly higher than reported.
**Advisory Limits.

Comments: Pesticide surrogate recovery (dibutyl chlorendate) could not be calculated for some samples due to interferences.
(3) - Field Blank - no effect on data. (4) Actual levels & DL's for acids may be slightly higher than reported for 3338, 40.
(1) - No effect on data - see Internal Standard Form. (5) Actual DL's for BNS may be [illegible] than reported for 3927.
(2) - Actual TIC level of some VOA may be slightly different than reported. [illegible] in 3355, 53, 3357 and 78.

Volatiles: 13 out of 45; outside of QC limits
Semi-Volatiles: 17 out of 60; outside of QC limits
Pesticides: 2 out of 18; outside of QC limits
Dioxin: ___ out of ___; outside of QC limits

(6) Pesticide DL's reported from med. Level screen, [illegible]

Date Limit Set 12/82
Revision Due 6/83

FORM III (continued)

AR100164

CASE NO. 2062
LOW LEVEL
WATER
QC REPORT NO: 1

CONTRACTOR ENVIRODYNE
MED. LEVEL ✓

CONTRACT NO. 68-01-6185
HIGH LEVEL
OTHER (Specify)

[------- Volatile ---------][------------------------- Semi-Volatile ---------------------------][Pesticide][Dioxin]

SMO Traffic No.	D_8 Toluene (81-120)	BFB (57-137)**	D_4-1,2 Dichloro Ethane (50-150)**	D_5 Nitro Benzene (19-115)	2-Fluoro Biphenyl (17-125)	D_{14} p-Ter Phenyl (34-126)**		D_5 Phenol (10-106)	2-Fluoro Phenol (26-116)	2,4,6-Tribromo Phenol (32-124)**	Dibutyl Chlor-endate (41-121)**	1,2,3,4 TCDD (18-128)
✓ 3353	N/A	N/A	N/A	ND*	ND*	ND*		ND*	ND*	ND*	[illegible]	N/A
✓ 3356				ND*	98	ND*		ND*	ND*	36	[illegible]	
✓ 3357				131*	121	77		101	134*	131*	[illegible]	
3358				ND*	123	125		ND*	ND*	ND*	[illegible]	
✓ 3978				318*	161*	113		81	157*	108	[illegible]	
MB (0241)				129*	94	116		59	94	72		

*Asterisked values are outside of QC limits.
**Advisory Limits.

c 3353, 3356, 3357 & 3979 were affected by dilutions. In every case, surrogates were add. at less than the reported detection limit range. (surrogates were added at a 50,000 ug/kg conc. for BNA's) There is no Pesticide med. level surr.

Comments:
MB = lab Millipore water blank
Pesticide surrogate (Dibutyl Chlorendate) could not be analyzed because of interference in the medium level samples.

Volatiles: 0 out of 0; outside of QC limits
Semi-Volatiles: 21 out of 36; outside of QC limits
Pesticides: ___ out of ___; outside of QC limits
Dioxin: ___ out of ___; outside of QC limits

Date Limit Set 12/82
Revision Due 6/83

FORM III (continued)

CASE NO. 2062
LOW LEVEL ✓
WATER ✓
QC REPORT NO. ______

CONTRACTOR ENVIRODYNE
MED. LEVEL ______

CONTRACT NO. 68-01-6185
HIGH LEVEL ______
OTHER (Specify) ______

[------- Volatile --------][------------------------- Semi-Volatile ---------------------][Pesticide][Dioxin]

SMO Traffic No.	D8 Toluene (88-116)	BFB (63-127)**	D4-1,2 Dichloro Ethane (90-130)**	D5 Nitro Benzene (42-131)	2-Fluoro Biphenyl (50-154)	D14 p-Ter Phenyl (54-118)**		D5 Phenol (15-90)	2-Fluoro Phenol (25-115)	2,4,6-Tribromo Phenol (47-123)**	Dibutyl Chlor-endate (57-114)**	1,2,3,4 TCDD (26-104)
3336	(1) 148*	151*	83*	53	51	106		40	57	59	116*	N.A.
3336MS	109	101	94	71	17*	98		46	47	95	—	N.A.
3336MSD	145*	108	105	57	53	130		37	50	81	—	N.A.
MB	129*	133*	85*	70	60	98		42	50	89	107	N.A.
3341	134*	125	99	74	71	110		46	50	85	102	N.A.
3335	96	92	87*	96	79	90		47	52	87	98	N.A.
3339	100	(2) 316	75*	65	61	60		37	37	82	97	N.A.
3953	117*	118	89*	63	60	152*	(3)	(5) 1*	(5) 5*	(5) 2*	119	N.A.
3350	133*	153*	75*	57	52	162*	(3)	48	67	84	148	N.A.
3397	101	110	97	53	55	132*	(3)	41	58	76	116	N.A.
3337MS											93	N.A.
3337MSdup											92	N.A.

*Asterisked values are outside of QC limits.
**Advisory Limits.

Comments: (1),(2) Actual levels of some vols may be slightly different than reported (3336, 3339)
particularly heavier volatiles. No qualifier since no heavy vols reported.
(3) No effect on data since all BNA results have K approximation footnote.
(4) Field Blank — no significant effect on other samples.
(5) Actual [redacted] detection limits of some acids may be significantly higher than reported (3953

Volatiles: 6 out of 10; outside of QC limits
Semi-Volatiles: 3 out of 40; outside of QC limits
Pesticides: 4 out of 12; outside of QC limits
Dioxin: N.A. out of ___; outside of QC limits

Date Limit Set 12/82
Revision Due 6/83

FORM III

AR100166

MATRIX SPIKE DUPLICATE/...DVEL..

CASE NO. 2062
LOW LEVEL ✓
WATER
QC REPORT NO. 1

CONTRACTOR Envirodyne
MED. LEVEL
SOIL/SED. ✓

CONTRACT NO. 68-01-6785
HIGH LEVEL
OTHER (Specify)
UNITS (Circle) (ug/kg) ug/l

FRACTION	COMPOUND	CONC. SPIKE ADDED MS	CONC. SPIKE ADDED MSD	CONC. MS	% REC.	CONC. MSD	% REC.	RPD	QC LIMITS* RPD	QC LIMITS* RECOVERY	COMMENTS
VOA SMO # 3357	1,1-Dichloroethylene	51	50	136	267	113	236	12	<15%	51-151	% recovery out-both
	Trichloroethylene	51	50	71	139	66	132	5	<15%	74-128	% recovery out-both
	Chlorobenzene	51	50	62	122	49	98	22*	<15%	67-131	% recovery out - one
	Toluene	51	50	72	141	59	118	17*	<15%	58-132	% recovery out - one
	Benzene	51	50	72	141	65	120	8	<15%	56-132	
B/N SMO # 3356	1,2,4-Trichlorobenzene	2000		1480	74	1680	82	10	<50%	38-108	
	Acenaphthene	2000		2020	101	2060	103	2	<50%	57-115	
	2,4-Dinitrotoluene	2000		1690	85	2050	103	19	<50%	43-113	
	Di-N-Butylphthalate	2000		1464	75	2364	118	44	<50%	13-113	one % recovery out
	Pyrene	2000		2120	107	797	40	91*	<50%	25-137	one % recovery out
	N-Nitrosodi-N-Propylamine	2000		1910	96	2070	104	8	<50%	34-116	
	1,4-Dichlorobenzene	2000		1450	73	1395	70	4	<50%	33-103	
ACID SMO # 3359	Pentachlorophenol	2000		971	49	1490	76	43*	<40%	19-123	
	Phenol	2000		937	47	1498	75	46*	<40%	23-81	one % recovery out
	2-Chlorophenol	2000		644	32	1400	70	75*	<40%	33-102	
	P-Chloro-M-Cresol	2000		1570	79	1710	86	8	<40%	32-108	
	4-Nitrophenol	2000		997	50	1250	63	23	<40%	15-93	
PEST SMO # 3338	Lindane γ BHC	5000		910	164*	860	172*	7	<40%	87-107	
	Heptachlor	5000		3670	73	3820	76	4	<40%	43-125	
	Aldrin	6000		4560	91	4780	96	5	<40%	45-109	
	Dieldrin	9000		4430	89	3940	79	11	<40%	56-122	
	Endrin	6000		4080	82*	4659	12*	13	<40%	89-101	
	P,P-DDT	5000		3370	65*	3480	70*	6	<40%	82-102	

*Asterisked values are outside QC limits.

RPD: VOAs 2 out of 5; outside QC limits
B/N 1 out of 7; outside QC limits
ACID 3 out of 5; outside QC limits
PEST 0 out of 6; outside QC limits

RECOVERY: VOAs 6 out of 10; outside QC limits
B/N 2 out of 14; outside QC limits
ACID 1 out of 10; outside QC limits
PEST 3 out of 6; outside QC limits

*Date Limits Set 12/82
Revision Due 6/83

Values outside limit were not significant to affect data.

FORM V

AR100167

MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

CASE NO.	2062
LOW LEVEL	✓
WATER	✓
QC REPORT NO.	
CONTRACTOR	ENVIRODYNE
MED. LEVEL	
SOIL/SED.	
CONTRACT NO.	68-01-6785
HIGH LEVEL	
OTHER (Specify)	
UNITS (Circle)	ug/Kg (ug/l)

FRACTION	COMPOUND	CONC. SPIKE ADDED	CONC. MS	% REC.	CONC. MSD	% REC.	RPD	QC LIMITS* RPD	QC LIMITS* RECOVERY	COMMENTS
VOA SMO # 3336	1,1-Dichloroethylene	50	67	134	66	132	2	<15%	51-151	
	Trichloroethylene		47	98	69	138*	37*	<15%	74-128	
	Chlorobenzene		50	100	73	146*	37*	<15%	67-131	
	Toluene		52	104	71	142*	31*	<15%	58-132	
	Benzene		41	83	50	100	20*	<15%	56-132	
B/N SMO # 3336	1,2,4-Trichlorobenzene		23	46	28	56	30	<50%	38-108	
	Acenaphthene		40	80	40	80	0	<50%	57-115	
	2,4-Dinitrotoluene		66	132*	55	110	18	<50%	43-113	
	Di-N-Butylphthalate		47	94	39	78	19	<50%	13-113	
	Pyrene		47	94	43	86	9	<50%	25-137	
	N-Nitrosodi-N-Propylamine		40	80	48	96	15	<50%	34-114	
	1,4-Dichlorobenzene		32	64	29	58	10	<50%	33-103	
ACID SMO # 3336	Pentachlorophenol		45	90	29	58	43*	<40%	19-123	
	Phenol		24	45	27	54	12	<40%	23-81	
	2-Chlorophenol		46	92	46	92	0	<40%	33-107	
	P-Chloro-M-Cresol		46	92	49	98	6	<40%	32-108	
	4-Nitrophenol	↓	25	50	24	48	4	<40%	15-93	
PEST SMO # 3337	Lindane	5 ppb	4.48	90	3.70	74*	19	<40%	87-107	
	Heptachlor		4.05	81	3.24	65	22	<40%	43-125	
	Aldrin		4.32	86	3.55	71	20	<40%	45-109	
	Dieldrin		4.83	96	4.65	93	7	<40%	56-122	
	Endrin		4.42	86*	4.48	90	1	<40%	89-101	
	P,P-DDT	↓	4.85	81*	4.35	87	7	<40%	82-102	

*Asterisked values are outside QC limits.

RPD: VOAs 6 out of 10; outside QC limits
B/N 3 out of 40; outside QC limits
ACID 1 out of 5; outside QC limits
PEST 0 out of 6; outside QC limits

RECOVERY: VOAs 3 out of 10; outside QC limits
B/N 1 out of 14; outside QC limits
ACID 0 out of 10; outside QC limits
PEST 3 out of 12; outside QC limits

*Date Limits Set 12/82
Revision Due 6/83

No serious problems.

FORM V

EVALUATION OF CONFIRMATIONS OF GC ANALYSES

SAMPLE NO.	COMPOUND	GC COLUMN # 1 — COLUMN: Packed col. CONDITIONS: DETECTOR: OTHER: DATA FROM COLUMN # 1: ☒ RET. OR ☐ REL. RET. TIMES IN: Sample	Standard	RELATIVE PEAK AREA RATIOS: Sample	Standard	GC COLUMN # 2 — COLUMN: Screen column (capillary) CONDITIONS: DETECTOR: OTHER: DATA FROM COLUMN # 2: ☐ RET. OR ☐ REL. RET. TIMES IN: Sample	Standard	RELATIVE PEAK AREA RATIOS: Sample	Standard	GC/MS DATA — COLUMN: CONDITIONS: DETECTOR: OTHER: DATA FROM GC/MS RUN(S): SPECTRUM MATCH (Y/N)	LEVEL HIGH ENOUGH for GC/MS	WHICH EXTRACT	☐ SCAN NO. ☐ RET. OR ☐ REL. RET. TIMES IN: Sample	Standard	RELATIVE PEAK AREA RATIOS: Sample	Standard	TYPE OF CONFIRMATION (2 COL / GC/MS)	REVIEWER CONFIDENT
C3978	Chlordane 6%	No 6% fraction provided for analysis column				No peaks in chlordane region in medium screen 6%				Chlordane not present. "U" accidentally omitted during report transcription							0 col.	No
C3352	toxaphene 6%	ms std ms 13.53 ms 20.22 ms 21.99 ms	9.23 12.80 13.68 16.31 20.11 20.57 21.95 22.57	all of major peaks except two are missing. Lab probably didn't intend to report as I.D.		No peaks in toxaphene regions of medium screen				toxaphene not present. "U" accidentally omitted.							0 col.	No
C3340	toxaphene 6%	No peaks in 6% chlordane/toxaphene in toxaphene region				No peaks in toxaphene region of medium screen				[illegible] not present. "U" omitted in transcription.							0 col.	No

NA

AR100169

COMMENTS: Chlordane & toxaphene not present; reported accurately due to transcription error whereby "U" was omitted from [illegible]

QUANTITATIVE CALCULATIONS

CALCULATION ERRORS AND CORRECTED RESULTS ARE LISTED BELOW:

toluene, sample C3353: $\left(\frac{1294}{1199}\right) \times \frac{500}{1.22} \times \frac{1}{10.1066} = 44$ ug/kg, not 4, which was reported

toluene sample C3355: $\frac{2332 \times 500}{1201} \times \frac{1}{5.1455} = 180$ ug/kg, not 36 as reported by lab.

methylene chloride sample C3351 solid field blank:
$\frac{15309}{1754} \frac{500}{5} \frac{1}{4.96}$ 176 ug/kg, not 125 ug/kg as reported by lab.

~~C3351 2-hexanone 160 500 1 = 44 ug/kg not 29 as reported by lab~~
~~1487 5 .82~~
Another calibration

methylene chloride C3355: $\frac{100292}{1068} \frac{500}{5.1455} \frac{1}{4.96} = 1806$
This sample will still be questioned since 10x3 times field blank C3351.

Samples for 2-hexanone quantitated from I.S. #2 although RRT listed for I.S. #1 (Made checking calculations difficult) Assumed that STD. also quantitated from I.S. #2.

C3352 - 42 ug/kg 2-hexanone using I.S. #2, not 105, as reported by lab.
$\left(\frac{283}{5161} \times \frac{500}{5.6159} \frac{1}{.817} = 42 \text{ ug/kg}\right)$

C3355: 4-methyl phenol (not 2-methylphenol - see matches)
$\frac{139920}{1478} \frac{40 \times 20}{1.39 \quad .025} = 430{,}000$ ug/kg

C3358 2,4-dimethyl phenol calculated 10X too low by Lab, verified calculation since Lab reported 4-methylphenol conc matches volume/weight factors listed:
area $\frac{1497}{\text{area}=3381\text{S}} \times \frac{40 \text{ ml}}{.317} \times \frac{10 \text{ ml}}{.350 \text{ ml}} \times \frac{150 \text{ ml}}{.603 \text{ kg}} = \frac{7989000 \text{ ug}}{1 \text{ kg}} = 739000$ ug/kg reported by lab
RF

C3357 1,4-dichlorobenzene. Lab calculated 2.5x too low, probably transcription error, since reported 33 instead of 83 ug/kg
$\frac{41}{5995} \frac{40}{1.3} \frac{10}{.1970} = 83$ ug/kg

Same for all other reported compounds: naphthalene = 60, not 24 ug/kg. 2-methyl naphthalene = 57 ug/kg

TARGET COMPOUND MATCHING QUALITY

TARGET COMPOUNDS OF QUESTIONABLE SPECTRUM OR RETENTION TIME MATCHING QUALITY ARE LISTED BELOW:

SAMPLE #	FRACTION	SCAN #(S) OB/EXP	SPECTRUM MATCH INDICES TYPE	SCORE	TYPE	SCORE	ESTIMATED CONCENTRATION	COMPOUND NAME	COMMENTS
C3340	BNA	10.7/10.04					974 ug/kg	2-methylphenol	not present
		10.7/10.6					697 ug/kg	4-methylphenol	actually present
							Spectra are identical. Standard showed		
							RRT's of 1.11 and 1.17 for 2-MeΦOH and 4-MeΦOH,		
							respectively. Lab misidentified as wrong isomer		
							(I.S. in sample was at 9.05 minutes)		
C3355	BNA	10.7/10.4					<1000 ug/kg	2-methyl phenol	- not present
		10.7/11.0						4-methyl phenol	actually present
							(Using other I.S. to compute expected RT,		
							expected 2-MeΦOH = 9.52, and		
							expected 4-MeΦOH = 10.0. Actual		
							expectation for 4-MeΦOH probably between 10 and 11		
							and expectation for 2-MeΦOH probably between 9.52 and 10.		

TENTATIVELY IDENTIFIED COMPOUND SAMPLE RESULTS

ALL TENTATIVE IDENTIFICATIONS OF CONFIDENT MATCHING QUALITY, WHICH AREN'T SUSPECTED ARTIFACTS/CONTAMINANTS, ARE LISTED BELOW:

SAMPLE #	FRACTION	SCAN #(S)	SPECTRUM MATCH INDICES TYPE	SCORE	TYPE	SCORE	ESTIMATED CONCENTRATION	COMPOUND NAME	COMMENTS
C3335	VOA & BNA						None		
C3336	VOA						None		
↓	BNA	26.8	HP	.981			30ug/L	dioctyl adipidate	
C3337	VOA						None		
↓	BNA	16.0	HP	.981			15ug/L	1,3,5-trimethyl-2,4,6-trioxo-hexahydrotria	
C3339	VOA						None		
↓	BNA	26.9	HP	.980			354ug/L	dioctyl adipidate	
C3341	VOA & BNA						None		
C3350	VOA & BNA						None		
C3353	VOA						None		
↑	BNA	23.6	HP	.981			14ug/L	benzothiazole or 1,2-benzisothiazole	
		23.8	HP	.979			14ug/L	unknown	
		19.4	HP	.980			612ug/L	tri-n-butyl phosphate	
		19.7	HP	.979			18ug/L	2-hydroxy benzothiazole	
↓	↓	27.0	HP	.971			293ug/L	unknown	
C3338	VOA						None		
	BNA	11.2	HP	.981			590ug/kg	methyl benzoate	
		14.9	HP	.981			1000ug/kg	a methyl naphthalene	
		20.0	HP	.981			605ug/kg	an alkane sulfur 1-tridecene	
		23.8	HP	.980			4710ug/kg	elemental sulfur (S_8)	
↓	↓	16.5	HP	.981			1380ug/kg	a dimethyl naphthalene	
C3340	VOA	24.2	HP	.970			6ug/kg	alkane sulfur 2,3,3-tetramethyl butane	
↓	BNA	4.2	HP	.771			1678ug/kg	unknown	
C3352	VOA						None		
	BNA	12.4	HP	.866			2330ug/kg	unknown	
		13.6	HP	.781			40,500ug/kg	benzothiazole or 1,2-benzisothiazole	
		15.3	HP	.910			15,600ug/kg	a tetrachlorobenzene	
		19.0	HP	.936			85600ug/kg	2(methylthio)benzothiazole ($C_8H_7NS_2$)	
		20.2	HP	.979			45000ug/kg	2-hydroxybenzothiazole	
		22.0	HP	.979			50,500	unknown derivative of benzothiazole, possibly 2-mercaptobenzothiazole or benzothiazole-2-thiol	
		23.3	HP	.980			26,400 ug/kg	unknown, possibly an isomer of 2-phenylbenzothiazole	
		23.4	HP	.979			30,700 ug/kg	a benzothiazole derivative of formula C_7H_5N possibly 2-mercaptobenzothiazole or benzothiazole-2-thiol	
		23.8	HP	.976			53,100 ug/kg	phthalimide ($C_8H_5NO_2$) CAS 520036, Wiley IS	
		23.9	HP	.979			50,700 ug/kg	phthalimide " " " "	

— C3352 CONTINUED NEXT PAGE —

TENTATIVELY IDENTIFIED COMPOUND SAMPLE RESULTS (p.2 of 6)

ALL TENTATIVE IDENTIFICATIONS OF CONFIDENT MATCHING QUALITY, WHICH AREN'T SUSPECTED ARTIFACTS/CONTAMINANTS, ARE LISTED BELOW:

SAMPLE #	FRACTION	SCAN #(S) Retention Time	SPECTRUM MATCH INDICES TYPE	SCORE	TYPE	SCORE	ESTIMATED CONCENTRATION	COMPOUND NAME	COMMENTS
C3352	BNA - continued from p1								
		24.3	HP	.855			17,200 ug/kg	unknown (possible formula $C_{13}H_9NOS$)	
		24.8	HP	.982			173,000 ug/kg	stearic acid	
		26.0					43,000 ug/kg	unknown	
		28.8					55,400 ug/kg	unknown	
		29.2	HP	.764			53,300 ug/kg	unknown	
		29.6					60,880 ug/kg	unknown	
		29.9					105,000 ug/kg	unknown	
		30.2					47,400 ug/kg	unknown	
↓	↓	30.6	HP	.644			75,400 ug/kg	unknown	
C3353	VOA						None		
	BNA	15.4	HP	.880			357,000,000 ug/kg	(362) a tetrachlorobenzene (Compound is solid at room temp. excellent match)	
								(This sample appears to be virtually 100% tetrachlorobenzene in crystalline form.	
↓	↓								
C3354	VOA & BNA						None		
C3355	VOA	15.8					20 ug/kg	unknown	
	BNA	6.6	HP	.872			544,000 ug/kg	a dimethylphenol	
		13.1	HP	.981			115,000 ug/kg	a dimethylphenol	
		13.6	HP	.98			312,000 ug/kg	benzothiazole or 1,2-benzisothiazole	
		14.1	HP	.980			126,000 ug/kg	an ethylmethylphenol or propylphenol	
		15.2	HP	.981			348,000 ug/kg	phthalic acid	
		19.0	HP	.981			42,600 ug/kg	2(methylthio)benzothiazole ($C_8H_7NS_2$)	
		20.1	HP	.909			46,200 ug/kg	unknown	
		20.7	HP	.982			80,800 ug/kg	a phthalate	
		20.4	HP	.974			354,000 ug/kg	unknown	
		26.1	HP	.803			916,000 ug/kg	unknown	
		29.1	HP	.705			23,000 ug/kg	unknown	
		29.3	HP	—			304,000 ug/kg	unknown	
		29.4	HP	.732			216,000 ug/kg	unknown	
		29.7	HP	—			682,000 ug/kg	unknown	
		30.0	HP	.737			1,260,000 ug/kg	unknown	
		30.3	HP	—			1,571,000 ug/kg	unknown	
		30.5	HP	.857			1,106,000 ug/kg	unknown	
		30.4	HP	—			796,000 ug/kg	unknown	
		31.1	HP	—			266,000 ug/kg	unknown	
↓	↓	32.1	HP	—			292,000 ug/kg	unknown	
C3356	VOA	1.0	HP	.980			408 ug/kg	ethanol	
	↓	24.8	HP	.971			Comp/kg	unknown	
	BNA	12.9	HP	.981			236,000 ug/kg	a dimethyl phenol	
		13.7	HP	.981			12,900,000 ug/kg	benzothiazole or 1,2-benzisothiazol	
		18.9	HP	.981			1,540,000 ug/kg	2(methylthio) benzothiazole	
		23.0	HP	.979			67,800,000 ug/kg	a benzothiazole derivative of formula C_7H_5	
↓	↓							2-mercaptobenzothiazole or benzothiazole-2-thiol	

C3356 CONTINUED NEXT PAGE

AR100193

AR100193

TENTATIVELY IDENTIFIED COMPOUND SAMPLE RESULTS (p. 3 of 5)

ALL TENTATIVE IDENTIFICATIONS OF CONFIDENT MATCHING QUALITY, WHICH AREN'T SUSPECTED ARTIFACTS/CONTAMINANTS, ARE LISTED BELOW:

SAMPLE #	FRACTION	SCAN #(S) Retention Time	SPECTRUM MATCH INDICES TYPE	SCORE	TYPE	SCORE	ESTIMATED CONCENTRATION	COMPOUND NAME	COMMENTS
C3356	BNA (continued from p.2)								
		23.9	HP	.853			31100000 ug/kg	elemental sulfur (S_8)	
		26.0	HP	.842			27,800,000 ug/kg	unknown	
		26.2	HP	—			8,780,000 ug/kg	unknown	
		26.5	HP	.820			3,560,000 ug/kg	unknown	
		28.4	HP	—			1,510000		
		29.2	HP	.972			1,120,000		
		31.9	HP	.836			29,900000		
		35.9	HP	—			2,660,000		
C3357	VOA	2.2					29 ug/kg	unknown	
		3.1					4 ug/kg	unknown	
		3.4					10 ug/kg	unknown	
		9.6					13 ug/kg	unknown	
		10.1					7 ug/kg	unknown	
		14.2					14 ug/kg	unknown	
		24.5	HP	.733			14 ug/kg	alkane such as 2,7-dimethyloctane	
	BNA	12.7	HP	.781			1,320,000 ug/kg	a dimethylphenol	
		13.1	HP	.781			663,000 ug/kg	a dimethylphenol	
		15.1	HP	.981			843,000 ug/kg	phthalic acid	
C3358	VOA	15.9	HP	.974			10 ug/kg	unknown	
		24.6	HP	.974			57 ug/kg	alcohol such as 2-methyl-1-butanol	
		28.3	HP	.749			78 ug/kg	unknown	
	BNA	18.4					15,300,000 ug/kg	unknown	
		19.7	HP	.982			221,000,000 ug/kg	2,5-di-tert-amylquinone (2. (excellent match)	
		19.8	HP	.982			30,800,000 ug/kg	2,5-di-tert-amylquinone (3 (or isomer) → not quite as perfect match as	
		21.6	HP	.732			14,100,000 ug/kg	unknown	
		22.7	HP	.839			18,000,000 ug/kg	unknown	
		22.9	HP	.841			40,600,000 ug/kg	2,5-di-tert-amylhydroquinone (excellent match)	
C3377	VOA						None		
	BNA	22.9	HP	.981			8020 ug/kg	a benzothiazole derivative of formula C_7H_5 such as 2-mercaptobenzothiazole or benzothiazole-2-thiol	
		23.5	HP	.729			6260 ug/kg	elemental sulfur (S_8)	
		23.8	HP	.979			95100 ug/kg	elemental sulfur (S_8)	
		23.9	HP	.981			150000 ug/kg	elemental sulfur (S_8)	
		27.8	HP	.981			5010 ug/kg	unknown	
		29.0	HP	.982			2300 ug/kg	alkane, alkene, or alcohol	
		34.8	HP	.981			10,800 ug/kg	24XI-ethylcholest-5-en-3beta-o (C29H50O, mol wt 414) good match, esp for high molecular weight fragments	

AR100174

CONTINUED

TENTATIVELY IDENTIFIED COMPOUND SAMPLE RESULTS (p. 4 of 4)

ALL TENTATIVE IDENTIFICATIONS OF CONFIDENT MATCHING QUALITY, WHICH AREN'T SUSPECTED ARTIFACTS/CONTAMINANTS, ARE LISTED BELOW:

SAMPLE #	FRACTION	SCAN #(S)	SPECTRUM MATCH INDICES TYPE	SCORE	TYPE	SCORE	ESTIMATED CONCENTRATION	COMPOUND NAME	COMMENTS
C3978	VOA	20.6					8 ug/kg	unknown	
		26.5	HP	.978			4038 ug/kg	2-butoxy ethanol	(or isomer)
		16.0					44 ug/kg	unknown	
	BNA	19.9	HP	.981			919,000 ug/kg	alcohol such as 1-dodecanol	
		21.1	HP	.983			1,340,000 ug/kg	alcohol	
		22.2	HP	.983			1,690,000 ug/kg	alcohol	
		22.6	HP	.982			32,200,000 ug/kg	palmitic acid	
		24.5	HP	.982			20,500,000 ug/kg	octadecanoic acid	
		26.5	HP	.981			3,960,000 ug/kg	carboxylic acid, such as docosanoic c	
		27.0	HP	.977			7,500,000 ug/kg	unknown	
		28.5	HP	.977			30,000,000 ug/kg	unknown	
		33.7	HP	.983			8,550,000 ug/kg	alcohol, such as 12-octadecanedio	
		33.9	HP	.980			6,980,000 ug/kg	unknown	
		36.4	HP	.994			12,700,000 ug/kg	alcohol or alkene	
		36.6	HP	.981			39,000,000 ug/kg	unknown	

Internal Standards Performance

C3357 j VOA analysis reports 4 1&2 Recovery of surrogates. Look at areas of I.S. & surr. Recoveries of previous & post runs.

	area IS#1	area IS#2	area IS#3	%RQT	%RBF8	%RD4-1,2-dCEa	Area SS#1	Area SS#2	
C3340	1537	5130	2990	109	71	72	M00	6500	3879
C3338	1769	6689	4576	127	85	88	21000	M200	4818
C3357	1090	3648	1838	4	1	3	349	49	87
C3377	713	2493	1314	155	79	98	9932	306	2159

Because I.S. areas are fairly consistent, it appears that surrogate Response in C3357 was low due to improper surrogate spiking — No effect on data.

TDD NO: F3-8308-2

EPA SITE NO.: WV-51
REGION: III

QUALITY ASSURANCE REVIEW OF INORGANIC ANALYTICAL DATA PACKAGE

Case No.: 2062
Contract No.: 68-01-6616
Contract Laboratory: ITC
Applicable IFB No.:
Reviewer: Anthony N Enweze
Review Date:

Applicable Sample No's.:
MC1389, MC1390
MC1391A, MC1391B, MC1393A
MC1393B, MC1395 & MC1411

The inorganic analytical data for this case has been reviewed. The quality assurance evaluation is summarized in the following table:

Reviewer's Evaluation*	Fraction			
	TASK I ICP or AA METALS	TASK II FURNACE AA METALS	TASK II COLD VAPOR AA MERCURY	TASK III CYANIDE
Acceptable				
Acceptable with exception(s)	✓ (1)(4)	✓ (4)	✓ (4)	✓ (4)
Questionable				
Unacceptable				

* Definitions of the evaluation score categories are listed on next page.

This evaluation was based upon an analysis of the review items indicated below:

- ● DATA COMPLETENESS
- ● BLANK ANALYSIS RESULTS
- ● MATRIX SPIKE RESULTS
- ● DUPLICATE ANALYSIS RESULTS
- (2) ○ STANDARD ADDITIONS RESULTS
- ◒ QUANTITATIVE CALCULATIONS
- ● INITIAL CALIBRATION VERIFICATION
- ● CONTINUING CALIBRATION VERIFICATION
- (3) ○ INTERFERENCE QC RESULTS
- ● DETECTION LIMITS RESULTS
- ● INSTRUMENT SENSITIVITY REPORTS

Data review forms are attached for each of the review items indicated above.

╪ No errors noted, no form attached.

◒ Spot Check performed.

Comments: (1) See Blank Analysis. AR100177
(2) Not Applicable.
(3) All task I by AA
(4) Sample labelling or preservation error. MC1391 - lab rcvd. 2 bottles, Both acidic. MC1393 - lab rcvd. 2 bottles, both basic. Could be one of two errors: (1) Bottles marked correctly, but preserved incorrectly. (2) MC1391 Bottles are actually MC1391 and MC1393, and MC1393 Bottles are actually MC1391 and MC1393 (Labels switched). Lab was instructed to run acid bottles for metals, basic bottles for cyanide. Since metal results are similar but do not agree for all parameters, cannot tell which error occured. In conclusion, One can say that results obtained for a parameter indicate a valid result for the Sample number. (For example, MC1393 Bottles both had ND for CN^-; so CN^- is definitely not in MC1393 because at least one, and possibly both bottles marked MC1393 are actually MC1392) No statement can be made about metals results for MC1393, or CN^- for

AR100177

DATA EVALUATION SCORE CATEGORIES

ACCEPTABLE: Data is within established control limits, or the data which is outside established control limits does not affect the validity of the analytical results.

ACCEPTABLE WITH EXCEPTION(S): Data is not completely within established control limits. The deficiences are identified and specific data is still valid, given certain qualifications which are listed below.

QUESTIONABLE: Data is not within established control limits. The deficiences bring the validity of the entire data set into question. However, the data validity is neither proved nor disproved by the available information.

UNACCEPTABLE: Data is not within established control limits. The deficiences imply the results are not meaningful.

DATA COMPLETENESS	CONC./ MATRIX	L/SO													
	TRAFFIC REPORT # MC	1414	1359	1359	1359A	1359B	1359A	1359B	1359	1419					
	LAB I.D. # 70	0588	0589	0590 B	0591 A	0591 B	0592 A	0593 B	0594	0595					
FIELD QC	BLANK	✓													
	DUPLICATE		✓		✓				✓						
	SPIKE		✓	✓	✓										
TASK I: ICAP OR AA: METALS	RAW DATA	✓								→					
	TAB. RESULTS	✓								→					
	TAB. D.L.'s	✓								→					
	QA FORM	✓								→					
	ICAR INTER. QC	N/A								→					
	INSTR. SENS.	✓								→					
TASK II: FURNACE AA: METALS	RAW DATA	✓								→					
	TAB. RESULTS	✓								→					
	TAB. D.L.'s	✓								→					
	QA FORM	✓								→					
	INSTR. SENS.	✓								→					
TASK II: COLD VAPOR AA: MERCURY	RAW DATA	✓								→					
	TAB. RESULTS	✓								→					
	TAB. D.L.'s	✓								→					
	QA FORM	✓								→					
	INSTR. SENS.	✓								→					
TASK III: CYANIDE	RAW DATA	✓								→					
	TAB. RESULTS	✓								→					
	TAB. D.L.'s	✓								→					
	QA FORM.	✓								→					
	INSTR. SENS.	✓								→					
OTHER (SPECIFY):	RAW DATA														
	TAB. RESULTS														
	TAB. D.L.'s														
	QA FORM														
	INSTR. SENS.														
OTHER (SPECIFY):	RAW DATA														
	TAB. RUSULTS														
	TAB. D.L.'s														
	QA FORM														
	INSTR. SENS.														

COMMENTS:

BLANK ANALYSIS RESULTS

Ag 80

TASK	TYPE	CONC	MATRIX	SAMPLE #	SOURCE OF H_2O	CONTAMINANTS (CONCENTRATION / DETECTION			LIMI
ALL	Prep Blank			—	JTC	Aluminum (50 ug/L)	<	250	12.
						Beryllium (2.7 ug/L)	<	13.5	0.7
						Cobalt (5.9 ug/L)	<	29.	1.5
						Copper (7.7 ug/L)	<	39.5	1.9
						Nickel (30 ug/L)	<	150	7.5
						Manganese (2 ug/L)	<	10	0.5
						Zinc (29 ug/L)	<	145	7.5
						Arsenic (4.1 ug/L)	<	20.5	1.0
						Antimony (2 ug/L)	<	10	0.5
						Selenium (0.8 ug/L)	<	4	0.2
						mercury (0.1 ug/L)	<	0.5	0.02
						Tin (29 ug/L)	<	145	7.5
						Lead (1 ug/L)	<	5	0.5
ALL	Field Blank low Aqueous		MC1414 700594		NUS	Aluminum (80 ug/L)	<	400	20
						Barium (37.5 ug/L)	<	187.5	9.4
						Beryllium (0.3 ug/L)	<	1.5	0.1
						Cobalt (8.3 ug/L)	<	41.5	2.1
						Copper (30 ug/L)	<	150	7.5
						Iron (41.7 ug/L)	<	208.5	10.4
						Nickel (40 ug/L)	<	200	10
						Zinc (70 ug/L)	<	350	17.
						Silver (2 ug/L)	<	10	0.5
						Arsenic (1.8 ug/L)	<	9	1.5
						Antimony (2 ug/L)	<	10	0.5
						Selenium (2.1 ug/L)	<	10.5	0.5
						Tin (59.5 ug/L)	<	298	14.9
						Selenium (3.1 ug/L)	<	15.5	0.8
						Lead (3.9 ug/L)	<	19.5	1.0
Hg only	Calibration Blank			—		mercury (0.125 ug/L)	2/3	(0.625)	

LABORATORY REPORTED FIELD BLANK DATA IS COMPARED WITH THE SAMPLE DATA IN A TABULATION FORM WITHIN SAMPLE ANALYTICAL DATA SUMMARY.

COMMENTS:

(1) RESULT REPORTED BY LABORATORY AND CONFIRMED BY REVIEWER. AR100180

(2) RESULT INFERRED FROM RAW DATA

(3) Mercury results given in absorbance units w/ graph recordings attached. Calibration blank showed positive, and was higher than field blank or prep blank. 8, 6, 4, 2, 1 ppb standards showed 0.04 absorbance units per 1 ug/L std. However, 0.2 ug/L std. showed unusually large response (0.020) instead of predicted 0.008. (this indicates possible background contamination in standards, on bottles or pipets.) Calibration blank shows 0.008 absorbance, prep blank 0.0076, and field blank 0.003. Since no samples, blanks or standards showed readings less than 0.003, 0.003 was subtracted from all blank absorbances to get probable contamination levels (0.005, 0.004, and 0) for these blanks. All were corrected to conc. (i.e. 0.04) to get 0.125 ug/L as highest

JFC LH

MATRIX SPIKE RECOVERIES

Sample No.	MC1389	MC1391	MC1390			
Field Spike						
Lab Spike	✓	✓	✓			
Matrix	Aqueous	Aqueous	Aqueous			
Conc. Level	Low	Low	Low			
Method Std.						
Fraction	I, II	II (Hg)	III			

All matrix spike recoveries were within the established control ranges specified in; IFB WA82-A072, Exhibit E, Table 2. ___ Yes ✓ No

Exception(s):

Parameter	Accepted Range (%)	Actual % Rec.	Sample Number	Org. Result	Spike Added	Spike Result	Units
Lead	75-125%	57%	MC1389	ND	25	14	ug/l
Vanadium	80-120%	130%	MC1389	ND	4000	5190	ug/l
Mercury	75-125%	40%	MC1391	0.5	2	1.3	ug/l
Cyanide	80-120%	66%	MC1390	—	0.066	0.00	mg/l
Tin		14%	MC1389	12	100	26	ug/l

Comments: Detection limits for tin in sample MC1389 may be slightly higher than reported. (This may be due to a suppression effect, possibly from chlorides) Detection limits for tin in samples reported as ND are slightly higher than contracted d.l.'s.
MC1391 Result for mercury questioned by blank.

Duplicate Analysis Results

The applicable duplicate pairs are:

sample no.	MC 1389	MC 1391A	MC 1395			
Field duplicate		(or 1393)				
Lab duplicate	✓	✓	✓			
sample level	low	low	low			
sample matrix	Aqeous	Aqeous	Aqeous			
Fraction	F, T	Hg T	Cyanide T			

The relative percent difference (RPD) for each parameter group was evaluated. The duplicate analysis RPD acceptance criteria should be:

Fraction	maximum acceptable Percent Difference
All Aqeous Samples	20% Adopted for
All Solid Samples	40% review purposes.

The RPD's exceeding the maximum acceptable percent difference were:

Fraction	Compound	Actual RPD	Sample	Comparison conc.	Comparison conc.
I	Aluminum	45%	MC 1389	1410	890
I	Beryllium	(1) 200%	MC 1389	(2) ND	6
I	Zinc	(2) 200%	MC 1389	(2) ND	30
T	Selenium	(3) 200%	MC 1389	(2) ND	2

AR100182

Comments: (1), (2) & (3) values are not significant.
Mercury questioned by blank. AR 1390 Pg 393 identifies one in question. See cover page.

Initial Calibration Verification and Continuing Calibration Verification

Documentation indicates calibrations were performed and checked every ten samples: Yes ✓ No

Exceptions: _____

Calibrations and verifications were all within the control limits specified in

W/A82-A072 : Yes ✓ No

Outliers are listed below:

Parameter	Acceptable Range (%)	Calibration Identifier	% of True Value	Comments

Interference QC Results

Documentation indicates interference QC samples were run before and after every ten samples: Yes ___

Exceptions: N/A

Interference QC results were all within the control limits specified in

_____ : N/A Yes ___ No

Exceptions:

Parameter	Acceptable Range (%)	Calibration Identifier	% of True Value	Comments

Detection Limits Results

Detection limits were reported for all samples analyzed: Yes ✓ No ___

Exceptions: _____

Detection limits were less than or equal to the required detection limits specified in WA82-A022. Yes ✓ No ___

Exceptions: _____

Instrument Sensitivity Reports

Instrument sensitivity reports were documented for all parameters:

Yes ✓ No ___

Comments: _____

Other Remarks Concerning this Case:

NONE

AR100184

PROJECT NAME: HEIZER CREEK
TDD NO: F3-8308-29

EPA SITE NO.: WV-31
REGION: III

QUALITY ASSURANCE REVIEW OF INORGANIC ANALYTICAL DATA PACKAGE

Case No.: 2062
Contract No.:
Contract Laboratory: U.S Testing
Applicable IFB No.:
Reviewer: Anthony N. Enweze
Review Date:

Applicable Sample No's.:
MC1408, MC1392, MC1394, MC1412, MC1413, MC1409, MC1416, MC1418, MC1411, MC1419, MC1410 and MC.1417

The inorganic analytical data for this case has been reviewed. The quality assurance evaluation is summarized in the following table:

Reviewer's Evaluation*	Fraction			
	TASK I ICP or AA METALS	TASK II FURNACE AA METALS	TASK II COLD VAPOR AA MERCURY	TASK III CYANIDE
Acceptable		✓	✓	
Acceptable with exception(s)	✓ (1)(2)(3)			✓ (5)
Questionable				
Unacceptable				

* Definitions of the evaluation score categories are listed on next page.

This evaluation was based upon an analysis of the review items indicated below:

- ● DATA COMPLETENESS
- ● BLANK ANALYSIS RESULTS
- ● MATRIX SPIKE RESULTS
- ● DUPLICATE ANALYSIS RESULTS
- (4) ○ STANDARD ADDITIONS RESULTS
- ◒ QUANTITATIVE CALCULATIONS
- ● INITIAL CALIBRATION VERIFICATION
- ● CONTINUING CALIBRATION VERIFICATION
- ● INTERFERENCE QC RESULTS
- ● DETECTION LIMITS RESULTS
- ● INSTRUMENT SENSITIVITY REPORTS

Data review forms are attached for each of the review items indicated above.

╪ No errors noted, no form attached.

◒ Spot Check performed.

Comments: (1) See Blank analysis
(2) See Duplicate analysis
(3) See ICP interference check.
(4) Not applicable.
(5) No raw data supplied. Requested 11/16/84. Frank Bryanster

DATA EVALUATION SCORE CATEGORIES

ACCEPTABLE: Data is within established control limits, or the data which is outside established control limits does not affect the validity of the analytical results.

ACCEPTABLE WITH EXCEPTION(S): Data is not completely within established control limits. The deficiences are identified and specific data is still valid, given certain qualifications which are listed below.

QUESTIONABLE: Data is not within established control limits. The deficiences bring the validity of the entire data set into question. However, the data validity is neither proved nor disproved by the available information.

UNACCEPTABLE: Data is not within established control limits. The deficiences imply the results are not meaningful.

76048-1

BLANK ANALYSIS RESULTS

Aq% | Sol

TASK	TYPE / CONC / MATRIX	SAMPLE #	SOURCE OF H_2O	CONTAMINANTS (CONCENTRATION / DETECTION LIMIT)		
I	Prep. Blank #2	9/27/83	U.S Testing	Nickel (10 ug/L) 2	50	2.5
				Aluminum 208 ug/L) 2	1040	52
				Vanadium (5 ug/L) 2	50	2.5
I	Prep. Blank #2	9/27/83	U.S. Testing	Nickel (28 ug/L) 2	140	7.0
				Vanadium (20 ug/L) 2	100	5.0
I	Prep. Blank #1	9/28/83	U.S. Testing	Iron (39 ug/L) 2	195	10
				Silver (8 ug/L) 2	40	2.0
	Prep. Blank #2	9/28/83	U.S Testing	Iron (7 ug/L) 2	35	[illegible]
				Silver (12 ug/L) 2	60	3.
II + III	Prep. Blank		U.S. Testing	SEE FOOT NOTE. (3).		
I	Field. Blank low/solid	9/28/83 MC1408 76048/1	NUS	Barium (2 ug/L) 2	10	0.
				Copper (17 ug/L) 2	85	4.
II + III	Field Blank low/solid	MC1408 76048/1 9/27/83	NUS	Antimony, Tin, Lead, Cadmium, Arsenic, Selenium, Mercury → (3)		

LABORATORY REPORTED FIELD BLANK DATA IS COMPARED WITH THE SAMPLE DATA IN A TABULATION FORM WITHIN SAMPLE ANALYTICAL DATA SUMMARY.

COMMENTS:

(1) RESULT REPORTED BY LABORATORY AND CONFIRMED BY REVIEWER.

(2) RESULT INFERRED FROM RAW DATA

(3) No absorbance unit report to varify contamination, just below detection limit. Conc. were reported in less then values for all Field Blanks & prep blanks for task II parameters

AR100187

DATA COMPLETENESS	CONC./ MATRIX														
	TRAFFIC REPORT # MC	1408	1392	1394	1412	1413	1409	1416	1408	1411	1419	1412	1417		
	LAB I.D. #76048	-1	-2	-3	-6	-7	-4	-9	-10	-5	-11	-12	-8		
FIELD QC	BLANK	✓													
	DUPLICATE				✓		✓								
	SPIKE				✓				✓	✓					
TASK I: ICAP OR AA: METALS	RAW DATA	✓													
	TAB. RESULTS	✓													
	TAB. D.L.'s	✓													
	QA FORM	✓													
	ICAP INTER. QC	✓													
	INSTR. SENS.	✓													
TASK II: FURNACE AA: METALS	RAW DATA	✓													
	TAB. RESULTS	✓													
	TAB. D.L.'s	✓													
	QA FORM	✓													
	INSTR. SENS.	✓													
TASK II: COLD VAPOR AA: MERCURY	RAW DATA	✓													
	TAB. RESULTS	✓													
	TAB. D.L.'s	✓													
	QA FORM	✓													
	INSTR. SENS.	✓													
TASK III: CYANIDE	RAW DATA	✓													
	TAB. RESULTS	✓													
	TAB. D.L.'s	✓													
	QA FORM.	✓													
	INSTR. SENS.	✓													
OTHER (SPECIFY):	RAW DATA														
	TAB. RESULTS														
	TAB. D.L.'s														
	QA FORM														
	INSTR. SENS.														
OTHER (SPECIFY):	RAW DATA														
	TAB. RUSULTS														
	TAB. D.L.'s														
	QA FORM														
	INSTR. SENS.														

COMMENTS:

BLANK ANALYSIS RESULTS

Aq | Sol

TASK	TYPE	CONC	MATRIX	SAMPLE #	SOURCE OF H_2O	CONTAMINANTS (CONCENTRATION / DETECTION LIMI		
I	Field Blank			1760 48/1 MC4C8 9/27/89	HLS	Zinc (3 ug/L)	2	15 0.7
						Cobalt (10 ug/L)	2	50 2.5
						Nickel (31 ug/L)	2	155 7.7
						Chromium (5 ug/L)	2	25 1.2
						Aluminum (169 ug/L)	2	845 42

LABORATORY REPORTED FIELD BLANK DATA IS COMPARED WITH THE SAMPLE DATA IN A TABULATION FORM WITHIN SAMPLE ANALYTICAL DATA SUMMARY.

COMMENTS:

(1) RESULT REPORTED BY LABORATORY AND CONFIRMED BY REVIEWER.

(2) RESULT INFERRED FROM RAW DATA

MATRIX SPIKE RECOVERIES

Sample No.	MC 1411	MC 1417	MC 1412			
Field Spike						
Lab Spike						
Matrix	Solid	Solid	Solid			
Conc. Level	Medium	Low	Low			
Method Std.						
Fraction	I, II	Hg	III (W)			

All matrix spike recoveries were within the established control ranges specified in; IFB WA82-A072, Exhibit E, Table 2. ✓ Yes ___ No

Exception(s):

Parameter	Accepted Range (%)	Actual % Rec.	Sample Number	Org. Result	Spike Added	Spike Result	Units

Comments: NONE -

Duplicate Analysis Results

The applicable duplicate pairs are:

sample no.	MC 1409	MC 1412				
Field duplicate						
Lab duplicate	✓	✓				
sample level	low	low				
sample matrix	Solid	Solid				
Fraction	I, II,	III/CN				

The relative percent difference (RPD) for each parameter group was evaluated. The duplicate analysis RPD acceptance criteria should be:

Fraction	maximum acceptable Percent Difference	
All Aqeous	— 20%	Adopted for
All Solids	— 40%	Review purpos

The RPD's exceeding the maximum acceptable percent difference were:

Fraction	Compound	Actual RPD	Sample	Comparison conc.	conc.
I	Berium	50.7%	MC1409	383	228
I	Boron	(1) 200%	MC1409	1180	259

Comments: (1) Not significant because no results reported for B

Initial Calibration Verification and Continuing Calibration Verification

Documentation indicates calibrations were performed and checked every ten samples: Yes ✓ No

Exceptions: _____

Calibrations and verifications were all within the control limits specified in

K/A82-A072 : Yes ___ No

Outliers are listed below:

Parameter	Acceptable Range (%)	Calibration Identifier	% of True Value	Comments

Interference QC Results

Documentation indicates interference QC samples were run before and after every ten samples: Yes ✓ N

Exceptions: _____

Interference QC results were all within the control limits specified in

K/A82-A072 : Yes ___ No

Exceptions:

Parameter	Acceptable Range (%)	Calibration Identifier	% of True Value	Comments
Nickel	85-115			SEE NEXT PAGE.

AR100192

NUS CORPORATION
SUPERFUND DIVISION

QA PROJECT NOTES

INTERFERENCE Standards (ICP)

CASE NUMBER

	I.D. Amplitude 1 & 5			ID Amplitude 1 & 5			ID Amplitude #3			
METALS	FOUND	TRUE	%Rec.	FOUND	TRUE	%Rec.	FOUND	TRUE	%Rec.	
Aluminum	131	120	109	128	120	107				
Boron										
Barium										
Beryllium	.096	.100	96	.098	.100	98				
Calcium										
Chromium	.363	.300	121(1)	.373	.300	124(1)				
Cobalt	.314	.300	105	.329	.300	110				
Copper										
Iron	.507	.500	101	.520	.500	104				
Magnesium										
Manganese	.099	.200	50(2)	.132	.200	66(2)				
Nickel	.332	.200	166(3)	.380	.300	127(3)				
Silver							.280	.300	93	
Sodium										
Vanadium	.311	.300	104	.310	.300	103				
Zinc	.304	.300	101	.326	.300	109				

COMMENTS: (1) Recoveries are not significantly outside range and should not affect results.

~~(2) High discrepancy in recovery of Mn [illegible] to interference [illegible] beginning and end of analysis [illegible] should not affect the reported results.~~

(3) Recovery of Nickel is not significantly outside the acceptable window.

NUS 4434 08 1182

(2) Low recovery ~~ARE NOT~~ significant because solid sample results show higher typical variance to overshadow possible bias effect shown here

L

Detection Limits Results

Detection limits were reported for all samples analyzed: Yes ✓ No ___

Exceptions: _____

Detection limits were less than or equal to the required detection limits specified in WA82-A072. Yes ✓ No ___

Exceptions: _____

Instrument Sensitivity Reports

Instrument sensitivity reports were documented for all parameters:

Yes ✓ No ___

Comments: _____

Other Remarks Concerning this Case:

NONE

APPENDIX D

NOV - 2 1983

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
C-3885
SBP 1/16/84

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Enviredyne
Case No: 2062
Lab Sample ID No: C-3885
QC Report No: 1
Sample Matrix: Water
Contract No.: 68-01-6785
Data Release Authorized By:
Date Sample Received: 9-14-83

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/19/83
DATE ANALYZED: 10/5/83
PERCENT MOISTURE:

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	10 U
(22A)	59-50-7	p-chloro-m-cresol	10 U
(26A)	95-57-8	2- chlorophenol	10 U
(31A)	120-83-2	2,4-dichlorophenol	10 U
(34A)	105-67-9	2,4-dimethylphenol	10 U
(57A)	88-75-5	2- nitrophenol	20 U
(58A)	100-02-7	4-nitrophenol	50 U
(59A)	51-28-5	2,4-dinitrophenol	50 U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	20 U
(64A)	87-86-5	pentachlorophenol	10 U
(65A)	108-95-2	phenol	10 U
	65-85-0	benzoic acid	100 U
	95-48-7	2-methylphenol	5 U
	108-39-4	4-methylphenol	5 U
	95-95-4	2,4,5-trichlorophenol	100 U
(1B)	83-32-9	acenaphthene	10 U
(2B)	92-87-5	benzidine	40 U
(3B)	120-82-1	1,2,4-trichlorobenzene	10 U
(9B)	118-74-1	hexachlorobenzene	10 U
(12B)	67-72-1	hexachloroethane	10 U
(13B)	111-44-4	bis(2-chloroethyl)ether	10 U
(20B)	91-58-7	2-chloronaphthalene	10 U
(23B)	95-50-1	1,2-dichlorobenzene	10 U
(24B)	541-73-1	1,3-dichlorobenzene	10 U
(27B)	106-46-7	1,4-dichlorobenzene	10 U
(28B)	91-94-1	3,3'-dichlorobenzidine	20 U
(35B)	121-14-2	2,4-dinitrotoluene	20 U
(36B)	606-20-2	2,6-dinitrotoluene	20 U
(37B)	122-66-7	1,2-diphenylhydrazine	20 U
(39B)	206-44-0	fluoranthene	10 U
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10 U
(41B)	101-55-3	4-bromophenyl phenyl ether	10 U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	20 U

PP #	CAS #		ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	10 U
(53B)	77-47-4	hexachlorocyclopentadiene	10 U
(54B)	78-59-1	isophorone	10 U
(55B)	91-20-3	naphthalene	10 U
(56B)	98-95-3	nitrobenzene	10 U
(62B)	86-30-6	N-nitrosodiphenylamine	10 U
(63B)	621-64-7	N-nitrosodipropylamine	10 U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	NC B
(67B)	85-68-7	benzyl butyl phthalate	10 U
(68B)	84-74-2	di-n-butyl phthalate	2 J
(69B)	117-84-0	di-n-octyl phthalate	10 U
(70B)	84-66-2	diethyl phthalate	2 J
(71B)	131-11-3	dimethyl phthalate	10 U
(72B)	56-55-3	benzo(a)anthracene	10 U
(73B)	50-32-8	benzo(a)pyrene	20 U
(74B)	205-99-2	benzo(b)fluoranthene	20 U
(75B)	207-08-9	benzo(k)fluoranthene	20 U
(76B)	218-01-9	chrysene	20 U
(77B)	208-96-8	acenaphthylene	10 U
(78B)	120-12-7	anthracene	10 U
(79B)	191-24-2	benzo(ghi)perylene	20 U
(80B)	86-73-7	fluorene	10 U
(81B)	85-01-8	phenanthrene	10 U
(82B)	53-70-3	dibenzo(a,h)anthracene	20 U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20 U
(84B)	129-00-0	pyrene	10 U
	62-53-3	aniline	5
	100-51-6	benzyl alcohol	10
	106-47-8	4-chloroaniline	50 U
	132-64-9	dibenzofuran	10 U
	91-57-6	2-methylnaphthalene	20 U
	88-74-4	2-nitroaniline	100 U
	99-09-2	3-nitroaniline	100 U

ARI 1196

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OK 10/20 WPE

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
C-3335
S. Ben-Porat
1/16/84

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: ENVIRODYNE
Case No: 2062
Lab Sample ID No: C-3335
QC Report No: 1
Sample Matrix: Water
Contract No.: 68-01-6285
Data Release Authorized By: Sheldon Ben-Porat
Date Sample Received: 9-16-83

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 10/12/83
DATE ANALYZED: 10/12/83
PERCENT MOISTURE: _____

PP #	CAS #		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	100 U
(3V)	107-13-1	acrylonitrile	100 U
(6V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	1U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	5U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride - 793C	
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	ND
(50V)	75-71-8	dichlorodifluoromethane	ND
(51V)	124-48-1	chlorodibromomethane	5U
(53V)	127-18-4	tetrachloroethene	5U
(54V)	108-88-3	toluene	5U
(57V)	79-01-6	trichloroethene	5U
(58V)	75-01-4	vinyl chloride	10U
	67-64-1	acetone	5U
	78-93-3	2-butanone	5U
	75-15-0	carbon disulfide	1U
	519-78-6	2-hexanone	5U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U

AR100197

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/20/83
DATE ANALYZED: 10/5/83
PERCENT MOISTURE: _____

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	0.003 U
(90P)	60-57-1	dieldrin	0.003 U
(91P)	57-74-9	chlordane	0.010 U
(92P)	50-29-3	4,4'-DDT	0.004 U
(93P)	72-55-9	4,4'-DDE	0.005 U
(94P)	72-54-8	4,4'-DDD	0.003 U
(95P)	115-29-7	α-endosulfan	0.005 U
(96P)	115-29-7	β-endosulfan	0.007 U
(97P)	1031-07-8	endosulfan sulfate	0.005 U
(98P)	72-20-8	endrin	0.003 U
(99P)	7421-93-4	endrin aldehyde	0.004 U
(100P)	76-44-8	heptachlor	0.003 U
(101P)	1024-57-3	heptachlor epoxide	0.003 U
(102P)	319-84-6	α-BHC	0.002 U
(103P)	319-85-7	β-BHC	0.001 U
(104P)	319-86-8	δ-BHC	0.005 U
(105P)	58-89-9	γ-BHC (lindane)	0.003 U
(106P)	53469-21-9	PCB-1242	0.003 U
(107P)	11097-69-1	PCB-1254	0.100 U
(108P)	11104-28-2	PCB-1221	0.100 U
(109P)	11141-16-5	PCB-1232	0.100 U
(110P)	12672-29-6	PCB-1248	0.100 U
(111P)	11096-82-5	PCB-1260	0.100 U
(112P)	12674-11-2	PCB-1016	0.100 U
(113P)	8001-35-2	toxaphene	0.23 U

DIOXINS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/16/83
DATE ANALYZED: 9/17/83
PERCENT MOISTURE: _____

PP #	CAS #		ug/l or ug/kg (circle one)
(129D)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	N.A.

Exhibit B
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ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number
C3335

Laboratory Name: ENVIRODYNE Case No: 2.62

QC Report No:

B. Tentatively Identified Compounds

	CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Data Allowed (See Matching Section: Specify _____)	Estimated Concentration (ug/L or ug/kg)
1.	NO	Significant Search	B/N-1			
2.						
3.	13391	1,4-dioxane	VOA	15.1	0.97	44
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						
16.						
17.						
18.						
19.						
20.						
21.						
22.						
23.						
24.						
25.						
26.						
27.						
28.						
29.						
30.						

6/82

FORM II (continued)

NOV - 2 198

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
C-3336

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Enviredyne
Case No: 2062
Lab Sample ID No: C-3336
QC Report No: 1
Sample Matrix: Water
Contract No.: 68-01-6785
Data Release Authorized By: Sheldon Bin-Pomat
Date Sample Received: 9-16-83

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/19/83
DATE ANALYZED: 10/6/83
PERCENT MOISTURE: _____

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	10 U
(22A)	59-50-7	p-chloro-m-cresol	10 U
(26A)	95-57-8	2- chlorophenol	10 U
(31A)	120-83-2	2,4-dichlorophenol	10 U
(36A)	105-67-9	2,4-dimethylphenol	10 U
(57A)	88-75-5	2- nitrophenol	20 U
(58A)	100-02-7	4-nitrophenol	50 U
(59A)	51-28-5	2,4-dinitrophenol	50 U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	20 U
(64A)	87-86-5	pentachlorophenol	10 U
(65A)	108-95-2	phenol	10 U
	65-85-0	benzoic acid	100 U
	95-48-7	2-methylphenol	5 U
	108-39-4	4-methylphenol	5 U
	95-95-4	2,4,5-trichlorophenol	100 U
(1B)	83-32-9	acenaphthene	10 U
(5B)	92-87-5	benzidine	40 U
(8B)	120-82-1	1,2,4-trichlorobenzene	10 U
(9B)	118-74-1	hexachlorobenzene	10 U
(12B)	67-72-1	hexachloroethane	10 U
(18B)	111-44-4	bis(2-chloroethyl)ether	10 U
(20B)	91-58-7	2-chloronaphthalene	10 U
(25B)	95-50-1	1,2-dichlorobenzene	10 U
(26B)	541-73-1	1,3-dichlorobenzene	10 U
(27B)	106-46-7	1,4-dichlorobenzene	10 U
(28B)	91-94-1	3,3'-dichlorobenzidine	20 U
(29B)	121-14-2	2,4-dinitrotoluene	20 U
(30B)	606-20-2	2,6-dinitrotoluene	20 U
(32B)	122-66-7	1,2-diphenylhydrazine	20 U
(33B)	206-44-0	fluoranthene	10 U
(34B)	7005-72-3	4-chlorophenyl phenyl ether	10 U
(35B)	101-55-3	4-bromophenyl phenyl ether	10 U

AR100199

PP #	CAS #		ug/l or ug/kg (circle one)
(37B)	87-68-3	hexachlorobutadiene	10 U
(38B)	77-47-4	hexachlorocyclopentadiene	10 U
(39B)	78-59-1	isophorone	10 U
(55B)	91-20-3	naphthalene	10 U
(56B)	98-95-3	nitrobenzene	10 U
(62B)	86-30-6	N-nitrosodiphenylamine	10 U
(63B)	621-64-7	N-nitrosodipropylamine	10 U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	10 C
(67B)	85-68-7	benzyl butyl phthalate	10 U
(68B)	84-74-2	di-n-butyl phthalate	2
(69B)	117-84-0	di-n-octyl phthalate	10 U
(70B)	84-66-2	diethyl phthalate	— 1
(71B)	131-11-3	dimethyl phthalate	10 U
(72B)	56-55-3	benzo(a)anthracene	10 U
(73B)	50-32-8	benzo(a)pyrene	20 U
(74B)	205-99-2	benzo(b)fluoranthene	20 U
(75B)	207-08-9	benzo(k)fluoranthene	20 U
(76B)	218-01-9	chrysene	20 U
(77B)	208-96-8	acenaphthylene	10 U
(78B)	120-12-7	anthracene	10 U
(79B)	191-24-2	benzo(ghi)perylene	20 U
(80B)	86-73-7	fluorene	10 U
(81B)	85-01-8	phenanthrene	10 U
(82B)	53-70-3	dibenzo(a,h)anthracene	20 U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20 U
(84B)	129-00-0	pyrene	10 U
	62-53-3	aniline	5 U
	100-51-6	benzyl alcohol	100 U
	106-47-8	4-chloroaniline	50 U
	132-64-9	dibenzofuran	10 U
	91-57-6	2-methylnaphthalene	20 U
	88-74-4	2-nitroaniline	100 U
	99-09-2	3-nitroaniline	100 U

HSV - 2 138.

OK 10/20 WPC

U.S. ENVIRONMENTAL PROTECTION AGENCY • CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 • FTS/557-2490

Sample Number
C-3336
SBP 1/14/84

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: ENVIRODYNE
Lab Sample ID No: C-3336
Sample Matrix: Water
Data Release Authorized By: Sharon Bo-Pratt

Case No: 2062
QC Report No: 1
Contract No.: 68-01-6785
Date Sample Received: 9-16-83

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED: 10-19-83
PERCENT MOISTURE:

PP #	CAS #		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	100 U
(3V)	107-13-1	acrylonitrile	100 U
(6V)	71-43-2	benzene	5U
(5V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	1U
(11V)	71-55-6	1,1,1-trichloroethane	10
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	NDB
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	5U
(38V)	100-01-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	> 5U 2C
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	ND
(50V)	75-71-8	dichlorodifluoromethane	ND
(51V)	124-48-1	chlorodibromomethane	5U
(53V)	127-18-4	tetrachloroethene	5U
(54V)	108-88-3	toluene	NDB
(57V)	79-01-6	trichloroethene	5U
(58V)	75-01-4	vinyl chloride	10U
	67-64-1	acetone	5U
	78-93-3	2-butanone	5U
	75-15-0	carbondisulfide	1U
	519-78-6	2-hexanone	AR100200 10U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/20/83
DATE ANALYZED: 10/5/83
PERCENT MOISTURE:

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	0.003U
(90P)	60-57-1	dieldrin	0.003U
(91P)	57-74-9	chlordane	0.01U
(92P)	50-29-3	4,4'-DDT	0.01U
(93P)	72-55-9	4,4'-DDE	0.01U
(94P)	72-54-8	4,4'-DDD	0.01U
(95P)	115-29-7	α-endosulfan	0.00
(96P)	115-29-7	β-endosulfan	0.01
(97P)	1031-07-8	endosulfan sulfate	0.01
(98P)	72-20-8	endrin	0.01U
(99P)	7421-93-4	endrin aldehyde	0.01U
(100P)	76-44-8	heptachlor	0.00
(101P)	1024-57-3	heptachlor epoxide	0.00
(102P)	319-84-6	α-BHC	0.00
(103P)	319-85-7	β-BHC	0.00
(104P)	319-86-8	δ-BHC	0.00
(105P)	58-89-9	γ-BHC (lindane)	0.00
(106P)	53469-21-9	PCB-1242	0.10
(107P)	11097-69-1	PCB-1254	0.10
(108P)	11104-28-2	PCB-1221	0.10
(109P)	11141-16-5	PCB-1232	0.10
(110P)	12672-29-6	PCB-1248	0.10
(111P)	11096-82-5	PCB-1260	0.10
(112P)	12674-11-2	PCB-1016	0.10
(113P)	8001-35-2	toxaphene	0.23

DIOXINS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/16/83
DATE ANALYZED: 9/17/83
PERCENT MOISTURE:

AR100200

PP #	CAS #		ug/l or ug/kg (circle one)
(129D)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	N.A.

NUV - 21

Exhibit B
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ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number
33336
SBP 1/16/84.

Laboratory Name ENVIRODYNE Case No 2062

QC Report No

B. Tentatively Identified Compounds

	CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Blank Allowed (Max Multiplier Relative Specify: 1.0000)	Estimated Concentration (ug/l or ug/kg)
1.	83745	dicyclopentane	A/A-A	24.3	6.9812	5.
2.						
3.	separate fr AROCH		VOA			
4.						
5.						
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6/82

FORM II (continued)

NOV - 2 1983

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
C-3337

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Envirodyne
Lab Sample ID No: C-3337
Sample Matrix: Water
Data Release Authorized By: Sharon Du-Pont

Case No: 2062
QC Report No: 1
Contract No.: 68-01-6785
Date Sample Received: 9-16-83

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/19/83
DATE ANALYZED: 10/6/83
PERCENT MOISTURE: _____

ARI002.02

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	10 U
(22A)	59-50-7	p-chloro-m-cresol	10 U
(24A)	95-57-8	2- chlorophenol	10 U
(31A)	120-83-2	2,4-dichlorophenol	10 U
(34A)	105-67-9	2,4-dimethylphenol	10 U
(57A)	88-75-5	2- nitrophenol	20 U
(58A)	100-02-7	4-nitrophenol	50 U
(59A)	51-28-5	2,4-dinitrophenol	50 U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	20 U
(64A)	87-86-5	pentachlorophenol	10 U
(65A)	108-95-2	phenol	10 U
	65-85-0	benzoic acid	100 U
	95-48-7	2-methylphenol	5 U
	108-39-4	4-methylphenol	5 U
	95-95-4	2,4,5-trichlorophenol	100 U
(1B)	83-32-9	acenaphthene	10 U
(3B)	92-87-5	benzidine	40 U
(8B)	120-82-1	1,2,4-trichlorobenzene	10 U
(9B)	118-74-1	hexachlorobenzene	10 U
(12B)	67-72-1	hexachloroethane	10 U
(13B)	111-44-4	bis(2-chloroethyl)ether	10 U
(20B)	91-58-7	2-chloronaphthalene	10 U
(23B)	95-50-1	1,2-dichlorobenzene	10 U
(24B)	541-73-1	1,3-dichlorobenzene	10 U
(27B)	106-46-7	1,4-dichlorobenzene	10 U
(28B)	91-94-1	3,3'-dichlorobenzidine	20 U
(29B)	121-14-2	2,4-dinitrotoluene	20 U
(30B)	606-20-2	2,6-dinitrotoluene	20 U
(32B)	122-66-7	1,2-diphenylhydrazine	20 U
(33B)	206-44-0	fluoranthene	10 U
(34B)	7005-72-3	4-chlorophenyl phenyl ether	10 U
(35B)	101-55-3	4-bromophenyl phenyl ether	10 U
(36B)	39638-32-9	bis (2-chloroisopropyl) ether	20 U

PP #	CAS #		ug/l or ug/kg (circle one)
(37B)	87-68-3	hexachlorobutadiene	10 U
(38B)	77-47-4	hexachlorocyclopentadiene	10 U
(39B)	78-59-1	isophorone	10 U
(55B)	91-20-3	naphthalene	10 U
(56B)	98-95-3	nitrobenzene	10 U
(42B)	86-30-6	N-nitrosodiphenylamine	10 U
(43B)	621-64-7	N-nitrosodipropylamine	10 U
(44B)	117-81-7	bis (2-ethylhexyl) phthalate	A - B
(47B)	85-68-7	benzyl butyl phthalate	10 U
(48B)	84-74-2	di-n-butyl phthalate	3
(49B)	117-84-0	di-n-octyl phthalate	10 U
(70B)	84-66-2	diethyl phthalate	5
(71B)	131-11-3	dimethyl phthalate	10 U
(72B)	56-55-3	benzo(a)anthracene	10 U
(73B)	50-32-8	benzo(a)pyrene	20 U
(74B)	205-99-2	benzo(b)fluoranthene	20 U
(75B)	207-08-9	benzo(k)fluoranthene	20 U
(76B)	218-01-9	chrysene	20 U
(77B)	208-96-8	acenaphthylene	10 U
(78B)	120-12-7	anthracene	10 U
(79B)	191-24-2	benzo(ghi)perylene	20 U
(80B)	86-73-7	fluorene	10 U
(81B)	85-01-8	phenanthrene	10 U
(82B)	53-70-3	dibenz(a,h)anthracene	20 U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20 U
(84B)	129-00-0	pyrene	10 U
	62-53-3	aniline	5 U
	100-51-6	benzyl alcohol	100 U
	106-47-8	4-chloroaniline	50 U
	132-64-9	dibenzofuran	10 U
	91-57-6	2-methylnaphthalene	20 U
	88-74-4	2-nitroaniline	100 U
	99-09-2	3-nitroaniline	100 U

ARI002.02

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U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
C-3337
SBP 11/16/83

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: ENVIRODYNE
Case No: 2062
Lab Sample ID No: C-3337
QC Report No: 1
Sample Matrix: WATER
Contract No.: 68-01-6785
Data Release Authorized By: Gheraldine Bow-Powell
Date Sample Received: 9-14-83

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 10/12/83
DATE ANALYZED: 10/12/83
PERCENT MOISTURE:

PP #	CAS #		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(6V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	1U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	5U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	NDB
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	ND
(50V)	75-71-8	dichlorodifluoromethane	ND
(51V)	124-48-1	chlorodibromomethane	5U
(53V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	10U
	67-64-1	acetone	5U
	78-93-3	2-butanone	5U
	75-15-0	carbon disulfide	ND
	519-78-6	2-hexanone	U
	108-10-1	4-methyl-2-pentanone	U
	100-42-5	styrene	5U
		vinyl acetate	

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/20/83
DATE ANALYZED: 10/15/83
PERCENT MOISTURE:

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	0.003U
(90P)	60-57-1	dieldrin	0.002U
(91P)	57-74-9	chlordane	0.01U
(92P)	50-29-3	4,4'-DDT	0.004U
(93P)	72-55-9	4,4'-DDE	0.005U
(94P)	72-54-8	4,4'-DDD	0.003U
(95P)	115-29-7	α-endosulfan	0.005U
(96P)	115-29-7	β-endosulfan	0.002U
(97P)	1031-07-8	endosulfan sulfate	0.002U
(98P)	72-20-8	endrin	0.004U
(99P)	7421-93-4	endrin aldehyde	0.003U
(100P)	76-44-8	heptachlor	0.002U
(101P)	1024-57-3	heptachlor epoxide	0.002U
(102P)	319-84-6	α-BHC	0.005U
(103P)	319-85-7	β-BHC	0.0067U
(104P)	319-86-8	δ-BHC	0.003U
(105P)	58-89-9	γ-BHC (lindane)	0.0056
(106P)	53469-21-9	PCB-1242	0.100U
(107P)	11097-69-1	PCB-1254	0.100U
(108P)	11104-28-2	PCB-1221	0.100U
(109P)	11141-16-5	PCB-1232	0.100U
(110P)	12672-29-6	PCB-1248	0.100U
(111P)	11096-82-5	PCB-1260	0.100U
(112P)	12674-11-2	PCB-1016	0.100U
(113P)	8001-35-2	toxaphene	0.23U

DIOXINS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/16/83
DATE ANALYZED: 9/19/83
PERCENT MOISTURE:

AR100203

PP #	CAS #		ug/l or ug/kg (circle one)
(129D)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	N.A.

GC/MS ANALYSIS DATA SHEET - Page 3

Sample Number
23337.1
SOP 1/16/87

Laboratory Name: ENVIRODYNE Case No: 2062

QC Report No:

B. Tentatively Identified Compounds

	CAS #	Compound Name	Fraction	Scan No. or Retention Time	Maximum Score Attained Mass Matching Reverse Search	Estimated Concentration (ug/L or ug/kg)
1.	827167	1,2,3,4-tetramethyl-2,4-cyclopentadiene	B/N-A	16.0	0.951	1*
2.		hexahydrindazole				
3.						
4.	123911	1,4-dioxane	VOA	15.1	0.978	17
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U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number: C-3338

OK 10/31 WPC

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Envirodyne Engrs. Inc
Lab Sample ID No: C-3338
Sample Matrix: Soil
Data Release Authorized By: [signature]

Case No: 2062
QC Report No: 1
Contract No.: 68-01-6785
Date Sample Received: 9/16/83

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: NA
DATE ANALYZED: 10/9/83
PERCENT MOISTURE: 23 +/-%

PP #	CAS #		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	200U
(3V)	107-13-1	acrylonitrile	200U
(6V)	71-43-2	benzene	1
(6V)	56-23-5	carbon tetrachloride	10U
(7V)	108-90-7	chlorobenzene	20U
(10V)	107-06-2	1,2-dichloroethane	40U
(11V)	71-55-6	1,1,1-trichloroethane	NDB
(13V)	75-34-3	1,1-dichloroethane	40U
(14V)	79-00-5	1,1,2-trichloroethane	40U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	20U
(16V)	75-00-3	chloroethane	60U
(19V)	110-75-8	2-chloroethylvinyl ether	40U
(23V)	67-66-3	chloroform	NDB
(29V)	75-35-4	1,1-dichloroethene	40U
(30V)	156-60-5	trans-1,2-dichloroethene	40U
(32V)	78-87-5	1,2-dichloropropane	40U
(33V)	10061-02-6	trans-1,3-dichloropropene	20U
	10061-01-05	cis-1,3-dichloropropene	20U
(38V)	100-41-4	ethylbenzene	20U
(44V)	75-09-2	methylene chloride	NPB
(45V)	74-87-3	chloromethane	20U
(46V)	74-83-9	bromomethane	60U
(47V)	75-25-2	bromoform	40U
(48V)	75-27-4	bromodichloromethane	40U
(49V)	75-69-4	fluorotrichloromethane	—
(50V)	75-71-8	dichlorodifluoromethane	—
(51V)	124-48-1	chlorodibromomethane	20U
(85V)	127-18-4	tetrachloroethene	20U
(86V)	108-88-3	toluene	NDB
(87V)	79-01-6	trichloroethene	20U
(88V)	75-01-4	vinyl chloride	60U
	67-64-1	acetone	200U
	78-93-3	2-butanone	200U
	75-15-0	carbondisulfide	20U
	519-78-6	2-hexanone	40U
	108-10-1	4-methyl-2-pentanone	60U
	100-42-5	styrene	20U
	108-05-4	vinyl acetate	20U
	1330-20-7	total xylenes	20U

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/20/83
DATE ANALYZED: 10/6/83
PERCENT MOISTURE: 20.4%

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	0.142 U
(90P)	60-57-1	dieldrin	0.126U
(91P)	57-74-9	chlordane	1.50 U
(92P)	50-29-3	4,4'-DDT	0.183U
(93P)	72-55-9	4,4'-DDE	0.247U
(94P)	72-54-8	4,4'-DDD	0.194U
(95P)	115-29-7	α-endosulfan	0.214U
(96P)	115-29-7	β-endosulfan	0.112U
(97P)	1031-07-8	endosulfan sulfate	0.254U
(98P)	72-20-8	endrin	0.182U
(99P)	7421-93-4	endrin aldehyde	0.202U
(100P)	76-44-8	heptachlor	0.137U
(101P)	1024-57-3	heptachlor epoxide	0.135U
(102P)	319-84-6	α-BHC	0.230U
(103P)	319-85-7	β-BHC	0.118U
(104P)	319-86-8	δ-BHC	0.150U
(105P)	58-89-9	γ-BHC (lindane)	0.142U
(106P)	53469-21-9	PCB-1242	3.98U
(107P)	11097-69-1	PCB-1254	2.512U
(108P)	11104-28-2	PCB-1221	8.0 U
(109P)	11141-16-5	PCB-1232	8.88U
(110P)	12672-29-6	PCB-1248	3.936U
(111P)	11096-82-5	PCB-1260	3.24U
(112P)	12674-11-2	PCB-1016	3.20
(113P)	8001-35-2	toxaphene	3.02U

DIOXINS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/7/83
DATE ANALYZED: 9/8/83
PERCENT MOISTURE: 20.4%

PP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	N.A.

July 1983

ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
ite 815, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
C-3338

NOV - 2 1983

SDP 11/14/84

ORGANICS ANALYSIS DATA SHEET

ratory Name: Enviredyne
Sample ID No: C-3338
le Matrix: Soil
Release Authorized By: [signature]

Case No: 2062
QC Report No: 1
Contract No.: 68-01-6785
Date Sample Received: 9/16/83

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/20/83
DATE ANALYZED: 10/7/83
PERCENT MOISTURE: _____

AR100206

			ug/l or ug/kg (circle one)				ug/l or ug/kg (circle one)
P#	CAS #			PP #	CAS #		
(11A)	88-06-2	2,4,6- trichlorophenol	800 U	(52B)	87-68-3	hexachlorobutadiene	800 U
(22A)	59-50-7	p-chloro-m-cresol	400 U	(53B)	77-47-4	hexachlorocyclopentadiene	800 U
(6A)	95-57-8	2- chlorophenol	200 U	(54B)	78-59-1	isophorone	100 U
(31A)	120-83-2	2,4-dichlorophenol	300 U	(55B)	91-20-3	naphthalene	+ 963
(34A)	105-67-9	2,4-dimethylphenol	+ 213	(56B)	98-95-3	nitrobenzene	200 U
(7A)	88-75-5	2- nitrophenol	400 U	(62B)	86-30-6	N-nitrosodiphenylamine	350 U
(58A)	100-02-7	4-nitrophenol	350 U	(63B)	621-64-7	N-nitrosodipropylamine	200 U
(59A)	51-28-5	2,4-dinitrophenol	700 U	(66B)	117-81-7	bis (2-ethylhexyl) phthalate	1738
(60A)	534-52-1	4,6-dinitro-2-methylphenol	700 U	(67B)	85-68-7	benzyl butyl phthalate	150 U
(64A)	87-86-5	pentachlorophenol	42	(68B)	84-74-2	di-n-butyl phthalate	+ NDB
(65A)	108-95-2	phenol	226	(69B)	117-84-0	di-n-octyl phthalate	+ 19
	65-85-0	benzoic acid	400 U	(70B)	84-66-2	diethyl phthalate	NDB
	95-48-7	2-methylphenol	200 U	(71B)	131-11-3	dimethyl phthalate	150 U
	108-39-4	4-methylphenol	375	(72B)	56-55-3	benzo(a)anthracene	+ 755
	95-95-4	2,4,5-trichlorophenol	400 U	(73B)	50-32-8	benzo(a)pyrene	+ 1274
(1B)	83-32-9	acenaphthene	+ 26	(74B)	205-99-2	benzo(b)fluoranthene	+ 1900
(5B)	92-87-5	benzidine	700 U	(75B)	207-08-9	benzo(k)fluoranthene	+
(8B)	120-82-1	1,2,4-trichlorobenzene	300 U	(76B)	218-01-9	chrysene	+ 814
(9B)	118-74-1	hexachlorobenzene	350 U	(77B)	208-96-8	acenaphthylene	+ 498
(12B)	67-72-1	hexachloroethane	500 U	(78B)	120-12-7	anthracene	+ 229
(15B)	111-44-4	bis(2-chloroethyl)ether	150 U	(79B)	191-24-2	benzo(ghi)perylene	+ 572
(20B)	91-58-7	2-chloronaphthalene	200 U	(80B)	86-73-7	fluorene	+ 159
(25B)	95-50-1	1,2-dichlorobenzene	200 U	(81B)	85-01-8	phenanthrene	+ 1940
(26B)	541-73-1	1,3-dichlorobenzene	200 U	(82B)	53-70-3	dibenzo(a,h)anthracene	350 U
(27B)	106-46-7	1,4-dichlorobenzene	49	(83B)	193-39-5	indeno(1,2,3-cd)pyrene	+ 461
(28B)	91-94-1	3,3'-dichlorobenzidine	700 U	(84B)	129-00-0	pyrene	+ 2250
(35B)	121-14-2	2,4-dinitrotoluene	350 U		62-53-3	aniline	150 U
(36B)	606-20-2	2,6-dinitrotoluene	800 U		100-51-6	benzyl alcohol	200 U
(37B)	122-66-7	1,2-diphenylhydrazine	150 U		106-47-8	4-chloroaniline	300 U
(39B)	206-44-0	fluoranthene	+ 2950		132-64-9	dibenzofuran	+ 421
(40B)	7005-72-3	4-chlorophenyl phenyl ether	150 U		91-57-6	2-methylnaphthalene	+ 1080
(41B)	101-55-3	4-bromophenyl phenyl ether	350 U		88-74-4	2-nitroaniline	400 U
	39638-32-9	bis (2-chloroisopropyl) ether	150 U		99-09-2	3-nitroaniline	350 U
			200 U		100-01-6	4-nitroaniline	350 U

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ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number C-3358

SBP 1/16/84

Laboratory Name: Envirodyne Case No: 2062

QC Report No:

B. Tentatively Identified Compounds

	CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Ions Amount (Mass Matching Score: Specify .8000)	Estimated Concentration (ug/L or ug/kg)
1.	463490	allene	VOA	9.2	.9782	14
2.	60297	diethyl ether	"	12.4	.9761	20
3.	109660	n-pentane	"	14.2	.7712	9
4.	123911	1,4 dioxane	"	14.8	.9709	10
5.	93583	methyl benzoate	B/N-A	11.2	.9810	590
6.	90120	1-methylnaphthalene	"	14.9	.9808	1900
7.	629505	n-tridecane	"	20.0	.9810	685
8.	1054500	octa-sulphur	"	23.8	.9795	4710
9.	573988	1,2-dimethylnaphthalene	"	16.5	.9813	1380
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NOV - 2 1983

OK 10/20 WPB

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
C-5339
SBP 11/16/84

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: ENVIRODYNE
Lab Sample ID No: C-5339
Sample Matrix: Water
Data Release Authorized By: Charles Ben-Pont

Case No: 2062
QC Report No: 1
Contract No.: 68-01-6785
Date Sample Received: 9-16-83

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED: 10/19/83
PERCENT MOISTURE:

FF #	CAS #		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	100 U
(3V)	107-13-1	acrylonitrile	100 U
(4V)	71-43-2	benzene	5 U
(5V)	56-23-5	carbon tetrachloride	5 U
(7V)	108-90-7	chlorobenzene	5 U
(10V)	107-06-2	1,2-dichloroethane	1 U
(11V)	71-55-6	1,1,1-trichloroethane	> 7
(13V)	75-34-3	1,1-dichloroethane	5 U
(14V)	79-00-5	1,1,2-trichloroethane	5 U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	100 U
(16V)	75-00-3	chloroethane	100 U
(19V)	110-75-8	2-chloroethylvinyl ether	100 U
(23V)	67-66-3	chloroform	NDB
(29V)	75-35-4	1,1-dichloroethene	5 U
(30V)	156-60-5	trans-1,2-dichloroethene	5 U
(32V)	78-87-5	1,2-dichloropropane	100 U
(33V)	10061-02-6	trans-1,3-dichloropropene	5 U
	10061-01-05	cis-1,3-dichloropropene	5 U
(38V)	100-41-4	ethylbenzene	5 U
(44V)	75-09-2	methylene chloride	NDB
(45V)	74-87-3	chloromethane	10 U
(46V)	74-83-9	bromomethane	10 U
(47V)	75-25-2	bromoform	10 U
(48V)	75-27-4	bromodichloromethane	5 U
(49V)	75-69-4	fluorotrichloromethane	ND
(50V)	75-71-8	dichlorodifluoromethane	ND
(51V)	124-48-1	chlorodibromomethane	5 U
(53V)	127-18-4	tetrachloroethene	5 U
(54V)	108-88-3	toluene	5 U
(57V)	79-01-6	trichloroethene	21
(58V)	75-01-4	vinyl chloride	10 U
	67-64-1	acetone	5 U
	78-93-3	2-butanone	5 U
	75-15-0	carbon disulfide	1 U
	519-78-6	2-hexanone	5 U
	108-10-1	4-methyl-2-pentanone	5 U
	100-42-5	styrene	5 U

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/16/83
DATE ANALYZED: 10/5/83
PERCENT MOISTURE:

FF #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	0.003 U
(90P)	60-57-1	dieldrin	0.003 U
(91P)	57-74-9	chlordane	0.010 U
(92P)	50-29-3	4,4'-DDT	0.004 U
(93P)	72-55-9	4,4'-DDE	0.031 U
(94P)	72-54-8	4,4'-DDD	0.003 U
(95P)	115-29-7	α-endosulfan	0.005 U
(96P)	115-29-7	β-endosulfan	0.007
(97P)	1031-07-8	endosulfan sulfate	0.005
(98P)	72-20-8	endrin	0.008 U
(99P)	7421-93-4	endrin aldehyde	0.004 U
(100P)	76-44-8	heptachlor	0.003 U
(101P)	1024-57-3	heptachlor epoxide	0.005 U
(102P)	319-84-6	α-BHC	0.003 U
(103P)	319-85-7	β-BHC	0.005 U
(104P)	319-86-8	δ-BHC	0.007
(105P)	58-89-9	γ-BHC (lindane)	0.004 U
(106P)	53469-21-9	PCB-1242	0.100 U
(107P)	11097-69-1	PCB-1254	0.100 U
(108P)	11104-28-2	PCB-1221	0.100 U
(109P)	11141-16-5	PCB-1232	0.100 U
(110P)	12672-29-6	PCB-1248	0.100 U
(111P)	11096-82-5	PCB-1260	0.100 U
(112P)	12674-11-2	PCB-1016	0.100 U
(113P)	8001-35-2	toxaphene	0.23 U

DIOXINS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/16/83
DATE ANALYZED: 9/27/83
PERCENT MOISTURE:

FF #	CAS #		ug/l or ug/kg (circle one)
(129D)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	N.A.

AR100208

RUV - 2 1983

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
C-3339
SDP 1/16/84

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Enviredyne
Case No: 2062
Lab Sample ID No: C-3339
QC Report No: 1
Sample Matrix: water
Contract No.: 68-01-6785
Data Release Authorized By: Marlene Bien-Ernst
Date Sample Received: 9-14-83

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/19/83
DATE ANALYZED: 10/5/83
PERCENT MOISTURE: _____

ARI00209

PP #	CAS #		ug/l or ug/kg (circle one)	PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	10 U	(52B)	87-68-3	hexachlorobutadiene	10 U
(22A)	59-50-7	p-chloro-m-cresol	10 U	(53B)	77-47-4	hexachlorocyclopentadiene	10 U
(26A)	95-57-8	2- chlorophenol	10 U	(54B)	78-59-1	isophorone	10 U
(31A)	120-83-2	2,4-dichlorophenol	10 U	(55B)	91-20-3	naphthalene	10 U
(36A)	105-67-9	2,4-dimethylphenol	10 U	(56B)	98-95-3	nitrobenzene	10 U
(57A)	88-75-5	2- nitrophenol	20 U	(62B)	86-30-6	N-nitrosodiphenylamine	10 U
(58A)	100-02-7	4-nitrophenol	50 U	(63B)	621-64-7	N-nitrosodipropylamine	10 U
(59A)	51-28-5	2,4-dinitrophenol	50 U	(66B)	117-81-7	bis (2-ethylhexyl) phthalate	~ 193
(60A)	534-52-1	4,6-dinitro-2-methylphenol	20 U	(67B)	85-68-7	benzyl butyl phthalate	10 U
(64A)	87-86-5	pentachlorophenol	10 U	(68B)	84-74-2	di-n-butyl phthalate	~ 3
(65A)	108-95-2	phenol	10 U	(69B)	117-84-0	di-n-octyl phthalate	10 U
	65-85-0	benzoic acid	100 U	(70B)	84-66-2	diethyl phthalate	~ 1.0
	95-48-7	2-methylphenol	5 U	(71B)	131-11-3	dimethyl phthalate	10 U
	108-39-4	4-methylphenol	5 U	(72B)	56-55-3	benzo(a)anthracene	10 U
	95-95-4	2,4,5-trichlorophenol	100 U	(73B)	50-32-8	benzo(a)pyrene	20 U
(1B)	83-32-9	acenaphthene	10 U	(74B)	205-99-2	benzo(b)fluoranthene	20 U
(5B)	92-87-5	benzidine	40 U	(75B)	207-08-9	benzo(k)fluoranthene	20 U
(8B)	120-82-1	1,2,4-trichlorobenzene	10 U	(76B)	218-01-9	chrysene	20 U
(9B)	118-74-1	hexachlorobenzene	10 U	(77B)	208-96-8	acenaphthylene	10 U
(12B)	67-72-1	hexachloroethane	10 U	(78B)	120-12-7	anthracene	10 U
(15B)	111-44-4	bis(2-chloroethyl)ether	10 U	(79B)	191-24-2	benzo(ghi)perylene	20 U
(20B)	91-58-7	2-chloronaphthalene	10 U	(80B)	86-73-7	fluorene	10 U
(23B)	95-50-1	1,2-dichlorobenzene	10 U	(81B)	85-01-8	phenanthrene	10 U
(24B)	541-73-1	1,3-dichlorobenzene	10 U	(82B)	53-70-3	dibenzo(a,h)anthracene	20 U
(27B)	106-46-7	1,4-dichlorobenzene	10 U	(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20 U
(28B)	91-94-1	3,3'-dichlorobenzidine	20 U	(84B)	129-00-0	pyrene	10 U
(33B)	121-14-2	2,4-dinitrotoluene	20 U		62-53-3	aniline	5 U
(34B)	606-20-2	2,6-dinitrotoluene	20 U		100-51-6	benzyl alcohol	100 U
(37B)	122-66-7	1,2-diphenylhydrazine	20 U		106-47-8	4-chloroaniline	50 U
(39B)	206-44-0	fluoranthene	10 U		132-64-9	dibenzofuran	10 U
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10 U		91-57-6	2-methylnaphthalene	20 U
(41B)	101-55-3	4-bromophenyl phenyl ether	10 U		88-74-4	2-nitroaniline	100 U
(42B)	7650-32-9	bis (2-chloroisopropyl) ether	20 U R	1112 U	99-09-2	3-nitroaniline	100 U
(43B)	111-91-1	bis (2-chloroethoxy) methane	20 U		100-01-6	4-nitroaniline	100 U

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number
33939
SBP 1/16/84

Laboratory Name ENVIRODYNE Case No. 2010

QC Report No.

B. Tentatively Identified Compounds

	CAS #	Compound Name	Fraction	Scan No. or Retention Time	Maximum Score Attained Mass Matching Routine: (Specify:)	Estimated Concentration (ug/l or ug/kg)
1.	103795	dioctyl adipate	B/N	24.9	1.9963	354
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3.	no peaks > 20%		VOA			
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U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
C-3340

ORGANICS ANALYSIS DATA SHEET

OK 10/21 NOV - 2 1983

Laboratory Name: Engineering Enger Inc
Case No: 2062 WPC
Lab Sample ID No: C-3340
QC Report No: 1
Sample Matrix: Soil
Contract No.: 68-01-6785
Data Release Authorized By:
Date Sample Received: 9/16/83

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: NA
DATE ANALYZED: 10/19/83
PERCENT MOISTURE: 18.6

PP #	CAS #		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	200 U
(3V)	107-13-1	acrylonitrile	200 U
(4V)	71-43-2	benzene	< 1
(5V)	56-23-5	carbon tetrachloride	60 U
(7V)	108-90-7	chlorobenzene	20 U
(10V)	107-06-2	1,2-dichloroethane	40 U
(11V)	71-55-6	1,1,1-trichloroethane	NDB
(13V)	75-34-3	1,1-dichloroethane	40 U
(14V)	79-00-5	1,1,2-trichloroethane	40 U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	20 U
(16V)	75-00-3	chloroethane	60 U
(19V)	110-75-8	2-chloroethylvinyl ether	40 U
(23V)	67-66-3	chloroform	NDB
(29V)	75-35-4	1,1-dichloroethene	40 U
(30V)	156-60-5	trans-1,2-dichloroethene	40 U
(32V)	78-87-5	1,2-dichloropropane	40 U
(33V)	10061-02-6	trans-1,3-dichloropropene	20 U
	10061-01-05	cis-1,3-dichloropropene	20 U
(38V)	100-41-4	ethylbenzene	20 U
(44V)	75-09-2	methylene chloride	NDB
(45V)	74-87-3	chloromethane	20 U
(46V)	74-83-9	bromomethane	60 U
(47V)	75-25-2	bromoform	40 U
(48V)	75-27-4	bromodichloromethane	40 U
(49V)	75-69-4	fluorotrichloromethane	—
(50V)	75-71-8	dichlorodifluoromethane	—
(51V)	124-48-1	chlorodibromomethane	20 U
(53V)	127-18-4	tetrachloroethene	20 U
(86V)	108-88-3	toluene	NDB
(87V)	79-01-6	trichloroethene	20 U
(88V)	75-01-4	vinyl chloride	60 U
	67-64-1	acetone	200 U
	78-93-3	2-butanone	200 U
	75-15-0	carbon disulfide	20 U
	519-78-6	2-hexanone	40 U
	108-10-1	4-methyl-2-pentanone	60 U
	100-42-5	styrene	20 U
	108-05-4	vinyl acetate	40 U
	1330-20-7	total xylenes	20 U

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/20/83
DATE ANALYZED: 10/5/83
PERCENT MOISTURE: 18.6

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	0.142 U
(90P)	60-57-1	dieldrin	0.126 U
(91P)	57-74-9	chlordane	1.50 U
(92P)	50-29-3	4,4'-DDT	0.193 U
(93P)	72-55-9	4,4'-DDE	0.247 U
(94P)	72-54-8	4,4'-DDD	0.1446 U
(95P)	115-29-7	α-endosulfan	0.814 U
(96P)	115-29-7	β-endosulfan	0.112 U
(97P)	1031-07-8	endosulfan sulfate	0.254 U
(98P)	72-20-8	endrin	0.182 U
(99P)	7421-93-4	endrin aldehyde	0.202 U
(100P)	76-44-8	heptachlor	0.137 U
(101P)	1024-57-3	heptachlor epoxide	0.135 U
(102P)	319-84-6	α-BHC	0.230 U
(103P)	319-85-7	β-BHC	0.118 U
(104P)	319-86-8	δ-BHC	0.150 U
(105P)	58-89-9	γ-BHC (lindane)	0.142 U
(106P)	53469-21-9	PCB-1242	3.42 U
(107P)	11097-69-1	PCB-1254	2.512 U
(108P)	11104-28-2	PCB-1221	8.0 U
(109P)	11141-16-5	PCB-1232	8.88 U
(110P)	12672-29-6	PCB-1248	2.936 U
(111P)	11096-82-5	PCB-1260	3.24 U
(112P)	12674-11-2	PCB-1016	3.20 U
(113P)	8001-35-2	toxaphene	3.02

DIOXINS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/27/83
DATE ANALYZED: 9/27/83
PERCENT MOISTURE: 18.6

PP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	N.A.

AR100211

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number: C-3340

SOP 1/16/84 NOV - 2

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Enviredyne
Lab Sample ID No: C-3340
Sample Matrix: Soil
Data Release Authorized By:

Case No: 2062
QC Report No: 1
Contract No.: 68-01-6795
Date Sample Received: 9/22/83

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/30/83
DATE ANALYZED: 10/7/83
PERCENT MOISTURE:

AR100212

PP #	CAS #		ug/L or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	800 U
(22A)	59-50-7	p-chloro-m-cresol	400 U
(26A)	95-57-8	2- chlorophenol	200 U
(31A)	120-83-2	2,4-dichlorophenol	300 U
(34A)	105-67-9	2,4-dimethylphenol	454
(57A)	88-75-5	2- nitrophenol	400 U
(58A)	100-02-7	4-nitrophenol	350 U
(59A)	51-28-5	2,4-dinitrophenol	700 U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	700 U
(64A)	87-86-5	pentachlorophenol	350 U
(65A)	108-95-2	phenol	150 U
	65-85-0	benzoic acid	400 U
	95-48-7	2-methylphenol	974
	108-39-4	4-methylphenol	200 U
	95-95-4	2,4,5-trichlorophenol	400 U
(1B)	83-32-9	acenaphthene	89
(5B)	92-87-5	benzidine	700 U
(8B)	120-82-1	1,2,4-trichlorobenzene	300 U
(9B)	118-74-1	hexachlorobenzene	350 U
(12B)	67-72-1	hexachloroethane	500 U
(13B)	111-44-4	bis(2-chloroethyl)ether	150 U
(20B)	91-58-7	2-chloronaphthalene	200 U
(25B)	95-50-1	1,2-dichlorobenzene	200 U
(26B)	541-73-1	1,3-dichlorobenzene	200 U
(27B)	106-46-7	1,4-dichlorobenzene	31
(28B)	91-94-1	3,3'-dichlorobenzidine	700 U
(35B)	121-14-2	2,4-dinitrotoluene	350 U
(36B)	606-20-2	2,6-dinitrotoluene	800 U
(37B)	122-66-7	1,2-diphenylhydrazine	150 U
(39B)	206-44-0	fluoranthene	801
(40B)	7005-72-3	4-chlorophenyl phenyl ether	150 U
(41B)	101-55-3	4-bromophenyl phenyl ether	350 U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	150 U

PP #	CAS #		ug/L or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	900 U
(53B)	77-47-4	hexachlorocyclopentadiene	800 U
(54B)	78-59-1	isophorene	100 U
(55B)	91-20-3	naphthalene	724
(56B)	98-95-3	nitrobenzene	31
(62B)	86-30-6	N-nitrosodiphenylamine	350 U
(63B)	621-64-7	N-nitrosodipropylamine	200 U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	2826
(67B)	85-68-7	benzyl butyl phthalate	150 U
(68B)	84-74-2	di-n-butyl phthalate	NDB
(69B)	117-84-0	di-n-octyl phthalate	100 U
(70B)	84-66-2	diethyl phthalate	NDB
(71B)	131-11-3	dimethyl phthalate	200 U
(72B)	56-55-3	benzo(a)anthracene	2916
(73B)	50-32-8	benzo(a)pyrene	577
(74B)	205-99-2	benzo(b)fluoranthene (co-elute)	590
(75B)	207-08-9	benzo(k)fluoranthene	
(76B)	218-01-9	chrysene	363
(77B)	208-96-8	acenaphthylene	169
(78B)	120-12-7	anthracene	135
(79B)	191-24-2	benzo(ghi)perylene	392
(80B)	86-73-7	fluorene	76
(81B)	85-01-8	phenanthrene	807
(82B)	53-70-3	dibenz(a,h)anthracene	350 U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	265
(84B)	129-00-0	pyrene	678
	62-53-3	aniline	150 U
	100-51-6	benzyl alcohol	200 U
	106-47-8	4-chloroaniline	300 U
	132-64-9	dibenzofuran	321
	91-57-6	2-methylnaphthalene	970
	88-74-4	2-nitroaniline	400 U
	99-09-2	3-nitroaniline	350 U
	100-01-6	4-nitroaniline	350 U

AR100212

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number C-3340
SBP 1/16/84

Laboratory Name Envirodyne Case No 2062

QC Report No

B. Tentatively Identified Compounds

	CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Score Attained Mean Matching Reverse (Specify: 1.0000)	Estimated Concentration (ug/L or ug/kg)
1.	124403	dimethylamine	VOA	1.2	.7826	20
2.	463490	allene	"	2.9	.9782	5
3.	123911	1,4-dioxane	"	14.5	.9783	6
4.	—	compound not in EPA/NIH	"	22.5	—	4
5.		library				
6.	594821	2,2,3,3-tetramethyl-	"	24.2	.9697	6
7.		butane				
8.	591877	allyl acetate	B/N-A	4.2	.9708	1670
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NOV - 2

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
C-B341
SDP 1/16/84

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Enviro dyne
Lab Sample ID No: C-B341
Sample Matrix: Water
Data Release Authorized By: Abraham Ben-Tovim

Case No: 8062
QC Report No: 1
Contract No.: 68-01-6765
Date Sample Received: 9-16-83

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/19/83
DATE ANALYZED: 10/5/83
PERCENT MOISTURE: _____

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	10 U
(22A)	59-50-7	p-chloro-m-cresol	10 U
(26A)	95-57-8	2- chlorophenol	10 U
(31A)	120-83-2	2,4-dichlorophenol	10 U
(34A)	105-67-9	2,4-dimethylphenol	10 U
(37A)	88-75-5	2- nitrophenol	20 U
(38A)	100-02-7	4-nitrophenol	50 U
(39A)	51-28-5	2,4-dinitrophenol	50 U
(40A)	534-52-1	4,6-dinitro-2-methylphenol	20 U
(44A)	87-86-5	pentachlorophenol	10 U
(45A)	108-95-2	phenol	10 U
	65-85-0	benzoic acid	100 U
	95-48-7	2-methylphenol	5 U
	108-39-4	4-methylphenol	5 U
	95-95-4	2,4,5-trichlorophenol	100 U
(1B)	83-32-9	acenaphthene	10 U
(5B)	92-87-5	benzidine	40 U
(8B)	120-82-1	1,2,4-trichlorobenzene	10 U
(9B)	118-74-1	hexachlorobenzene	10 U
(12B)	67-72-1	hexachloroethane	10 U
(15B)	111-44-4	bis(2-chloroethyl)ether	10 U
(20B)	91-58-7	2-chloronaphthalene	10 U
(25B)	95-50-1	1,2-dichlorobenzene	10 U
(26B)	541-73-1	1,3-dichlorobenzene	10 U
(27B)	106-46-7	1,4-dichlorobenzene	10 U
(28B)	91-94-1	3,3'-dichlorobenzidine	20 U
(33B)	121-14-2	2,4-dinitrotoluene	20 U
(34B)	606-20-2	2,6-dinitrotoluene	20 U
(37B)	122-66-7	1,2-diphenylhydrazine	20 U
(39B)	206-44-0	fluoranthene	10 U
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10 U
(41B)	101-55-3	4-bromophenyl phenyl ether	10 U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	20 U
(43B)	111-91-1	bis (2-chloroethoxy) methane	20 U

PP #	CAS #		ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	10 U
(53B)	77-47-4	hexachlorocyclopentadiene	10 U
(54B)	78-59-1	isophorone	10 U
(55B)	91-20-3	naphthalene	10 U
(56B)	98-95-3	nitrobenzene	10 U
(62B)	86-30-6	N-nitrosodiphenylamine	10 U
(63B)	621-64-7	N-nitrosodipropylamine	10 U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	NDR
(67B)	85-68-7	benzyl butyl phthalate	10 U
(68B)	84-74-2	di-n-butyl phthalate	10
(69B)	117-84-0	di-n-octyl phthalate	10 U
(70B)	84-66-2	diethyl phthalate	2
(71B)	131-11-3	dimethyl phthalate	10 U
(72B)	56-55-3	benzo(a)anthracene	10 U
(73B)	50-32-8	benzo(a)pyrene	20 U
(74B)	205-99-2	benzo(b)fluoranthene	20 U
(75B)	207-08-9	benzo(k)fluoranthene	20 U
(76B)	218-01-9	chrysene	20 U
(77B)	208-96-8	acenaphthylene	10 U
(78B)	120-12-7	anthracene	10 U
(79B)	191-24-2	benzo(ghi)perylene	20 U
(80B)	86-73-7	fluorene	10 U
(81B)	85-01-8	phenanthrene	10 U
(82B)	53-70-3	dibenzo(a,h)anthracene	20 U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20 U
(84B)	129-00-0	pyrene	10 U
	62-53-3	aniline	5
	100-51-6	benzyl alcohol	10
	106-47-8	4-chloroaniline	20 U
	132-64-9	dibenzofuran	10 U
	91-57-6	2-methylnaphthalene	20 U
	88-74-4	2-nitroaniline	100 U
	99-09-2	3-nitroaniline	100 U
	100-01-6	4-nitroaniline	100 U

100214

WDF - 2

OK 10/20 WPE

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Sample Number
C-3341
SBP 1/4/84

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: ENVIRODYNE
Case No: 2062
Lab Sample ID No: C-3341
QC Report No: 1
Sample Matrix: WATER
Contract No.: 68-01-6785
Data Release Authorized By: Stephen Ben-Porat
Date Sample Received: 9-16-83

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED: 10/19/83
PERCENT MOISTURE:

FF #	CAS #		(CLP) ug/l or mg/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(5V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	1U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	6U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	NDB
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	10U
(35V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	5U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	3130C
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	ND
(50V)	75-71-8	dichlorodifluoromethane	ND
(51V)	124-48-1	chlorodibromomethane	5U
(53V)	127-18-4	tetrachloroethene	5U
(54V)	108-88-3	toluene	NDB
(57V)	79-01-6	trichloroethene	5U
(58V)	75-01-4	vinyl chloride	10U
	67-64-1	acetone	5U
	78-93-3	2-butanone	5U
	75-15-0	carbon disulfide	NDB
	591-78-6	2-hexanone	5U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/20/83
DATE ANALYZED: 10/5/83
PERCENT MOISTURE:

FF #	CAS #		(ug/l) ug/kg (circle one)
(89P)	309-00-2	aldrin	0.003U
(90P)	60-57-1	dieldrin	0.007U
(91P)	57-74-9	chlordane	0.01U
(92P)	50-29-3	4,4'-DDT	0.004U
(93P)	72-55-9	4,4'-DDE	0.005U
(94P)	72-54-8	4,4'-DDD	0.007U
(95P)	115-29-7	α-endosulfan	0.005U
(96P)	115-29-7	β-endosulfan	0.007U
(97P)	1031-07-8	endosulfan sulfate	0.005U
(98P)	72-20-8	endrin	0.003U
(99P)	7421-93-4	endrin aldehyde	0.004U
(100P)	76-44-8	heptachlor	0.003U
(101P)	1024-57-3	heptachlor epoxide	0.003U
(102P)	319-84-6	α-BHC	0.002U
(103P)	319-85-7	β-BHC	0.005U
(104P)	319-86-8	δ-BHC	0.003U
(105P)	58-89-9	γ-BHC (lindane)	0.003U
(106P)	53469-21-9	PCB-1242	0.10U
(107P)	11097-69-1	PCB-1254	0.10U
(108P)	11104-28-2	PCB-1221	0.10U
(109P)	11141-16-5	PCB-1232	0.10U
(110P)	12672-29-6	PCB-1248	0.10U
(111P)	11096-82-5	PCB-1260	0.10U
(112P)	12674-11-2	PCB-1016	0.10U
(113P)	8001-35-2	toxaphene	0.23U

DIOXINS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/16/83
DATE ANALYZED: 9/17/83
PERCENT MOISTURE:

FF #		(ug/l or ug/kg (circle one))
(129D)	2,3,7,8-tetrachlorodibenzo-p-dioxin	N.A

AR100215

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number
3941
SDP 1/16/84

Laboratory Name: ENVIRODYNE Case No.: No. 2012

QC Report No.:

B. Tentatively Identified Compounds

	CAS #	Compound Name	Fraction	Scan No. or Retention Time	Q (Maximum Score Attained Mass Matching Reviewer: Specify:)	Estimated Concentration (ug/L or ug/kg)
1.		No Peaks to Search	B/N-A			
2.						
3.	123911	1,4-dioxane	VOA	14.7	0.9726	50
4.						
5.						
6.						
7.						
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9.						
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30.						

6/82

NOV - 2 1983

OK 10/20 WPC

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - FTS/557-2490

Sample Number
C-3350
SBP 11/16/83

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: ENVIRODYNE
Case No: 3062
Lab Sample ID No: C-3350
QC Report No: 1
Sample Matrix: Water
Contract No.: 68-01-6785
Data Release Authorized By: [signature]
Date Sample Received: 9-16-83

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED: 10/19/83
PERCENT MOISTURE:

FP #	CAS #		ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	<1
(5V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	1U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	NDB 1
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	5U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	NDB 2.5B
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	ND
(50V)	75-71-8	dichlorodifluoromethane	ND
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	NDB 5.0
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	10U
	67-64-1	acetone	5U
	78-93-3	2-butanone	5U
	75-15-0	carbon disulfide	1U
	591-78-6	2-hexanone	5U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/20/83
DATE ANALYZED: 10/5/83
PERCENT MOISTURE:

FP #	CAS #		ug/kg (circle one)
(89P)	309-00-2	aldrin	0.003U
(90P)	60-57-1	dieldrin	0.005U
(91P)	57-74-9	chlordane	0.010U
(92P)	50-29-3	4,4'-DDT	0.005U
(93P)	72-55-9	4,4'-DDE	0.005U
(94P)	72-54-8	4,4'-DDD	0.003U
(95P)	115-29-7	α-endosulfan	0.005U
(96P)	115-29-7	β-endosulfan	0.007U
(97P)	1031-07-8	endosulfan sulfate	0.005U
(98P)	72-20-8	endrin	0.003U
(99P)	7421-93-4	endrin aldehyde	0.004U
(100P)	76-44-8	heptachlor	0.002U
(101P)	1024-57-3	heptachlor epoxide	0.003U
(102P)	319-84-6	α-BHC	0.002U
(103P)	319-85-7	β-BHC	0.005U
(104P)	319-86-8	δ-BHC	0.003U
(105P)	58-89-9	γ-BHC (lindane)	0.002C FF
(106P)	53469-21-9	PCB-1242	0.100U
(107P)	11097-69-1	PCB-1254	0.100U
(108P)	11104-28-2	PCB-1221	0.100U
(109P)	11141-16-5	PCB-1232	0.100U
(110P)	12672-29-6	PCB-1248	0.100U
(111P)	11096-82-5	PCB-1260	0.100U
(112P)	12674-11-2	PCB-1016	0.100U
(113P)	8001-35-2	toxaphene	0.23U

DIOXINS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/16/83
DATE ANALYZED: 9/17/83
PERCENT MOISTURE:

FP #	CAS #		ug/l or ug/kg (circle one)
(179P)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	N.A.

NOV - 2 1983

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
C-8350 Blank
SBP 1/16/84

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Enviredyne
Lab Sample ID No: C-8350
Sample Matrix: Water
Data Release Authorized By: [signature]
Case No: 2062
QC Report No: 1
Contract No.: 68-01-6785
Date Sample Received: 9-14-83

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/19/83
DATE ANALYZED: 10/6/83
PERCENT MOISTURE: _____

FF #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	10 U
(22A)	59-50-7	p-chloro-m-cresol	10 U
(26A)	95-57-8	2- chlorophenol	10 U
(31A)	120-83-2	2,4-dichlorophenol	10 U
(34A)	105-67-9	2,4-dimethylphenol	10 U
(37A)	88-75-5	2- nitrophenol	20 U
(38A)	100-02-7	4-nitrophenol	50 U
(39A)	51-28-5	2,4-dinitrophenol	50 U
(40A)	534-52-1	4,6-dinitro-2-methylphenol	20 U
(44A)	87-86-5	pentachlorophenol	10 U
(45A)	108-95-2	phenol	14.2
	65-85-0	benzoic acid	100 U
	95-48-7	2-methylphenol	5 U
	108-39-4	4-methylphenol	5 U
	95-95-4	2,4,5-trichlorophenol	100 U
(1B)	83-32-9	acenaphthene	10 U
(5B)	92-87-5	benzidine	40 U
(8B)	120-82-1	1,2,4-trichlorobenzene	10 U
(9B)	118-74-1	hexachlorobenzene	10 U
(12B)	67-72-1	hexachloroethane	10 U
(15B)	111-44-4	bis(2-chloroethyl)ether	10 U
(20B)	91-58-7	2-chloronaphthalene	10 U
(25B)	95-50-1	1,2-dichlorobenzene	10 U
(26B)	541-73-1	1,3-dichlorobenzene	10 U
(27B)	106-46-7	1,4-dichlorobenzene	10 U
(28B)	91-94-1	3,3'-dichlorobenzidine	20 U
(32B)	121-14-2	2,4-dinitrotoluene	20 U
(34B)	606-20-2	2,6-dinitrotoluene	20 U
(37B)	122-66-7	1,2-diphenylhydrazine	20 U
(39B)	206-44-0	fluoranthene	10 U
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10 U
(41B)	101-55-3	4-bromophenyl phenyl ether	10 U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	20 U

FF #	CAS #		ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	10 U
(53B)	77-47-4	hexachlorocyclopentadiene	10 U
(54B)	78-59-1	isophorone	10 U
(55B)	91-20-3	naphthalene	10 U
(56B)	98-95-3	nitrobenzene	10 U
(62B)	86-30-6	N-nitrosodiphenylamine	10 U
(63B)	621-64-7	N-nitrosodipropylamine	10 U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	NCB
(67B)	85-68-7	benzyl butyl phthalate	10 U
(68B)	84-74-2	di-n-butyl phthalate	2.
(69B)	117-84-0	di-n-octyl phthalate	10 U
(70B)	84-66-2	diethyl phthalate	1
(71B)	131-11-3	dimethyl phthalate	10 U
(72B)	56-55-3	benzo(a)anthracene	10 U
(73B)	50-32-8	benzo(a)pyrene	20 U
(74B)	205-99-2	benzo(b)fluoranthene	20 U
(75B)	207-08-9	benzo(k)fluoranthene	20 U
(76B)	218-01-9	chrysene	20 U
(77B)	208-96-8	acenaphthylene	10 U
(78B)	120-12-7	anthracene	10 U
(79B)	191-24-2	benzo(ghi)perylene	20 U
(80B)	86-73-7	fluorene	10 U
(81B)	85-01-8	phenanthrene	10 U
(82B)	53-70-3	dibenzo(a,h)anthracene	20 U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20 U
(84B)	129-00-0	pyrene	10 U
	62-53-3	aniline	5
	100-51-6	benzyl alcohol	100 U
			50 U
	AR.100218		10 U
			20 U
	88-74-4	2-nitroaniline	100 U
	99-09-2	3-nitroaniline	100 U

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
C3351

OLC 10/31 WPC NOV - 2 1993

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Enviredyne Engrs. Inc.
Lab Sample ID No: C3351
Sample Matrix: Soil
Data Release Authorized By: [signature]

Case No: 2062
QC Report No: #1
Contract No.: 68-01-6785
Date Sample Received: 9/16/93

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: N/A
DATE ANALYZED: 10/19/93
PERCENT MOISTURE: -

FF #	CAS #		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	200 U
(3V)	107-13-1	acrylonitrile	200 U
(5V)	71-43-2	benzene	1
(6V)	56-23-5	carbon tetrachloride	10 U
(7V)	108-90-7	chlorobenzene	20 U
(10V)	107-06-2	1,2-dichloroethane	40 U
(11V)	71-55-6	1,1,1-trichloroethane	NDB
(13V)	75-34-3	1,1-dichloroethane	40 U
(18V)	79-00-5	1,1,2-trichloroethane	40 U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	20 U
(16V)	75-00-3	chloroethane	40 U
(19V)	110-75-8	2-chloroethylvinyl ether	40 U
(23V)	67-66-3	chloroform	NDB
(29V)	75-35-4	1,1-dichloroethene	40 U
(30V)	156-60-5	trans-1,2-dichloroethene	40 U
(32V)	78-87-5	1,2-dichloropropane	40 U
(33V)	10061-02-6	trans-1,3-dichloropropene	20 U
	10061-01-05	cis-1,3-dichloropropene	20 U
(38V)	100-41-4	ethylbenzene	20 U
(44V)	75-09-2	methylene chloride	125
(45V)	74-87-3	chloromethane	20 U
(46V)	74-83-9	bromomethane	40 U
(47V)	75-25-2	bromoform	40 U
(48V)	75-27-4	bromodichloromethane	40 U
(49V)	75-69-4	fluorotrichloromethane	-
(50V)	75-71-8	dichlorodifluoromethane	-
(51V)	124-48-1	chlorodibromomethane	20 U
(85V)	127-18-4	tetrachloroethene	20 U
(86V)	108-88-3	toluene	NDB
(87V)	79-01-6	trichloroethene	1
(88V)	75-01-4	vinyl chloride	40 U
	67-64-1	acetone	200 U
	78-93-3	2-butanone	200 U
	75-15-0	carbon disulfide	20 U
	519-78-6	2-hexanone	20
	108-10-1	4-methyl-2-pentanone	18
	100-42-5	styrene	20 U
	108-05-4	vinyl acetate	-
	1330-20-7	total xylenes	20 U

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/20/93
DATE ANALYZED: 10/2/93
PERCENT MOISTURE: -

FF #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	0.143 U
(90P)	60-57-1	dieldrin	0.126 U
(91P)	57-74-9	chlordane	1.50 U
(92P)	50-29-3	4,4'-DDT	0.123 U
(93P)	72-55-9	4,4'-DDE	0.247 U
(94P)	72-54-8	4,4'-DDD	0.144 U
(95P)	115-29-7	α-endosulfan	0.21 U
(96P)	115-29-7	β-endosulfan	0.112 U
(97P)	1031-07-8	endosulfan sulfate	0.284 U
(98P)	72-20-8	endrin	0.182 U
(99P)	7421-93-4	endrin aldehyde	0.20 U
(100P)	76-44-8	heptachlor	0.137 U
(101P)	1024-57-3	heptachlor epoxide	0.135 U
(102P)	319-84-6	α-BHC	0.210 U
(103P)	319-85-7	β-BHC	0.112 U
(104P)	319-86-8	δ-BHC	0.158 U
(105P)	58-89-9	γ-BHC (lindane)	0.145 U
(106P)	53469-21-9	PCB-1242	3.46 U
(107P)	11097-69-1	PCB-1254	2.51 U
(108P)	11104-28-2	PCB-1221	8.00 U
(109P)	11141-16-5	PCB-1232	8.18 U
(110P)	12672-29-6	PCB-1248	2.93 U
(111P)	11096-82-5	PCB-1260	3.24 U
(112P)	12674-11-2	PCB-1016	3.20 U
(113P)	8001-35-2	toxaphene	9.00 U

DIOXINS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/17/93
DATE ANALYZED: 9/18/93
PERCENT MOISTURE: -

FF #	CAS #		ug/l or ug/kg (circle one)
(129D)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	N.A.

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Sample Number
C-3351
NOV - 2
SBP 1/14/94

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Compuchem
Lab Sample ID No: C-3351
Sample Matrix: Soil
Data Release Authorized By: [signature]

Case No: 2062
QC Report No: /
Contract No.: 68-D0-6785
Date Sample Received: 9/16/93

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/19/93
DATE ANALYZED: 10/6/93
PERCENT MOISTURE: _____

PP #	CAS #		ug/l ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	800 U
(22A)	59-50-7	p-chloro-m-cresol	400 U
(26A)	95-57-8	2- chlorophenol	200 U
(31A)	120-83-2	2,4-dichlorophenol	300 U
(34A)	105-67-9	2,4-dimethylphenol	400 U
(57A)	88-75-5	2- nitrophenol	400 U
(58A)	100-02-7	4-nitrophenol	350 U
(59A)	51-28-5	2,4-dinitrophenol	700 U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	700 U
(64A)	87-86-5	pentachlorophenol	350 U
(65A)	108-95-2	phenol	91
	65-85-0	benzoic acid	400 U
	95-48-7	2-methylphenol	200 U
	108-39-4	4-methylphenol	200 U
	95-95-4	2,4,5-trichlorophenol	400 U
(1B)	83-32-9	acenaphthene	150 U
(5B)	92-87-5	benzidine	700 U
(8B)	120-82-1	1,2,4-trichlorobenzene	300 U
(9B)	118-74-1	hexachlorobenzene	350 U
(12B)	67-72-1	hexachloroethane	500 U
(13B)	111-44-4	bis(2-chloroethyl)ether	150 U
(20B)	91-58-7	2-chloronaphthalene	200 U
(23B)	95-50-1	1,2-dichlorobenzene	200 U
(24B)	541-73-1	1,3-dichlorobenzene	200 U
(27B)	106-46-7	1,4-dichlorobenzene	200 U
(28B)	91-94-1	3,3'-dichlorobenzidine	700 U
(35B)	121-14-2	2,4-dinitrotoluene	350 U
(36B)	606-20-2	2,6-dinitrotoluene	800 U
(37B)	122-66-7	1,2-diphenylhydrazine	150 U
(39B)	206-44-0	fluoranthene	100 U
(40B)	7005-72-3	4-chlorophenyl phenyl ether	150 U
(41B)	101-55-3	4-bromophenyl phenyl ether	350 U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	150 U
(43B)	111-91-1	bis (2-chloroethoxy) methane	200 U

PP #	CAS #		ug/l ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	800 U
(53B)	77-47-4	hexachlorocyclopentadiene	800 U
(54B)	78-59-1	isophorone	100 U
(55B)	91-20-3	naphthalene	100 U
(56B)	98-95-3	nitrobenzene	20
(62B)	86-30-6	N-nitrosodiphenylamine	3
(63B)	621-64-7	N-nitrosodipropylamine	200 U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	NDB
(67B)	85-68-7	benzyl butyl phthalate	150 U
(68B)	84-74-2	di-n-butyl phthalate	NDB
(69B)	117-84-0	di-n-octyl phthalate	100 U
(70B)	84-66-2	diethyl phthalate	NDB
(71B)	131-11-3	dimethyl phthalate	200 U
(72B)	56-55-3	benzo(a)anthracene	100 U
(73B)	50-32-8	benzo(a)pyrene	6000 U
(74B)	205-99-2	benzo(b)fluoranthene	200 U
(75B)	207-08-9	benzo(k)fluoranthene	200 U
(76B)	218-01-9	chrysene	100 U
(77B)	208-96-8	acenaphthylene	100 U
(78B)	120-12-7	anthracene	100 U
(79B)	191-24-2	benzo(ghi)perylene	300 U
(80B)	86-73-7	fluorene	150 U
(81B)	85-01-8	phenanthrene	100 U
(82B)	53-70-3	dibenzo(a,h)anthracene	350 U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	300 U
(84B)	129-00-0	pyrene	100 U
	62-53-3	aniline	150 U
	100-51-6	benzyl alcohol	200
	106-47-8	4-chloroaniline	300
	132-64-9	dibenzofuran	100 U
	91-57-6	2-methylnaphthalene	200 U
	88-74-4		400 U
	99	AR.100220	350 U
	100		350 U

SBP 1/16/84

Sample Number
C-3351

ORGANICS ANALYSIS DATA SHEET - Page 3

NOV - 5 1983

Laboratory Name: Envirodyne Case No: 2062
QC Report No:

B. Tentatively Identified Compounds

	CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Score Attained Mass Matching Routine: (Specify: 1.0000)	Estimated Concentration (ug/L or ug/kg)
1.	—	Compound not in library	VOA	7.5	—	46
2.	109660	n-pentane	"	13.2	.7761	11
3.	—	no peaks for library search	B/N-A	—	—	—
4.						
5.						
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6/82

AR100221

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1/4/87 SOP

Sample Number C-3352

NOV - 2 1983

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Envirodyne
Lab Sample ID No: C-3352
Sample Matrix: Soil
Data Release Authorized By: [signature]

Case No: 2062
QC Report No: 1
Contract No.: 68-01-6795
Date Sample Received: 9/16/83

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/20/83
DATE ANALYZED: 10/7/83
PERCENT MOISTURE: _____

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	9110
(22A)	59-50-7	p-chloro-m-cresol	800 U
(26A)	95-57-8	2- chlorophenol	400 U
(31A)	120-83-2	2,4-dichlorophenol	600 U
(34A)	105-67-9	2,4-dimethylphenol	33300
(57A)	88-75-5	2- nitrophenol	800 U
(58A)	100-02-7	4-nitrophenol	700 U
(59A)	51-28-5	2,4-dinitrophenol	14000 U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	1400 U
(64A)	87-86-5	pentachlorophenol	700 U
(65A)	108-95-2	phenol	4560
	65-85-0	benzoic acid	800 U
	95-48-7	2-methylphenol	400 U
	108-39-4	4-methylphenol	60600
	95-95-4	2,4,5-trichlorophenol	21300
(1B)	83-32-9	acenaphthene	300 U
(5B)	92-87-5	benzidine	1400 U
(8B)	120-82-1	1,2,4- trichlorobenzene	600 U
(9B)	118-74-1	hexachlorobenzene	700 U
(12B)	67-72-1	hexachloroethane	1000 U
(18B)	111-44-4	bis(2-chloroethyl)ether	300 U
(20B)	91-58-7	2-chloronaphthalene	400 U
(25B)	95-50-1	1,2-dichlorobenzene	64
(26B)	541-73-1	1,3-dichlorobenzene	400 U
(27B)	106-46-7	1,4-dichlorobenzene	153
(28B)	91-94-1	3,3'-dichlorobenzidine	1400 U
(35B)	121-14-2	2,4-dinitrotoluene	700 U
(36B)	606-20-2	2,6-dinitrotoluene	1600 U
(37B)	122-66-7	1,2-diphenylhydrazine	300 U
(39B)	206-44-0	fluoranthene	260
(40B)	7005-72-3	4-chlorophenyl phenyl ether	300 U
(41B)	101-55-3	4-bromophenyl phenyl ether	700 U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	300 U

PP #	CAS #		ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	1600 U
(53B)	77-47-4	hexachlorocyclopentadiene	1600 U
(54B)	78-59-1	isophorone	200 U
(55B)	91-20-3	naphthalene	21
(56B)	98-95-3	nitrobenzene	400 U
(62B)	86-30-6	N-nitrosodiphenylamine	700 U
(63B)	621-64-7	N-nitrosodipropylamine	400 U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	30300
(67B)	85-68-7	benzyl butyl phthalate	300 U
(68B)	84-74-2	di-n-butyl phthalate	87400
(69B)	117-84-0	di-n-octyl phthalate	200 U
(70B)	84-66-2	diethyl phthalate	300 U
(71B)	131-11-3	dimethyl phthalate	400 U
(72B)	56-55-3	benzo(a)anthracene	711
(73B)	50-32-8	benzo(a)pyrene	1200 U
(74B)	205-99-2	benzo(b)fluoranthene	400 U
(75B)	207-08-9	benzo(k)fluoranthene	400 U
(76B)	218-01-9	chrysene	912
(77B)	208-96-8	acenaphthylene	200 U
(78B)	120-12-7	anthracene	3100
(79B)	191-24-2	benzo(ghi)perylene	600 U
(80B)	86-73-7	fluorene	300 U
(81B)	85-01-8	phenanthrene	2770
(82B)	53-70-3	dibenz(a,h)anthracene	700 U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	600 U
(84B)	129-00-0	pyrene	105
	62-53-3	aniline	3
	100-51-6	benzyl alcohol	400 U
	106-47-8	4-chloroaniline	600 U
	132-64-9	dibenzofuran	864
	91		400 U
	88		800 U
	99		700 U

AR100222

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
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SBP 1/11/84 | Sample Number C-3352 | OK 10/31 WPC | NOV - 2 1983

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Envirodyne | Case No: 2062
Lab Sample ID No: C-3352 | QC Report No: 1
Sample Matrix: Soil | Contract No.: 68-01-6785
Data Release Authorized By: [signature] | Date Sample Received: 9/16/83

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: NA
DATE ANALYZED: 10-17-83
PERCENT MOISTURE: 20 2

PP #	CAS #		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	200 U
(3V)	107-13-1	acrylonitrile	200 U
(6V)	71-43-2	benzene	4
(5V)	56-23-5	carbon tetrachloride	60 U
(7V)	108-90-7	chlorobenzene	20 U
(10V)	107-06-2	1,2-dichloroethane	40 U
(11V)	71-55-6	1,1,1-trichloroethane	40 U
(13V)	75-34-3	1,1-dichloroethane	40 U
(18V)	79-00-5	1,1,2-trichloroethane	40 U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	20 U
(16V)	75-00-3	chloroethane	60 U
(19V)	110-75-8	2-chloroethylvinyl ether	40 U
(23V)	67-66-3	chloroform	NDB
(29V)	75-35-4	1,1-dichloroethene	40 U
(30V)	156-60-5	trans-1,2-dichloroethene	40 U
(32V)	78-87-5	1,2-dichloropropane	40 U
(33V)	10061-02-6	trans-1,3-dichloropropene	20 U
	10061-01-05	cis-1,3-dichloropropene	20 U
(38V)	100-41-4	ethylbenzene	20 U
(44V)	75-09-2	methylene chloride	153
(45V)	74-87-3	chloromethane	20 U
(46V)	74-83-9	bromomethane	60 U
(47V)	75-25-2	bromoform	40 U
(48V)	75-27-4	bromodichloromethane	40 U
(49V)	75-69-4	fluorotrichloromethane	—
(50V)	75-71-8	dichlorodifluoromethane	—
(51V)	124-48-1	chlorodibromomethane	20 U
(53V)	127-18-4	tetrachloroethene	20 U
(86V)	108-88-3	toluene	10
(87V)	79-01-6	trichloroethene	2
(88V)	75-01-4	vinyl chloride	60 U
	67-64-1	acetone	367
	78-93-3	2-butanone	200 U
	75-15-0	carbon disulfide	2
	519-78-6	2-hexanone	105
	108-10-1	4-methyl-2-pentanone	29
	100-42-5	styrene	20 U
	108-05-4	vinyl acetate	—

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/20/83
DATE ANALYZED: 10/5/83
PERCENT MOISTURE: 20 2

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	15.0 U
(90P)	60-57-1	dieldrin	17.3 U
(91P)	57-74-9	chlordane	126.0 U
(92P)	50-29-3	4,4'-DDT	20.3 U
(93P)	72-55-9	4,4'-DDE	16.9 U
(94P)	72-54-8	4,4'-DDD	22.8 U
(95P)	115-29-7	α-endosulfan	18.1 U
(96P)	115-29-7	β-endosulfan	20.8 U
(97P)	1031-07-8	endosulfan sulfate	24.7 U
(98P)	72-20-8	endrin	20.4 U
(99P)	7421-93-4	endrin aldehyde	29.6 U
(100P)	76-44-8	heptachlor	15.4 U
(101P)	1024-57-3	heptachlor epoxide	16.9 U
(102P)	319-84-6	α-BHC	7.3 U
(103P)	319-85-7	β-BHC	27.1 U
(104P)	319-86-8	δ-BHC	15.2 U
(105P)	58-89-9	γ-BHC (lindane)	14.1 U
(106P)	53469-21-9	PCB-1242	275 U
(107P)	11097-69-1	PCB-1254	250 U
(108P)	11104-28-2	PCB-1221	450 U
(109P)	11141-16-5	PCB-1232	450 U
(110P)	12672-29-6	PCB-1248	225 U
(111P)	11096-82-5	PCB-1260	75 U
(112P)	12674-11-2	PCB-1016	250 U
(113P)	8001-35-2	toxaphene	475 U

DIOXINS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/19/83
DATE ANALYZED: 9/28/83
PERCENT MOISTURE: 20.2

PP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	N.A.

AR10022J

ORGANICS ANALYSIS DATA SHEET - Page 3

SDP 1/11/84 Sample Number C-3352

Laboratory Name: Envirodyne Case No.: 2062 NOV 2 1983

QC Report No.:

B. Tentatively Identified Compounds

	CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Score Attained (Max Matching Revision: (Specify 1.0000)	Estimated Concentration (ug/L or ug/kg)
1.	123911	1,4-dioxane	VOA	14.8	.9759	123
2.	99092	m-nitroaniline	B/N-A	12.4	.8661	2320
3.	95169	benzothiazole	"	13.8	.9806	40500
4.	120752	2-methylbenzothiazole	"	14.8	.9803	44000
5.	634662	1,2,3,4-tetrachlorobenzene	"	15.3	.9800	15400
6.	615225	2(methylthio)benzothiazole	"	19.0	.9361	85000
7.	934349	2-hydroxybenzothiazole	"	20.2	.9786	45000
8.	149304	2-mercaptobenzothiazole	"	22.0	.9789	50500
9.	883932	2-phenylbenzothiazole	"	23.3	.9795	86400
10.	149304	2(mercaptobenzothiazole	"	23.4	.9791	30700
11.	520036	phthalonil	"	23.9	.9784	58.100
12.	520036	phthalonil	"	23.9	.9781	61900
13.	3204034	2-phenylthiazolo(3,2-A)-pyridinium-3-oxide	"	24.3	.8549	17200
14.						
15.	57114	stearic acid	"	24.9	.9824	173000
16.	3204034	2-phenylthiazolo(3,2-A)-pyridinium-3-oxide	"	26.0	.8417	43000
17.						
18.	—	compound not in EPA/NIH Library	"	28.9	—	55400
19.	7668328	alpha-benzoisothiazolyl-2-oximino-diphenylmethane-S-oxide	"	29.2	.7037	53300
20.						
21.						
22.	—	compound not in EPA/NIH Library	"	29.6	—	60880
23.	—	compound not in EPA/NIH Library	"	29.9	—	105000
24.	—	compound not in EPA/NIH Library	"	30.2	—	47400
25.	3485029	chloinium bromide	"	30.6	.6441	76400
26.						
27.						
28.						
29.						
30.						

0/82

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number: 3354

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Envirodyne
Lab Sample ID No: 3354
Sample Matrix: Soil
Data Release Authorized By:

Case No: 2062
QC Report No: 1
Contract No.: 68-01-6785
Date Sample Received: 9/16/83

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: NA
DATE ANALYZED: 10-17-83
PERCENT MOISTURE: 47.6

PP #	CAS #		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	200 U
(3V)	107-13-1	acrylonitrile	200 U
(4V)	71-43-2	benzene	1
(5V)	56-23-5	carbon tetrachloride	10 U
(7V)	108-90-7	chlorobenzene	20 U
(10V)	107-06-2	1,2-dichloroethane	40 U
(11V)	71-55-6	1,1,1-trichloroethane	40 U
(13V)	75-34-3	1,1-dichloroethane	40 U
(14V)	79-00-5	1,1,2-trichloroethane	40 U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	20 U
(16V)	75-00-3	chloroethane	60 U
(19V)	110-75-8	2-chloroethylvinyl ether	40 U
(23V)	67-66-3	chloroform	NDB
(29V)	75-35-4	1,1-dichloroethene	40 U
(30V)	156-60-5	trans-1,2-dichloroethene	40 U
(32V)	78-87-5	1,2-dichloropropane	40 U
(33V)	10061-02-6	trans-1,3-dichloropropene	20 U
	10061-01-05	cis-1,3-dichloropropene	20 U
(38V)	100-41-4	ethylbenzene	20 U
(44V)	75-09-2	methylene chloride	NDB
(45V)	74-87-3	chloromethane	20 U
(46V)	74-83-9	bromomethane	60 U
(47V)	75-25-2	bromoform	40 U
(48V)	75-27-4	bromodichloromethane	40 U
(49V)	75-69-4	fluorotrichloromethane	—
(50V)	75-71-8	dichlorodifluoromethane	—
(51V)	124-48-1	chlorodibromomethane	20 U
(85V)	127-18-4	tetrachloroethene	20 U
(86V)	108-88-3	toluene	NDB
(87V)	79-01-6	trichloroethene	20 U
(88V)	75-01-4	vinyl chloride	60 U
	67-64-1	acetone	200 U
	78-93-3	2-butanone	200 U
	75-15-0	carbondisulfide	NDB
	519-78-6	2-hexanone	40 U
	108-10-1	4-methyl-2-pentanone	60 U
	100-42-5	styrene	20 U
	108-05-4	vinyl acetate	—
	1330-20-7	total xylenes	20 U

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 1/20/83
DATE ANALYZED: 10/5/83
PERCENT MOISTURE: 47.6

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	0.142 U
(90P)	60-57-1	dieldrin	0.126 U
(91P)	57-74-9	chlordane	1.50 U
(92P)	50-29-3	4,4'-DDT	0.183 U
(93P)	72-55-9	4,4'-DDE	0.247 U
(94P)	72-54-8	4,4'-DDD	0.144 U
(95P)	115-29-7	α-endosulfan	0.414
(96P)	115-29-7	β-endosulfan	0.118 U
(97P)	1031-07-8	endosulfan sulfate	0.284 U
(98P)	72-20-8	endrin	0.182 U
(99P)	7421-93-4	endrin aldehyde	0.203 U
(100P)	76-44-8	heptachlor	0.137 U
(101P)	1024-57-3	heptachlor epoxide	0.135 U
(102P)	319-84-6	α-BHC	0.230 U
(103P)	319-85-7	β-BHC	0.118 U
(104P)	319-86-8	δ-BHC	0.150 U
(105P)	58-89-9	γ-BHC (lindane)	0.142 U
(106P)	53469-21-9	PCB-1242	3.42 U
(107P)	11097-69-1	PCB-1254	2.51 U
(108P)	11104-28-2	PCB-1221	8.0 U
(109P)	11141-16-5	PCB-1232	8.88 U
(110P)	12672-29-6	PCB-1248	3.936 U
(111P)	11096-82-5	PCB-1260	3.24 U
(112P)	12674-11-2	PCB-1016	3.20 U
(113P)	8001-35-2	toxaphene	3.02 U

DIOXINS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/19/83
DATE ANALYZED: 9/19/83
PERCENT MOISTURE: 47.6

PP #	CAS #		ug/l or ug/kg (circle one)
(129D)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	N.A.

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number: 3354

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Envirodyne
Lab Sample ID No: 3354
Sample Matrix: Soil
Data Release Authorized By:

Case No: 2062
QC Report No: 1
Contract No.: 68-01-6785
Date Sample Received: 9/16/83

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/19/83
DATE ANALYZED: 10/6/83
PERCENT MOISTURE:

PP #	CAS #		ug/l ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	800 U
(22A)	59-50-7	p-chloro-m-cresol	400 U
(24A)	95-57-8	2- chlorophenol	200 U
(31A)	120-83-2	2,4-dichlorophenol	300 U
(34A)	105-67-9	2,4-dimethylphenol	131
(57A)	88-75-5	2- nitrophenol	400 U
(58A)	100-02-7	4-nitrophenol	350 U
(59A)	51-28-5	2,4-dinitrophenol	700 U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	700 U
(64A)	87-86-5	pentachlorophenol	350 U
(65A)	108-95-2	phenol	32
	65-85-0	benzoic acid	400 U
	95-48-7	2-methylphenol	200 U
	108-39-4	4-methylphenol	200 U
	95-95-4	2,4,5-trichlorophenol	400 U
(1B)	83-32-9	acenaphthene	150 U
(5B)	92-87-5	benzidine	700 U
(8B)	120-82-1	1,2,4-trichlorobenzene	300 U
(9B)	118-74-1	hexachlorobenzene	350 U
(12B)	67-72-1	hexachloroethane	500 U
(18B)	111-44-4	bis(2-chloroethyl)ether	150 U
(20B)	91-58-7	2-chloronaphthalene	200 U
(25B)	95-50-1	1,2-dichlorobenzene	200 U
(26B)	541-73-1	1,3-dichlorobenzene	200 U
(27B)	106-46-7	1,4-dichlorobenzene	45
(28B)	91-94-1	3,3'-dichlorobenzidine	700 U
(35B)	121-14-2	2,4-dinitrotoluene	350 U
(36B)	606-20-2	2,6-dinitrotoluene	800 U
(37B)	122-66-7	1,2-diphenylhydrazine	150 U
(39B)	206-44-0	fluoranthene	100 U
(40B)	7005-72-3	4-chlorophenyl phenyl ether	150 U
(41B)	101-55-3	4-bromophenyl phenyl ether	350 U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	150 U
(43B)	111-91-1	bis (2-chloroethoxy) methane	200 U

PP #	CAS #		ug/l ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	800 U
(53B)	77-47-4	hexachlorocyclopentadiene	800 U
(54B)	78-59-1	isophorone	100 U
(55B)	91-20-3	naphthalene	100 U
(56B)	98-95-3	nitrobenzene	200
(62B)	86-30-6	N-nitrosodiphenylamine	350
(63B)	621-64-7	N-nitrosodipropylamine	200 U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate NDB	
(67B)	85-68-7	benzyl butyl phthalate	150 U
(68B)	84-74-2	di-n-butyl phthalate NDB	
(69B)	117-84-0	di-n-octyl phthalate	100 U
(70B)	84-66-2	diethyl phthalate	150 U
(71B)	131-11-3	dimethyl phthalate	200 U
(72B)	56-55-3	benzo(a)anthracene	100 U
(73B)	50-32-8	benzo(a)pyrene	600 U
(74B)	205-99-2	benzo(b)fluoranthene	200 U
(75B)	207-08-9	benzo(k)fluoranthene	200 U
(76B)	218-01-9	chrysene	100 U
(77B)	208-96-8	acenaphthylene	100 U
(78B)	120-12-7	anthracene	100 U
(79B)	191-24-2	benzo(ghi)perylene	300 U
(80B)	86-73-7	fluorene	150 U
(81B)	85-01-8	phenanthrene	100 U
(82B)	53-70-3	dibenzo(a,h)anthracene	350 U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	300 U
(84B)	129-00-0	pyrene	100 U
	62-53-3	aniline	150 U
	100-51-6	benzyl alcohol	20
	106-47-8	4-chloroaniline	300
	132-64-9	dibenzofuran	100 U
	91-57-6	2-methylnaphthalene	200 U
	88-74-4	2-nitroaniline	400 U
	99-09-2	3-nitroaniline	350 U
	100-01-6	4-nitroaniline	350 U

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number: 3355

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Envirodyne
Lab Sample ID No: 3355
Sample Matrix: Soil
Data Release Authorized By:

Case No: 2062
QC Report No: 1
Contract No.: 68-01-6785
Date Sample Received: 9/16/93

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: N.A.
DATE ANALYZED: 10-19-93
PERCENT MOISTURE: 17.5

PP #	CAS #		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	200 U
(3V)	107-13-1	acrylonitrile	200 U
(4V)	71-43-2	benzene	6
(5V)	56-23-5	carbon tetrachloride	40 U
(7V)	108-90-7	chlorobenzene	20 U
(10V)	107-06-2	1,2-dichloroethane	40 U
(11V)	71-55-6	1,1,1-trichloroethane	NDB
(13V)	75-34-3	1,1-dichloroethane	40 U
(14V)	79-00-5	1,1,2-trichloroethane	40 U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	20 U
(16V)	75-00-3	chloroethane	40 U
(19V)	110-75-8	2-chloroethylvinyl ether	40 U
(23V)	67-66-3	chloroform	6
(29V)	75-35-4	1,1-dichloroethene	40 U
(30V)	156-60-5	trans-1,2-dichloroethene	40 U
(32V)	78-87-5	1,2-dichloropropane	40 U
(33V)	10061-02-6	trans-1,3-dichloropropene	20 U
	10061-01-05	cis-1,3-dichloropropene	20 U
(38V)	100-41-4	ethylbenzene	20 U
(44V)	75-09-2	methylene chloride	1760
(45V)	74-87-3	chloromethane	20 U
(46V)	74-83-9	bromomethane	40 U
(47V)	75-25-2	bromoform	40 U
(48V)	75-27-4	bromodichloromethane	40 U
(49V)	75-69-4	fluorotrichloromethane	—
(50V)	75-71-8	dichlorodifluoromethane	—
(51V)	124-48-1	chlorodibromomethane	20 U
(85V)	127-18-4	tetrachloroethene	20 U
(86V)	108-88-3	toluene	36
(87V)	79-01-6	trichloroethene	15
(88V)	75-01-4	vinyl chloride	40 U
	67-64-1	acetone	200 U
	78-93-3	2-butanone	200 U
	75-15-0	carbondisulfide	20 U
	519-78-6	2-hexanone	102
	108-10-1	4-methyl-2-pentanone	102
	100-42-5	styrene	20 U
	108-05-4	vinyl acetate	—

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/20/93
DATE ANALYZED: 10/5/93
PERCENT MOISTURE: 17.5

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	15.0 U
(90P)	60-57-1	dieldrin	17.3 U
(91P)	57-74-9	chlordane	125.0 U
(92P)	50-29-3	4,4'-DDT	20.3 U
(93P)	72-55-9	4,4'-DDE	16.9 U
(94P)	72-54-8	4,4'-DDD	23.3 U
(95P)	115-29-7	α-endosulfan	8.5 U
(96P)	115-29-7	β-endosulfan	20.3 U
(97P)	1031-07-8	endosulfan sulfate	24.7 U
(98P)	72-20-8	endrin	20.3 U
(99P)	7421-93-4	endrin aldehyde	29.6 U
(100P)	76-44-8	heptachlor	15.6 U
(101P)	1024-57-3	heptachlor epoxide	16.9 U
(102P)	319-84-6	α-BHC	13.1 U
(103P)	319-85-7	β-BHC	27.1 U
(104P)	319-86-8	δ-BHC	15.2 U
(105P)	58-89-9	γ-BHC (lindane)	14.1 U
(106P)	53469-21-9	PCB-1242	275.0 U
(107P)	11097-69-1	PCB-1254	250.0 U
(108P)	11104-28-2	PCB-1221	250.0 U
(109P)	11141-16-5	PCB-1232	250.0 U
(110P)	12672-29-6	PCB-1248	230.0 U
(111P)	11096-82-5	PCB-1260	70 U
(112P)	12674-11-2	PCB-1016	200.0 U
(113P)	8001-35-2	toxaphene	475.0 U

DIOXINS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/17/93
DATE ANALYZED: 9/18/93
PERCENT MOISTURE: 17.5

PP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	N.A.

00027

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
3355

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Envirodyne
Lab Sample ID No: 3355
Sample Matrix: Soil
Data Release Authorized By:

Case No: 2062
QC Report No: 1
Contract No.: 68-01-6795
Date Sample Received: 9/16/83

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9-20-83
DATE ANALYZED: 10-7-83
PERCENT MOISTURE:

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	4000 U
(22A)	59-50-7	p-chloro-m-cresol	2000 U
(24A)	95-57-8	2- chlorophenol	1000 U
(31A)	120-83-2	2,4-dichlorophenol	1500 U
(34A)	105-67-9	2,4-dimethylphenol	240,000
(57A)	88-75-5	2- nitrophenol	2000 U
(58A)	100-02-7	4-nitrophenol	1750 U
(59A)	51-28-5	2,4-dinitrophenol	3500 U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	3500 U
(64A)	87-86-5	pentachlorophenol	1750 U
(65A)	108-95-2	phenol	32600
	65-85-0	benzoic acid	2000 U
	95-48-7	2-methylphenol	601,000
	108-39-4	4-methylphenol	1000 U
	95-95-4	2,4,5-trichlorophenol	2000 U
(1B)	83-32-9	acenaphthene	750 U
(5B)	92-87-5	benzidine	3500 U
(8B)	120-82-1	1,2,4-trichlorobenzene	1500 U
(9B)	118-74-1	hexachlorobenzene	1750 U
(12B)	67-72-1	hexachloroethane	2500 U
(18B)	111-44-4	bis(2-chloroethyl)ether	750 U
(20B)	91-58-7	2-chloronaphthalene	1000 U
(25B)	95-50-1	1,2-dichlorobenzene	1000 U
(26B)	541-73-1	1,3-dichlorobenzene	1000 U
(27B)	106-46-7	1,4-dichlorobenzene	169
(28B)	91-94-1	3,3'-dichlorobenzidine	3500 U
(33B)	121-14-2	2,4-dinitrotoluene	1750 U
(36B)	606-20-2	2,6-dinitrotoluene	4000 U
(37B)	122-66-7	1,2-diphenylhydrazine	750 U
(39B)	206-44-0	fluoranthene	606
(40B)	7005-72-3	4-chlorophenyl phenyl ether	750 U
(41B)	101-55-3	4-bromophenyl phenyl ether	1750 U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	750 U
(43B)	111-91-1	bis (2-chloroethoxy) methane	1000 U

PP #	CAS #		ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	4000 U
(53B)	77-47-4	hexachlorocyclopentadiene	4000 U
(54B)	78-59-1	isophorone	500 U
(55B)	91-20-3	naphthalene	1660
(56B)	98-95-3	nitrobenzene	105
(62B)	86-30-6	N-nitrosodiphenylamine	18,000
(63B)	621-64-7	N-nitrosodipropylamine	1000 U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	44900
(67B)	85-68-7	benzyl butyl phthalate	750 U
(68B)	84-74-2	di-n-butyl phthalate	500 U
(69B)	117-84-0	di-n-octyl phthalate	500 U
(70B)	84-66-2	diethyl phthalate	750 U
(71B)	131-11-3	dimethyl phthalate	1000 U
(72B)	56-55-3	benzo(a)anthracene	500 U
(73B)	50-32-8	benzo(a)pyrene	3000 U
(74B)	205-99-2	benzo(b)fluoranthene	1000 U
(75B)	207-08-9	benzo(k)fluoranthene	1000 U
(76B)	218-01-9	chrysene	500 U
(77B)	208-96-8	acenaphthylene	812
(78B)	120-12-7	anthracene	1170
(79B)	191-24-2	benzo(ghi)perylene	1500 U
(80B)	86-73-7	fluorene	750 U
(81B)	85-01-8	phenanthrene	1610
(82B)	53-70-3	dibenzo(a,h)anthracene	1750 U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	1500 U
(84B)	129-00-0	pyrene	500 U
	62-53-3	aniline	750 U
	100-51-6	benzyl alcohol	103
	106-47-8	4-chloroaniline	1500 U
	132-64-9	dibenzofuran	500 U
	91-57-6	2-methylnaphthalene	2420
	88-74-4	2-nitroaniline	2000 U
	99-09-2	3-nitroaniline	1750 U
	100-01-6	4-nitroaniline	1000 U

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U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number: 3356

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Enviodyne
Lab Sample ID No: 3356
Sample Matrix: Soil
Data Release Authorized By:

Case No: 2062
QC Report No: 1
Contract No.: 68-01-6785
Date Sample Received: 9/16/83

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: N.A.
DATE ANALYZED: 10-17-83
PERCENT MOISTURE: 17

PP #	CAS #		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	200 U
(3V)	107-13-1	acrylonitrile	200 U
(4V)	71-43-2	benzene	8
(5V)	56-23-5	carbon tetrachloride	40 U
(7V)	108-90-7	chlorobenzene	20 U
(10V)	107-06-2	1,2-dichloroethane	40 U
(11V)	71-55-6	1,1,1-trichloroethane	40 U
(13V)	75-34-3	1,1-dichloroethane	40 U
(14V)	79-00-5	1,1,2-trichloroethane	40 U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	20 U
(16V)	75-00-3	chloroethane	40 U
(19V)	110-75-8	2-chloroethylvinyl ether	40 U
(23V)	67-66-3	chloroform	20 U
(29V)	75-35-4	1,1-dichloroethene	40 U
(30V)	156-60-5	trans-1,2-dichloroethene	40 U
(32V)	78-87-5	1,2-dichloropropane	40 U
(33V)	10061-02-6	trans-1,3-dichloropropene	20 U
	10061-01-05	cis-1,3-dichloropropene	20 U
(38V)	100-41-4	ethylbenzene	20 U
(44V)	75-09-2	methylene chloride	74
(45V)	74-87-3	chloromethane	20 U
(46V)	74-83-9	bromomethane	40 U
(47V)	75-25-2	bromoform	40 U
(48V)	75-27-4	bromodichloromethane	40 U
(49V)	75-69-4	fluorotrichloromethane	—
(50V)	75-71-8	dichlorodifluoromethane	—
(51V)	124-48-1	chlorodibromomethane	20 U
(85V)	127-18-4	tetrachloroethene	20 U
(86V)	108-88-3	toluene	5
(87V)	79-01-6	trichloroethene	20 U
(88V)	75-01-4	vinyl chloride	40 U
	67-64-1	acetone	200 U
	78-93-3	2-butanone	200 U
	75-15-0	carbondisulfide	20 U
	519-78-6	2-hexanone	40 U
	108-10-1	4-methyl-2-pentanone	40 U
	100-42-5	styrene	20 U
	108-05-4	vinyl acetate	—
	1330-20-7	total xylenes	20 U

PESTICIDES

CONCENTRATION: LOW (MEDIUM) HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/20/83
DATE ANALYZED: 10/5/83
PERCENT MOISTURE: 17

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	15.0 U
(90P)	60-57-1	dieldrin	17.3 U
(91P)	57-74-9	chlordane	125.0 U
(92P)	50-29-3	4,4'-DDT	20.85 U
(93P)	72-55-9	4,4'-DDE	16.90 U
(94P)	72-54-8	4,4'-DDD	22.80 U
(95P)	115-29-7	α-endosulfan	18.15 U
(96P)	115-29-7	β-endosulfan	20.8 U
(97P)	1031-07-8	endosulfan sulfate	24.7 U
(98P)	72-20-8	endrin	20.4 U
(99P)	7421-93-4	endrin aldehyde	29.6 U
(100P)	76-44-8	heptachlor	15.65 U
(101P)	1024-57-3	heptachlor epoxide	10.95 U
(102P)	319-84-6	α-BHC	13.15 U
(103P)	319-85-7	β-BHC	27.15 U
(104P)	319-86-8	δ-BHC	15.20 U
(105P)	58-89-9	γ-BHC (lindane)	14.15 U
(106P)	53469-21-9	PCB-1242	275.0 U
(107P)	11097-69-1	PCB-1254	250 U
(108P)	11104-28-2	PCB-1221	250.0 U
(109P)	11141-16-5	PCB-1232	250.0 U
(110P)	12672-29-6	PCB-1248	225.0 U
(111P)	11096-82-5	PCB-1260	75.0 U
(112P)	12674-11-2	PCB-1016	250.0 U
(113P)	8001-35-2	toxaphene	475.0 U

DIOXINS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/17/83
DATE ANALYZED: 9/18/83
PERCENT MOISTURE: 17

PP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	N.A.

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
C3356

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Enviredyne Engrs. Inc.
Lab Sample ID No: C3356
Sample Matrix: Soil
Data Release Authorized By:

Case No: 2062
QC Report No: 1
Contract No.: 68-01-6786
Date Sample Received:

SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW (MEDIUM) HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/21/83
DATE ANALYZED: 10/7/83
PERCENT MOISTURE:

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6-trichlorophenol	1,240,000 U
(22A)	59-50-7	p-chloro-m-cresol	622,000 U
(26A)	95-57-8	2-chlorophenol	311,000 U
(31A)	120-83-2	2,4-dichlorophenol	467,000 U
(34A)	105-67-9	2,4-dimethylphenol	739,000
(57A)	88-75-5	2-nitrophenol	622,000 U
(58A)	100-02-7	4-nitrophenol	545,000 U
(59A)	51-28-5	2,4-dinitrophenol	1,090,000 U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	1,090,000 U
(64A)	87-86-5	pentachlorophenol	545,000 U
(65A)	108-95-2	phenol	233,000 U
	65-85-0	benzoic acid	622,000 U
	95-48-7	2-methylphenol	311,000 U
	108-39-4	4-methylphenol	1,580,000
	95-95-4	2,4,5-trichlorophenol	622,000 U
(1B)	83-32-9	acenaphthene	233,000 U
(5B)	92-87-5	benzidine	1,090,000 U
(8B)	120-82-1	1,2,4-trichlorobenzene	467,000 U
(9B)	118-74-1	hexachlorobenzene	545,000 U
(12B)	67-72-1	hexachloroethane	778,000 U
(18B)	111-44-4	bis(2-chloroethyl)ether	233,000 U
(20B)	91-58-7	2-chloronaphthalene	311,000 U
(25B)	95-50-1	1,2-dichlorobenzene	311,000 U
(26B)	541-73-1	1,3-dichlorobenzene	311,000 U
(27B)	106-46-7	1,4-dichlorobenzene	311,000 U
(28B)	91-94-1	3,3'-dichlorobenzidine	1,090,000 U
(35B)	121-14-2	2,4-dinitrotoluene	545,000 U
(36B)	606-20-2	2,6-dinitrotoluene	1,240,000 U
(37B)	122-66-7	1,2-diphenylhydrazine	233,000 U
(39B)	206-44-0	fluoranthene	156,000 U
(40B)	7005-72-3	4-chlorophenyl phenyl ether	233,000 U
(41B)	101-55-3	4-bromophenyl phenyl ether	545,000 U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	233,000 U
(43B)	111-91-1	bis (2-chloroethoxy) methane	311,000 U

PP #	CAS #		ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	1,240,000 U
(53B)	77-47-4	hexachlorocyclopentadiene	1,240,000 U
(54B)	78-59-1	isophorone	156,000 U
(55B)	91-20-3	naphthalene	156,000 U
(56B)	98-95-3	nitrobenzene	311,000 U
(62B)	86-30-6	N-nitrosodiphenylamine	1,470,000
(63B)	621-64-7	N-nitrosodipropylamine	311,000 U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	233,000 U
(67B)	85-68-7	benzyl butyl phthalate	233,000 U
(68B)	84-74-2	di-n-butyl phthalate	156,000 U
(69B)	117-84-0	di-n-octyl phthalate	156,000 U
(70B)	84-66-2	diethyl phthalate	233,000 U
(71B)	131-11-3	dimethyl phthalate	311,000 U
(72B)	56-55-3	benzo(a)anthracene	156,000 U
(73B)	50-32-8	benzo(a)pyrene	934,000 U
(74B)	205-99-2	benzo(b)fluoranthene	311,000 U
(75B)	207-08-9	benzo(k)fluoranthene	311,000 U
(76B)	218-01-9	chrysene	156,000 U
(77B)	208-96-8	acenaphthylene	156,000 U
(78B)	120-12-7	anthracene	156,000 U
(79B)	191-24-2	benzo(ghi)perylene	467,000 U
(80B)	86-73-7	fluorene	233,000 U
(81B)	85-01-8	phenanthrene	156,000 U
(82B)	53-70-3	dibenzo(a,h)anthracene	545,000 U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	467,000 U
(84B)	129-00-0	pyrene	156,000 U
	62-53-3	aniline	233,000 U
	100-51-6	benzyl alcohol	311,000 U
	106-47-8	4-chloroaniline	467,000 U
	132-64-9	dibenzofuran	156,000 U
	91-57-6	2-methylnaphthalene	311,000 U
	88-74-4	2-nitroaniline	622,000 U
	99-09-2	3-nitroaniline	545,000 U
	100-01-6	4-nitroaniline	545,000 U

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number: C 3357

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Envirodyne Engrs. Inc.
Case No: 2062
Lab Sample ID No: C 3357
QC Report No: 1
Sample Matrix: Soil
Contract No.: 68-01-6785
Data Release Authorized By:
Data Sample Received: 9/16/83

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: NA
DATE ANALYZED: 10/1/83
PERCENT MOISTURE: 5.1

PP #	CAS #		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	200U
(3V)	107-13-1	acrylonitrile	200U
(4V)	71-43-2	benzene	1
(5V)	56-23-5	carbon tetrachloride	60U
(7V)	108-90-7	chlorobenzene	20U
(10V)	107-06-2	1,2-dichloroethane	40U
(11V)	71-55-6	1,1,1-trichloroethane	NDB
(13V)	75-34-3	1,1-dichloroethane	40U
(14V)	79-00-5	1,1,2-trichloroethane	40U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	20U
(16V)	75-00-3	chloroethane	60U
(19V)	110-75-8	2-chloroethylvinyl ether	40U
(23V)	67-66-3	chloroform	NDB
(29V)	75-35-4	1,1-dichloroethene	40U
(30V)	156-60-5	trans-1,2-dichloroethene	40U
(32V)	78-87-5	1,2-dichloropropane	40U
(33V)	10061-02-6	trans-1,3-dichloropropene	20U
	10061-01-05	cis-1,3-dichloropropene	20U
(38V)	100-41-4	ethylbenzene	20U
(44V)	75-09-2	methylene chloride	53
(45V)	74-87-3	chloromethane	20U
(46V)	74-83-9	bromomethane	60U
(47V)	75-25-2	bromoform	40U
(48V)	75-27-4	bromodichloromethane	40U
(49V)	75-69-4	fluorotrichloromethane	—
(50V)	75-71-8	dichlorodifluoromethane	—
(51V)	124-48-1	chlorodibromomethane	20U
(85V)	127-18-4	tetrachloroethene	20U
(86V)	108-88-3	toluene	NDB
(87V)	79-01-6	trichloroethene	2
(88V)	75-01-4	vinyl chloride	60U
	67-64-1	acetone	137
	78-93-3	2-butanone	200U
	75-15-0	carbondisulfide	20U
	519-78-6	2-hexanone	40U
	108-10-1	4-methyl-2-pentanone	60U
	100-42-5	styrene	20U
	108-05-4	vinyl acetate	—
	1330-20-7	total xylenes	20U

PESTICIDES

CONCENTRATION: LOW (MEDIUM) HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/20/83
DATE ANALYZED: 10/5/83
PERCENT MOISTURE: 5.1

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	301.0U
(90P)	60-57-1	dieldrin	346.0U
(91P)	57-74-9	chlordane	2501.0U
(92P)	50-29-3	4,4'-DDT	747.0U
(93P)	72-55-9	4,4'-DDE	238.0U
(94P)	72-54-8	4,4'-DDD	446.0U
(95P)	115-29-7	α-endosulfan	362.0U
(96P)	115-29-7	β-endosulfan	446.0U
(97P)	1031-07-8	endosulfan sulfate	494.0U
(98P)	72-20-8	endrin	408.0U
(99P)	7421-93-4	endrin aldehyde	582.0U
(100P)	76-44-8	heptachlor	313.0U
(101P)	1024-57-3	heptachlor epoxide	339.0U
(102P)	319-84-6	α-BHC	263.0U
(103P)	319-85-7	β-BHC	543.0U
(104P)	319-86-8	δ-BHC	304.0U
(105P)	58-89-9	γ-BHC (lindane)	283.0U
(106P)	53469-21-9	PCB-1242	5000.0U
(107P)	11097-69-1	PCB-1254	5000.0U
(108P)	11104-28-2	PCB-1221	5000.0U
(109P)	11141-16-5	PCB-1232	5000.0U
(110P)	12672-29-6	PCB-1248	4500U
(111P)	11096-82-5	PCB-1260	1500.0U
(112P)	12674-11-2	PCB-1016	5000.0U
(113P)	8001-35-2	toxaphene	9500.0U

DIOXINS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/19/83
DATE ANALYZED: 9/18/83
PERCENT MOISTURE: 5.1

PP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	N.A.

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
C-3357

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Envirodyne Engrs, Inc
Lab Sample ID No: C-3357
Sample Matrix: Soil
Data Release Authorized By:

Case No: 2062
QC Report No: 1
Contract No.: 68-01-6785
Date Sample Received: 9/16/88

SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW (MEDIUM) HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/20/88
DATE ANALYZED: 10/7/88
PERCENT MOISTURE:

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	250,000 U
(22A)	59-50-7	p-chloro-m-cresol	125,000 U
(26A)	95-57-8	2- chlorophenol	62,300 U
(31A)	120-83-2	2,4-dichlorophenol	93,400 U
(36A)	105-67-9	2,4-dimethylphenol	2,510,000
(37A)	88-75-5	2- nitrophenol	125,000 U
(38A)	100-02-7	4-nitrophenol	109,000 U
(39A)	51-28-5	2,4-dinitrophenol	218,000 U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	218,000 U
(64A)	87-86-5	pentachlorophenol	109,000 U
(65A)	108-95-2	phenol	226,000
	65-85-0	benzoic acid	125,000 U
	95-48-7	2-methylphenol	62,300 U
	108-39-4	4-methylphenol	3,470,000
	95-95-4	2,4,5-trichlorophenol	125,000 U
(1B)	83-32-9	acenaphthene	46,700 U
(5B)	92-87-5	benzidine	218,000 U
(8B)	120-82-1	1,2,4-trichlorobenzene	93,400 U
(9B)	118-74-1	hexachlorobenzene	109,000 U
(12B)	67-72-1	hexachloroethane	156,000 U
(18B)	111-44-4	bis(2-chloroethyl)ether	46,700 U
(20B)	91-58-7	2-chloronaphthalene	62,300 U
(25B)	95-50-1	1,2-dichlorobenzene	62,300 U
(26B)	541-73-1	1,3-dichlorobenzene	62,300 U
(27B)	106-46-7	1,4-dichlorobenzene	62,300 U
(28B)	91-94-1	3,3'-dichlorobenzidine	218,000 U
(36B)	121-14-2	2,4-dinitrotoluene	109,000 U
(--)	606-20-2	2,6-dinitrotoluene	250,000 U
(37B)	122-66-	1,2-diphenylhydrazine	46,700 U
(39B)	206-44-0	fluoran...	31,100 U
(40B)	7005-72-3	4-chlorophenyl phenyl ether	46,700 U
(41B)	101-55-3	4-bromophenyl phenyl ether	109,000 U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	46,700 U
(43B)	111-91-1	bis (2-chloroethoxy) methane	62,300 U

PP #	CAS #		ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	250,000 U
(53B)	77-47-4	hexachlorocyclopentadiene	250,000 U
(54B)	78-59-1	isophorone	31,100 U
(55B)	91-20-3	naphthalene	57,800
(56B)	98-95-3	nitrobenzene	62,300 U
(62B)	86-30-6	N-nitrosodiphenylamine	109,000 U
(63B)	621-64-7	N-nitrosodipropylamine	62,300 U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	46,700 U
(67B)	85-68-7	benzyl butyl phthalate	46,700 U
(68B)	84-74-2	di-n-butyl phthalate	31,100 U
(69B)	117-84-0	di-n-octyl phthalate	31,100 U
(70B)	84-66-2	diethyl phthalate	46,700 U
(71B)	131-11-3	dimethyl phthalate	62,300 U
(72B)	56-55-3	benzo(a)anthracene	31,100 U
(73B)	50-32-8	benzo(a)pyrene	187,000 U
(74B)	205-99-2	benzo(b)fluoranthene	62,300 U
(75B)	207-08-9	benzo(k)fluoranthene	62,300 U
(76B)	218-01-9	chrysene	31,100 U
(77B)	208-96-8	acenaphthylene	31,100 U
(78B)	120-12-7	anthracene	31,100 U
(79B)	191-24-2	benzo(ghi)perylene	93,400 U
(80B)	86-73-7	fluorene	46,700 U
(81B)	85-01-8	phenanthrene	31,100 U
(82B)	53-70-3	dibenzo(a,h)anthracene	109,000 U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	93,400 U
(84B)	129-00-0	pyrene	31,100 U
	62-53-3	aniline	46,700 U
	100-51-6	benzyl alcohol	62,300 U
	106-47-8	4-chloroaniline	93,400 U
	132-64-9	dibenzofuran	31,100 U
	91-57-6	2-methylnaphthalene	96,400
	88-74-4	2-nitroaniline	125,000 U
	99-09-2	3-nitroaniline	109,000 U
	100-01-6	4-nitroaniline	109,000 U

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number: 3358

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Envirodyne
Lab Sample ID No: 3368
Sample Matrix: Soil
Data Release Authorized By:

Case No: 2002
QC Report No: 1
Contract No.: 68-01-6785
Date Sample Received: 9/16/83

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: N.A.
DATE ANALYZED: 10-18-83
PERCENT MOISTURE: 32 0

PP #	CAS #		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	200 U
(3V)	107-13-1	acrylonitrile	200 U
(6V)	71-43-2	benzene	6
(6V)	56-23-5	carbon tetrachloride	60 U
(7V)	108-90-7	chlorobenzene	20 U
(10V)	107-06-2	1,2-dichloroethane	40 U
(11V)	71-55-6	1,1,1-trichloroethane	40 U
(13V)	75-34-3	1,1-dichloroethane	40 U
(14V)	79-00-5	1,1,2-trichloroethane	40 U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	20 U
(16V)	75-00-3	chloroethane	60 U
(19V)	110-75-8	2-chloroethylvinyl ether	40 U
(23V)	67-66-3	chloroform	7
(29V)	75-35-4	1,1-dichloroethene	40 U
(30V)	156-60-5	trans-1,2-dichloroethene	40 U
(32V)	78-87-5	1,2-dichloropropane	40 U
(33V)	10061-02-6	trans-1,3-dichloropropene	20 U
	10061-01-05	cis-1,3-dichloropropene	20 U
(38V)	100-41-4	ethylbenzene	20 U
(44V)	75-09-2	methylene chloride	59
(45V)	74-87-3	chloromethane	20 U
(46V)	74-83-9	bromomethane	60 U
(47V)	75-25-2	bromoform	40 U
(48V)	75-27-4	bromodichloromethane	40 U
(49V)	75-69-4	fluorotrichloromethane	—
(50V)	75-71-8	dichlorodifluoromethane	—
(51V)	124-48-1	chlorodibromomethane	20 U
(85V)	127-18-4	tetrachloroethene	20 U
(86V)	108-88-3	toluene	21
(87V)	79-01-6	trichloroethene	6
(88V)	75-01-4	vinyl chloride	60 U
	67-64-1	acetone	200 U
	78-93-3	2-butanone	200 U
	75-15-0	carbondisulfide	20 U
	319-78-6	2-hexanone	145
	108-10-1	4-methyl-2-pentanone	106
	100-42-5	styrene	20 U
	108-05-4	vinyl acetate	—
	1330-20-7	total xylenes	

PESTICIDES

CONCENTRATION: LOW (MEDIUM) HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/20/83
DATE ANALYZED: 10/5/83
PERCENT MOISTURE: 32 0

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	15.85 U
(90P)	60-57-1	dieldrin	17.5 U
(91P)	57-74-9	chlordane	145.0 U
(92P)	50-29-3	4,4'-DDT	26.35 U
(93P)	72-55-9	4,4'-DDE	16.90 U
(94P)	72-54-8	4,4'-DDD	22.80 U
(95P)	115-29-7	α-endosulfan	18.5 U
(96P)	115-29-7	β-endosulfan	20.8 U
(97P)	1031-07-8	endosulfan sulfate	24.7 U
(98P)	72-20-8	endrin	20.4 U
(99P)	7421-93-4	endrin aldehyde	29.6 U
(100P)	76-44-8	heptachlor	15.65 U
(101P)	1024-57-3	heptachlor epoxide	16.95 U
(102P)	319-84-6	α-BHC	13.15 U
(103P)	319-85-7	β-BHC	27.15 U
(104P)	319-86-8	δ-BHC	15.30 U
(105P)	58-89-9	γ-BHC (lindane)	14.15 U
(106P)	53469-21-9	PCB-1242	275.0 U
(107P)	11097-69-1	PCB-1254	280.0 U
(108P)	11104-28-2	PCB-1221	280.0 U
(109P)	11141-16-5	PCB-1232	280.0 U
(110P)	12672-29-6	PCB-1248	280.0 U
(111P)	11096-82-5	PCB-1260	70.0 U
(112P)	12674-11-2	PCB-1016	200.0 U
(113P)	8001-35-2	toxaphene	4425.0 U

DIOXINS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/27/83
DATE ANALYZED: 9/28/83
PERCENT MOISTURE: 32 0

PP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	N.A

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number: C-3358

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Environmental Engineering Lab.
Lab Sample ID No: C-3358
Sample Matrix: Soil
Data Release Authorized By:

Case No: 2062
QC Report No: 1
Contract No.: 68-01-6785
Date Sample Received: 9/16/83

SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW (MEDIUM) HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/20/83
DATE ANALYZED: 10/7/83
PERCENT MOISTURE:

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	7,120,000 U
(22A)	59-50-7	p-chloro-m-cresol	3,560,000 U
(24A)	95-57-8	2- chlorophenol	1,780,000 U
(31A)	120-83-2	2,4-dichlorophenol	2,670,000 U
(34A)	105-67-9	2,4-dimethylphenol	739,000
(37A)	88-75-5	2- nitrophenol	3,560,000 U
(38A)	100-02-7	4-nitrophenol	3,120,000 U
(39A)	51-28-5	2,4-dinitrophenol	6,230,000 U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	6,230,000 U
(64A)	87-86-5	pentachlorophenol	3,120,000 U
(65A)	108-95-2	phenol	1,340,000 U
	65-85-0	benzoic acid	3,560,000 U
	95-48-7	2-methylphenol	1,780,000 U
	108-39-4	4-methylphenol	13,800,000
	95-95-4	2,4,5-trichlorophenol	3,560,000 U
(1B)	83-32-9	acenaphthene	1,340,000 U
(5B)	92-87-5	benzidine	6,230,000 U
(8B)	120-82-1	1,2,4-trichlorobenzene	2,670,000 U
(9B)	118-74-1	hexachlorobenzene	3,120,000 U
(12B)	67-72-1	hexachloroethane	4,450,000 U
(18B)	111-44-4	bis(2-chloroethyl)ether	1,340,000 U
(20B)	91-58-7	2-chloronaphthalene	1,780,000 U
(25B)	95-50-1	1,2-dichlorobenzene	1,780,000 U
(26B)	541-73-1	1,3-dichlorobenzene	1,780,000 U
(27B)	106-46-7	1,4-dichlorobenzene	1,780,000 U
(28B)	91-94-1	3,3'-dichlorobenzidine	6,230,000 U
(35B)	121-14-2	2,4-dinitrotoluene	3,120,000 U
(36B)	606-20-2	2,6-dinitrotoluene	7,120,000 U
(37B)	122-66-7	1,2-diphenylhydrazine	1,340,000 U
(39B)	206-44-0	fluoranthene	890,000 U
(40B)	7003-72-3	4-chlorophenyl phenyl ether	1,340,000 U
(41B)	101-55-3	4-bromophenyl phenyl ether	3,120,000 U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	1,340,000 U
(43B)	111-91-1	bis (2-chloroethoxy) methane	1,780,000 U

PP #	CAS #		ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	7,120,000 U
(53B)	77-47-4	hexachlorocyclopentadiene	7,120,000 U
(54B)	78-59-1	isophorone	890,000 U
(55B)	91-20-3	naphthalene	890,000 U
(56B)	98-95-3	nitrobenzene	1,780,000 U
(62B)	86-30-6	N-nitrosodiphenylamine	3,120,000 U
(63B)	621-64-7	N-nitrosodipropylamine	1,780,000 U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	1,340,000 U
(67B)	85-68-7	benzyl butyl phthalate	1,340,000 U
(68B)	84-74-2	di-n-butyl phthalate	890,000 U
(69B)	117-84-0	di-n-octyl phthalate	890,000 U
(70B)	84-66-2	diethyl phthalate	1,340,000 U
(71B)	131-11-3	dimethyl phthalate	1,780,000 U
(72B)	56-55-3	benzo(a)anthracene	890,000 U
(73B)	50-32-8	benzo(a)pyrene	5,340,000 U
(74B)	205-99-2	benzo(b)fluoranthene	1,780,000 U
(75B)	207-08-9	benzo(k)fluoranthene	1,780,000 U
(76B)	218-01-9	chrysene	890,000 U
(77B)	208-96-8	acenaphthylene	890,000 U
(78B)	120-12-7	anthracene	890,000 U
(79B)	191-24-2	benzo(ghi)perylene	2,670,000 U
(80B)	86-73-7	fluorene	1,340,000 U
(81B)	85-01-8	phenanthrene	890,000 U
(82B)	53-70-3	dibenzo(a,h)anthracene	3,120,000 U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	2,670,000 U
(84B)	129-00-0	pyrene	890,000 U
	62-53-3	aniline	1,340,000 U
	100-51-6	benzyl alcohol	1,780,000 U
	106-47-8	4-chloroaniline	2,670,000 U
	132-64-9	dibenzofuran	890,000 U
	91-57-6	2-methylnaphthalene	1,780,000 U
	88-74-4	2-nitroaniline	3,560,000 U
	99-09-2	3-nitroaniline	3,120,000 U
	100-01-6	4-nitroaniline	3,120,000 U

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U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number: Method Blank

SBP 1/16/84

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Envirodyne
Lab Sample ID No: Blank
Sample Matrix: Water
Data Release Authorized By: Sharon Bin Patel

Case No: 3062
QC Report No: 1
Contract No.: 68-01-6785
Date Sample Received: 9-16-83

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED: 10-13-83
PERCENT MOISTURE:

FF #	CAS #		(W) or (S) ug/kg (circle one)
(2V)	107-02-8	acrolein	100 U
(3V)	107-13-1	acrylonitrile	100 U
(4V)	71-43-2	benzene	21
(5V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	1U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	4 J
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	5U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	51
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	ND
(50V)	75-71-8	dichlorodifluoromethane	ND
(51V)	124-48-1	chlorodibromomethane	5U
(53V)	127-18-4	tetrachloroethene	5U
(54V)	108-88-3	toluene	5
(57V)	79-01-6	trichloroethene	5U
(58V)	75-01-4	vinyl chloride	10U
	67-64-1	acetone	5U
	78-93-3	2-butanone	5U
	75-15-0	carbon disulfide	2
	519-78-6	2-hexanone	5U
	108-10-1	4-methyl-2-pentanone	5U

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/20/83
DATE ANALYZED: 10/5/83
PERCENT MOISTURE:

FF #	CAS #		(W) or (S) ug/kg (circle one)
(89P)	309-00-2	aldrin	0.002 U
(90P)	60-57-1	dieldrin	0.002 U
(91P)	57-74-9	chlordane	0.01 U
(92P)	50-29-3	4,4'-DDT	0.004 U
(93P)	72-55-9	4,4'-DDE	0.005 U
(94P)	72-54-8	4,4'-DDD	0.003 U
(95P)	115-29-7	α-endosulfan	0.005 U
(96P)	115-29-7	β-endosulfan	0.007 U
(97P)	1031-07-8	endosulfan sulfate	0.005 U
(98P)	72-20-8	endrin	0.003 U
(99P)	7421-93-4	endrin aldehyde	0.004 U
(100P)	76-44-8	heptachlor	0.003 U
(101P)	1024-57-3	heptachlor epoxide	0.003 U
(102P)	319-84-6	α-BHC	0.003 U
(103P)	319-85-7	β-BHC	0.005
(104P)	319-86-8	δ-BHC	0.003 U
(105P)	58-89-9	γ-BHC (lindane)	0.003 U
(106P)	53469-21-9	PCB-1242	0.1 U
(107P)	11097-69-1	PCB-1254	0.1 U
(108P)	11104-28-2	PCB-1221	0.1 U
(109P)	11141-16-5	PCB-1232	0.1 U
(110P)	12672-29-6	PCB-1248	0.1 U
(111P)	11096-82-5	PCB-1260	0.1 U
(112P)	12674-11-2	PCB-1016	0.1 U
(113P)	8001-35-2	toxaphene	0.28 U

DIOXINS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/16/83
DATE ANALYZED: 9/17/83
PERCENT MOISTURE:

AR100235

FF #	CAS #		(W) or (S) ug/kg (circle one)
(114P)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	N.A.

AR100235

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U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
24185 Matrix Blank
SBP 1/16/84

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Enviredyne Engrs. Inc.
Case No: 2064
Lab Sample ID No: 8425 Method Blank
QC Report No: 1
Sample Matrix: Water
Contract No.: 68-01-6785
Data Release Authorized By: Graham Bluford
Date Sample Received: 9-16-83

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/19/83
DATE ANALYZED: 10/5/83
PERCENT MOISTURE: _____

AR100236

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	10 U
(27A)	59-50-7	p-chloro-m-cresol	10 U
(29A)	95-57-8	2- chlorophenol	10 U
(31A)	120-83-2	2,4-dichlorophenol	10 U
(34A)	105-67-9	2,4-dimethylphenol	10 U
(37A)	88-75-5	2- nitrophenol	20 U
(38A)	100-02-7	4-nitrophenol	50 U
(39A)	51-28-5	2,4-dinitrophenol	50 U
(40A)	534-52-1	4,6-dinitro-2-methylphenol	20 U
(44A)	87-86-5	pentachlorophenol	10 U
(45A)	108-95-2	phenol	10 U
	65-85-0	benzoic acid	100 U
	95-48-7	2-methylphenol	5 U
	108-39-4	4-methylphenol	5 U
	95-95-4	2,4,5-trichlorophenol	100 U
(1B)	83-32-9	acenaphthene	10 U
(5B)	92-87-5	benzidine	40 U
(8B)	120-82-1	1,2,4-trichlorobenzene	10 U
(9B)	118-74-1	hexachlorobenzene	10 U
(12B)	67-72-1	hexachloroethane	10 U
(15B)	111-44-4	bis(2-chloroethyl)ether	10 U
(20B)	91-58-7	2-chloronaphthalene	10 U
(28B)	95-50-1	1,2-dichlorobenzene	10 U
(26B)	541-73-1	1,3-dichlorobenzene	10 U
(27B)	106-46-7	1,4-dichlorobenzene	10 U
(28B)	91-94-1	3,3'-dichlorobenzidine	20 U
(33B)	121-14-2	2,4-dinitrotoluene	20 U
(36B)	606-20-2	2,6-dinitrotoluene	20 U
(37B)	122-66-7	1,2-diphenylhydrazine	20 U
(39B)	206-44-0	fluoranthene	10 U
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10 U
(41B)	101-55-3	4-bromophenyl phenyl ether	10 U

PP #	CAS #		ug/l or ug/kg (circle one)
(42B)	87-68-3	hexachlorobutadiene	10 U
(43B)	77-47-4	hexachlorocyclopentadiene	10 U
(44B)	78-59-1	isophorone	10 U
(45B)	91-20-3	naphthalene	10 U
(46B)	98-95-3	nitrobenzene	10 U
(62B)	86-30-6	N-nitrosodiphenylamine	10 U
(63B)	621-64-7	N-nitrosodipropylamine	10 U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	6
(67B)	85-68-7	benzyl butyl phthalate	10 U
(68B)	84-74-2	di-n-butyl phthalate	4
(69B)	117-84-0	di-n-octyl phthalate	10 U
(70B)	84-66-2	diethyl phthalate	10 U
(71B)	131-11-3	dimethyl phthalate	10 U
(72B)	56-55-3	benzo(a)anthracene	10 U
(73B)	50-32-8	benzo(a)pyrene	20 U
(74B)	205-99-2	benzo(b)fluoranthene	20 U
(75B)	207-08-9	benzo(k)fluoranthene	20 U
(76B)	218-01-9	chrysene	20 U
(77B)	208-96-8	acenaphthylene	10 U
(78B)	120-12-7	anthracene	10 U
(79B)	191-24-2	benzo(ghi)perylene	20 U
(80B)	86-73-7	fluorene	10 U
(81B)	85-01-8	phenanthrene	10 U
(82B)	53-70-3	dibenz(a,h)anthracene	20 U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20 U
(84B)	129-00-0	pyrene	10 U
	62-53-3	aniline	5 U
	100-51-6	benzyl alcohol	100 U
	106-47-8	4-chloroaniline	50 U
	132-64-9	dibenzofuran	10 U
	91-57-6	2-methylnaphthalene	20 U
	88-74-4	2-nitroaniline	100 U

AR100236

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ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number: Method Blank

Laboratory Name: ENVIRODYNE Case No: 3062

QC Report No:

B. Tentatively Identified Compounds

	CAS #	Compound Name	Fraction	Scan No. or Reference Time	% Maximum Blank Allowed (Mass Matching Routine: Specify _____)	Estimated Concentration (ug/l or ug/kg)
1.		No peaks to IDACA	B/N-A			
2.						
3.	623911	1,4-dioxane	VOA	14.5		19
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
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22.						
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8/82

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U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
C-3953
SBP 1/16/84

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: ENVIRODYNE
Lab Sample ID No: C-3953
Sample Matrix: Water
Data Release Authorized By: [signature]

Case No: 2062
QC Report No: 1
Contract No.: 68-01-6785
Date Sample Received: 9-16-83

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: _____
DATE ANALYZED: 10-12-83
PERCENT MOISTURE: _____

PP #	CAS #		(ug/l or ug/kg (circle one))
(2V)	107-02-8	acrolein	100 U
(3V)	107-13-1	acrylonitrile	100 U
(4V)	71-43-2	benzene	5 U
(5V)	56-23-5	carbon tetrachloride	5 U
(7V)	108-90-7	chlorobenzene	5 U
(10V)	107-06-2	1,2-dichloroethane	1 U
(11V)	71-55-6	1,1,1-trichloroethane	5 U
(13V)	75-34-3	1,1-dichloroethane	5 U
(14V)	79-00-5	1,1,2-trichloroethane	5 U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10 U
(16V)	75-00-3	chloroethane	10 U
(19V)	110-75-8	2-chloroethylvinyl ether	10 U
(23V)	67-66-3	chloroform	5 U
(29V)	75-35-4	1,1-dichloroethene	5 U
(30V)	156-60-5	trans-1,2-dichloroethene	5 U
(32V)	78-87-5	1,2-dichloropropane	10 U
(33V)	10061-02-6	trans-1,3-dichloropropene	10 U
	10061-01-05	cis-1,3-dichloropropene	10 U
(38V)	100-41-4	ethylbenzene	5 U
(44V)	75-09-2	methylene chloride	45.7 DC
(45V)	74-87-3	chloromethane	10 U
(46V)	74-83-9	bromomethane	10 U
(47V)	75-25-2	bromoform	10 U
(48V)	75-27-4	bromodichloromethane	5 U
(49V)	75-69-4	fluorotrichloromethane	ND
(50V)	75-71-8	dichlorodifluoromethane	ND
(51V)	124-48-1	chlorodibromomethane	5 U
(53V)	127-18-4	tetrachloroethene	5 U
(54V)	108-88-3	toluene	5 U
(57V)	79-01-6	trichloroethene	5 U
(59V)	75-01-4	vinyl chloride	10 U
	67-64-1	acetone	5 U
	78-93-3	2-butanone	5 U
	75-15-0	carbondisulfide	1 U
	591-78-6	2-hexanone	5 U
	108-10-1	4-methyl-2-pentanone	5 U
	67-64-1	acetone	5 U

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/20/83
DATE ANALYZED: 10/5/83
PERCENT MOISTURE: _____

PP #	CAS #		(ug/l or ug/kg (circle one))
(89P)	309-00-2	aldrin	0.03 U
(90P)	60-57-1	dieldrin	0.03 U
(91P)	57-74-9	chlordane	0.10 U
(92P)	50-29-3	4,4'-DDT	0.05 U
(93P)	72-55-9	4,4'-DDE	0.05 U
(94P)	72-54-8	4,4'-DDD	0.05 U
(95P)	115-29-7	α-endosulfan	0.0
(96P)	115-29-7	β-endosulfan	0.0
(97P)	1031-07-8	endosulfan sulfate	0.05 U
(98P)	72-20-8	endrin	0.03 U
(99P)	7421-93-4	endrin aldehyde	0.05 U
(100P)	76-44-8	heptachlor	0.03 U
(101P)	1024-57-3	heptachlor epoxide	0.03 U
(102P)	319-84-6	α-BHC	0.05 U
(103P)	319-85-7	β-BHC	0.05 U
(104P)	319-86-8	δ-BHC	0.03 U
(105P)	58-89-9	γ-BHC (lindane)	0.03 U
(106P)	53469-21-9	PCB-1242	0.5 U
(107P)	11097-69-1	PCB-1254	0.5 U
(108P)	11104-28-2	PCB-1221	0.5 U
(109P)	11141-16-5	PCB-1232	0.5 U
(110P)	12672-29-6	PCB-1248	0.5 U
(111P)	11096-82-5	PCB-1260	0.5 U
(112P)	12674-11-2	PCB-1016	0.5 U
(113P)	8001-35-2	toxaphene	2.0 U

DIOXINS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/16/83
DATE ANALYZED: 9/19/83
PERCENT MOISTURE: _____

PP #	CAS #		(ug/l or ug/kg (circle one))
(129P)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	N.A.

SR100238

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U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
C-3953
SBP. 1/16/84

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Enviodyne
Lab Sample ID No: C-3953
Sample Matrix: Water
Data Release Authorized By: Graham Blackburn

Case No: 2062
QC Report No: 1
Contract No.: 68-01-6785
Date Sample Received: 9-16-83

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/19/83
DATE ANALYZED: 10/6/83
PERCENT MOISTURE: _____

EPP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	10 U
(22A)	59-50-7	p-chloro-m-cresol	10 U
(24A)	95-57-8	2- chlorophenol	10 U
(31A)	120-83-2	2,4-dichlorophenol	10 U
(34A)	105-67-9	2,4-dimethylphenol	10 U
(57A)	88-75-5	2- nitrophenol	20 U
(58A)	100-02-7	4-nitrophenol	50 U
(59A)	51-28-5	2,4-dinitrophenol	50 U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	20 U
(64A)	87-86-5	pentachlorophenol	10 U
(65A)	108-95-2	phenol	10 U
	65-85-0	benzoic acid	100 U
	95-48-7	2-methylphenol	5 U
	108-39-4	4-methylphenol	5 U
	95-95-4	2,4,5-trichlorophenol	100 U
(1B)	83-32-9	acenaphthene	10 U
(2B)	92-87-5	benzidine	40 U
(3B)	120-82-1	1,2,4- trichlorobenzene	10 U
(9B)	118-74-1	hexachlorobenzene	10 U
(12B)	67-72-1	hexachloroethane	10 U
(15B)	111-44-4	bis(2-chloroethyl)ether	10 U
(20B)	91-58-7	2-chloronaphthalene	10 U
(21B)	95-50-1	1,2-dichlorobenzene	10 U
(24B)	541-73-1	1,3-dichlorobenzene	10 U
(27B)	106-46-7	1,4-dichlorobenzene	10 U
(28B)	91-94-1	3,3'-dichlorobenzidine	20 U
(29B)	121-14-2	2,4-dinitrotoluene	20 U
(34B)	606-20-2	2,6-dinitrotoluene	20 U
(37B)	122-66-7	1,2-diphenylhydrazine	20 U
(39B)	206-44-0	fluoranthene	10 U
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10 U

EPP #	CAS #		ug/l or ug/kg (circle one)
(42B)	87-68-3	hexachlorobutadiene	10 U
(43B)	77-47-4	hexachlorocyclopentadiene	10 U
(44B)	78-59-1	isophorone	10 U
(45B)	91-20-3	naphthalene	10 U
(46B)	98-95-3	nitrobenzene	10 U
(47B)	86-30-6	N-nitrosodiphenylamine	10 U
(48B)	621-64-7	N-nitrosodipropylamine	10 U
(49B)	117-81-7	bis (2-ethylhexyl) phthalate	NDE
(47B)	85-68-7	benzyl butyl phthalate	10 U
(48B)	84-74-2	di-n-butyl phthalate	3
(49B)	117-84-0	di-n-octyl phthalate	10 U
(70B)	84-66-2	diethyl phthalate	
(71B)	131-11-3	dimethyl phthalate	10 U
(72B)	56-55-3	benzo(a)anthracene	10 U
(73B)	50-32-8	benzo(a)pyrene	20 U
(74B)	205-99-2	benzo(b)fluoranthene	20 U
(75B)	207-08-9	benzo(k)fluoranthene	20 U
(76B)	218-01-9	chrysene	20 U
(77B)	208-96-8	acenaphthylene	10 U
(78B)	120-12-7	anthracene	10 U
(79B)	191-24-2	benzo(ghi)perylene	20 U
(80B)	86-73-7	fluorene	10 U
(81B)	85-01-8	phenanthrene	10 U
(82B)	53-70-3	dibenz(a,h)anthracene	20 U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20 U
(84B)	129-00-0	pyrene	10 U
	62-53-3	aniline	5 U
	100-51-6	benzyl alcohol	100 U
	106-47-8	4-chloroaniline	50 U
			10 U
			20 U

AR100239

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ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number: 63953
SBP 1/16/84

Laboratory Name: ENVIRODYNE   Case No: 2062

QC Report No:

B. Tentatively Identified Compounds

	CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Score Attained Mass Matching Routine (Specify: LCC Disk)	Estimated Concentration ug/L or ug/kg
1.	105553	[illegible]	B/N-A	3.5	0.9744	26
2.	95169	benzothiazole	B/N-A	23.8	0.9805	14
3.	112345	2-(2-butoxyethoxy) ethanol	B/N-A	24.4	0.9785	14
4.	126738	tri-n-butylphosphate	B/N-A	19.4	0.9799	612
5.	434949	2-hydroxy[illegible]	B/N-A	19.7	0.9787	18
6.	2917739	di-n-butyl [illegible]	B/N-A	17.0	0.9719	293
7.						
8.	123911	1,4-dioxane	VOA	15.1	0.9807	6
9.						
10.						
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16.						
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30.						

8/82

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number: C3977

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Envirodyne Engrs Inc
Case No: 2062
Lab Sample ID No: C3977
QC Report No: 1
Sample Matrix: Soil
Contract No.: 68-01-6785
Data Release Authorized By:
Date Sample Received: 9/16/83

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: NA
DATE ANALYZED: 10/19/83
PERCENT MOISTURE: 66.3

PP #	CAS #		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	200 U
(3V)	107-13-1	acrylonitrile	200 U
(4V)	71-43-2	benzene	1
(6V)	56-23-5	carbon tetrachloride	40 U
(7V)	108-90-7	chlorobenzene	20 U
(10V)	107-06-2	1,2-dichloroethane	40 U
(11V)	71-55-6	1,1,1-trichloroethane	40 U
(13V)	75-34-3	1,1-dichloroethane	40 U
(14V)	79-00-5	1,1,2-trichloroethane	40 U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	20 U
(16V)	75-00-3	chloroethane	40 U
(19V)	110-75-8	2-chloroethylvinyl ether	40 U
(23V)	67-66-3	chloroform	NDB
(29V)	75-35-4	1,1-dichloroethene	40 U
(30V)	156-60-5	trans-1,2-dichloroethene	40 U
(32V)	78-87-5	1,2-dichloropropane	40 U
(33V)	10061-02-6	trans-1,3-dichloropropene	20 U
	10061-01-05	cis-1,3-dichloropropene	20 U
(38V)	100-41-4	ethylbenzene	20 U
(44V)	75-09-2	methylene chloride	NDB
(45V)	74-87-3	chloromethane	20 U
(46V)	74-83-9	bromomethane	60 U
(47V)	75-25-2	bromoform	40 U
(48V)	75-27-4	bromodichloromethane	40 U
(49V)	75-69-4	fluorotrichloromethane	—
(50V)	75-71-8	dichlorodifluoromethane	—
(51V)	124-48-1	chlorodibromomethane	20 U
(85V)	127-18-4	tetrachloroethene	20 U
(86V)	108-88-3	toluene	NDB
(87V)	79-01-6	trichloroethene	20 U
(88V)	75-01-4	vinyl chloride	60 U
	67-64-1	acetone	200 U
	78-93-3	2-butanone	200 U
	75-15-0	carbondisulfide	20 U
	591-78-6	2-hexanone	40 U
	108-10-1	4-methyl-2-pentanone	60 U
	100-42-5	styrene	20 U
	108-05-4	vinyl acetate	—
	1330-20-7	total xylenes	20 U

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/20/83
DATE ANALYZED: 9/25/83
PERCENT MOISTURE: 66.3

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	0.142 U
(90P)	60-57-1	dieldrin	0.146 U
(91P)	57-74-9	chlordane	1.57 U
(92P)	50-29-3	4,4'-DDT	0.283 U
(93P)	72-55-9	4,4'-DDE	0.299 U
(94P)	72-54-8	4,4'-DDD	0.144 U
(95P)	115-29-7	α-endosulfan	0.214 U
(96P)	115-29-7	β-endosulfan	0.112 U
(97P)	1031-07-8	endosulfan sulfate	0.254 U
(98P)	72-20-8	endrin	0.182 U
(99P)	7421-93-4	endrin aldehyde	0.203 U
(100P)	76-44-8	heptachlor	0.137 U
(101P)	1024-57-3	heptachlor epoxide	0.135 U
(102P)	319-84-6	α-BHC	0.230 U
(103P)	319-85-7	β-BHC	0.118 U
(104P)	319-86-8	δ-BHC	0.180 U
(105P)	58-89-9	γ-BHC (lindane)	0.142 U
(106P)	53469-21-9	PCB-1242	3.44 U
(107P)	11097-69-1	PCB-1254	2.512 U
(108P)	11104-28-2	PCB-1221	8.0 U
(109P)	11141-16-5	PCB-1232	8.8 U
(110P)	12672-29-6	PCB-1248	2.93 U
(111P)	11096-82-5	PCB-1260	3.44 U
(112P)	12674-11-2	PCB-1016	2.2 U
(113P)	8001-35-2	toxaphene	9.0 U

DIOXINS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/13/83
DATE ANALYZED: 9/18/83
PERCENT MOISTURE: 66.3

PP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	N.R.

July 1983

AR100241

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number: 3977

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Enviradyne
Lab Sample ID No: 3977
Sample Matrix: Soil
Data Release Authorized By:

Case No: 2062
QC Report No: 1
Contract No.: 68-01-6785
Date Sample Received: 9/14/93

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/15/93
DATE ANALYZED: 10/6/93
PERCENT MOISTURE:

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	2000 U
(22A)	59-50-7	p-chloro-m-cresol	1000 U
(24A)	95-57-8	2- chlorophenol	500 U
(31A)	120-83-2	2,4-dichlorophenol	750 U
(34A)	105-67-9	2,4-dimethylphenol	1000 U
(37A)	88-75-5	2- nitrophenol	1000 U
(38A)	100-02-7	4-nitrophenol	875 U
(59A)	51-28-5	2,4-dinitrophenol	1750 U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	1750 U
(64A)	87-86-5	pentachlorophenol	875 U
(65A)	108-95-2	phenol	375 U
	65-85-0	benzoic acid	1000 U
	95-48-7	2-methylphenol	500 U
	108-39-4	4-methylphenol	500 U
	95-95-4	2,4,5-trichlorophenol	1000 U
(1B)	83-32-9	acenaphthene	150 U
(5B)	92-87-5	benzidine	700 U
(8B)	120-82-1	1,2,4-trichlorobenzene	300 U
(9B)	118-74-1	hexachlorobenzene	350 U
(12B)	67-72-1	hexachloroethane	500 U
(13B)	111-44-4	bis(2-chloroethyl)ether	150 U
(20B)	91-58-7	2-chloronaphthalene	700 U
(25B)	95-50-1	1,2-dichlorobenzene	300 U
(26B)	541-73-1	1,3-dichlorobenzene	300 U
(27B)	106-46-7	1,4-dichlorobenzene	33
(28B)	91-94-1	3,3'-dichlorobenzidine	700 U
(33B)	121-14-2	2,4-dinitrotoluene	250 U
(36B)	606-20-2	2,6-dinitrotoluene	800 U
(37B)	122-66-7	1,2-diphenylhydrazine	150 U
(39B)	206-44-0	fluoranthene	100 U
(40B)	7005-72-3	4-chlorophenyl phenyl ether	150 U
(41B)	101-55-3	4-bromophenyl phenyl ether	350 U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	150 U
(43B)	111-91-1	bis (2-chl... ...ether	... U

PP #	CAS #		ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	300 U
(53B)	77-47-4	hexachlorocyclopentadiene	800 U
(54B)	78-59-1	isophorone	150 U
(55B)	91-20-3	naphthalene	24
(56B)	98-95-3	nitrobenzene	200 U
(62B)	86-30-6	N-nitrosodiphenylamine	350 U
(63B)	621-64-7	N-nitrosodipropylamine	200 U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	783
(67B)	85-68-7	benzyl butyl phthalate	150 U
(68B)	84-74-2	di-n-butyl phthalate	NDP
(69B)	117-84-0	di-n-octyl phthalate	100 U
(70B)	84-66-2	diethyl phthalate	150 U
(71B)	131-11-3	dimethyl phthalate	200 U
(72B)	56-55-3	benzo(a)anthracene	100 U
(73B)	50-32-8	benzo(a)pyrene	600 U
(74B)	205-99-2	benzo(b)fluoranthene	200 U
(75B)	207-08-9	benzo(k)fluoranthene	200 U
(76B)	218-01-9	chrysene	100 U
(77B)	208-96-8	acenaphthylene	100 U
(78B)	120-12-7	anthracene	100 U
(79B)	191-24-2	benzo(ghi)perylene	200 U
(80B)	86-73-7	fluorene	150 U
(81B)	85-01-8	phenanthrene	100 U
(82B)	53-70-3	dibenzo(a,h)anthracene	350 U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	300 U
(84B)	129-00-0	pyrene	100 U
	62-53-3	aniline	150 U
	100-51-6	benzyl alcohol	200 U
	106-47-8	4-chloroaniline	300 U
	132-64-9	dibenzofuran	100 U
	91-57-6	2-methylnaphthalene	23
	88-74-4	2-nitroaniline	400 U
	99-09-2	3-nitroaniline	350 U

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number: 3978

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Envirodyne
Lab Sample ID No: 3979
Sample Matrix: Soil
Data Release Authorized By:

Case No: 2062
QC Report No: 1
Contract No.: 68-01-6785
Date Sample Received: 9/16/93

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: NA
DATE ANALYZED: 10-18-93
PERCENT MOISTURE: 19

FP #	CAS #		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	200U
(3V)	107-13-1	acrylonitrile	200U
(6V)	71-43-2	benzene	4
(6V)	56-23-5	carbon tetrachloride	60U
(7V)	108-90-7	chlorobenzene	20U
(10V)	107-06-2	1,2-dichloroethane	40U
(11V)	71-55-6	1,1,1-trichloroethane	NDB
(13V)	75-34-3	1,1-dichloroethane	40U
(14V)	79-00-5	1,1,2-trichloroethane	40U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	20U
(16V)	75-00-3	chloroethane	60U
(19V)	110-75-8	2-chloroethylvinyl ether	40U
(23V)	67-66-3	chloroform	NDB
(29V)	75-35-4	1,1-dichloroethene	40U
(30V)	156-60-5	trans-1,2-dichloroethene	40U
(32V)	78-87-5	1,2-dichloropropane	40U
(33V)	10061-02-6	trans-1,3-dichloropropene	20U
	10061-01-05	cis-1,3-dichloropropene	20U
(38V)	100-41-4	ethylbenzene	20U
(44V)	75-09-2	methylene chloride	276
(45V)	74-87-3	chloromethane	20U
(46V)	74-83-9	bromomethane	60U
(47V)	75-25-2	bromoform	40U
(48V)	75-27-4	bromodichloromethane	40U
(49V)	75-69-4	fluorotrichloromethane	—
(50V)	75-71-8	dichlorodifluoromethane	—
(51V)	124-48-1	chlorodibromomethane	20U
(85V)	127-18-4	tetrachloroethene	20U
(86V)	108-88-3	toluene	4
(87V)	79-01-6	trichloroethene	9
(88V)	75-01-4	vinyl chloride	60U
	67-64-1	acetone	121
	78-93-3	2-butanone	200U
	75-15-0	carbondisulfide	20U
	519-78-6	2-hexanone	40U
	108-10-1	4-methyl-2-pentanone	60U
	100-42-5	styrene	20U
	108-05-4	vinyl acetate	—
	1330-20-7	total xylenes	20U

PESTICIDES

CONCENTRATION: LOW (MEDIUM) HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/20/93
DATE ANALYZED: 10/5/93
PERCENT MOISTURE: 1.9

FP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	0.89 u
(90P)	60-57-1	dieldrin	0.79 u
(91P)	57-74-9	chlordane	9.3
(92P)	50-29-3	4,4'-DDT	1.15u
(93P)	72-55-9	4,4'-DDE	1.53u
(94P)	72-54-8	4,4'-DDD	0.90 u
(95P)	115-29-7	α-endosulfan	1.34u
(96P)	115-29-7	β-endosulfan	0.70 u
(97P)	1031-07-8	endosulfan sulfate	1.58u
(98P)	72-20-8	endrin	1.135u
(99P)	7421-93-4	endrin aldehyde	1.26 u
(100P)	76-44-8	heptachlor	0.85u
(101P)	1024-57-3	heptachlor epoxide	0.85u
(102P)	319-84-6	α-BHC	1.445u
(103P)	319-85-7	β-BHC	0.74u
(104P)	319-86-8	δ-BHC	0.93u
(105P)	58-89-9	γ-BHC (lindane)	0.89u
(106P)	53469-21-9	PCB-1242	20.0u
(107P)	11097-69-1	PCB-1254	15.7u
(108P)	11104-28-2	PCB-1221	50.0u
(109P)	11141-16-5	PCB-1232	55.5u
(110P)	12672-29-6	PCB-1248	18.35u
(111P)	11096-82-5	PCB-1260	20.25u
(112P)	12674-11-2	PCB-1016	20.0u
(113P)	8001-35-2	toxaphene	19.0u

DIOXINS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/17/93
DATE ANALYZED: 9/18/93
PERCENT MOISTURE: 1.9

FP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	NA

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
C3978

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Environmental Enforcement Conference
Lab Sample ID No: C3978
Sample Matrix: Soil
Data Release Authorized By:

Case No: 2062
QC Report No: 1
Contract No.: 68-01-6785
Date Sample Received: 9/16/83

SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW (MEDIUM) HIGH (circle one)
DATE EXTRACTED/PREPARED: 9/20/83
DATE ANALYZED: 10/7/83
PERCENT MOISTURE:

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	623,000 U
(22A)	59-50-7	p-chloro-m-cresol	311,000 U
(24A)	95-57-8	2- chlorophenol	156,000 U
(31A)	120-83-2	2,4-dichlorophenol	233,000 U
(34A)	105-67-9	2,4-dimethylphenol	688,000
(57A)	88-75-5	2- nitrophenol	311,000 U
(58A)	100-02-7	4-nitrophenol	272,000 U
(59A)	51-28-5	2,4-dinitrophenol	545,000 U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	545,000 U
(64A)	87-86-5	pentachlorophenol	8140
(65A)	108-95-2	phenol	117,000 U
	65-85-0	benzoic acid	311,000 U
	95-48-7	2-methylphenol	156,000 U
	108-39-4	4-methylphenol	1060,000
	95-95-4	2,4,5-trichlorophenol	311,000 U
(1B)	83-32-9	acenaphthene	117,000 U
(2B)	92-87-5	benzidine	545,000 U
(3B)	120-82-1	1,2,4-trichlorobenzene	233,000 U
(4B)	118-74-1	hexachlorobenzene	272,000 U
(5B)	67-72-1	hexachloroethane	389,000 U
(6B)	111-44-4	bis(2-chloroethyl)ether	117,000 U
(10B)	91-58-7	2-chloronaphthalene	156,000 U
(25B)	95-50-1	1,2-dichlorobenzene	156,000 U
(26B)	541-73-1	1,3-dichlorobenzene	156,000 U
(27B)	106-46-7	1,4-dichlorobenzene	156,000 U
(28B)	91-94-1	3,3'-dichlorobenzidine	545,000 U
(35B)	121-14-2	2,4-dinitrotoluene	272,000 U
(36B)	606-20-2	2,6-dinitrotoluene	623,000 U
(37B)	122-66-7	1,2-diphenylhydrazine	117,000 U
(39B)	206-44-0	fluoranthene	77,800 U
(40B)	7005-72-3	4-chlorophenyl phenyl ether	117,000 U
(41B)	101-55-3	4-bromophenyl phenyl ether	272,000 U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	117,000 U

PP #	CAS #		ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	623,000 U
(53B)	77-47-4	hexachlorocyclopentadiene	623,000 U
(54B)	78-59-1	isophorone	77,800 U
(55B)	91-20-3	naphthalene	77,800 U
(56B)	98-95-3	nitrobenzene	156 U
(62B)	86-30-6	N-nitrosodiphenylamine	272,000 U
(63B)	621-64-7	N-nitrosodipropylamine	156,000 U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	208,000
(67B)	85-68-7	benzyl butyl phthalate	117,000 U
(68B)	84-74-2	di-n-butyl phthalate	77,800
(69B)	117-84-0	di-n-octyl phthalate	77,800
(70B)	84-66-2	diethyl phthalate	117,000 U
(71B)	131-11-3	dimethyl phthalate	156,000 U
(72B)	56-55-3	benzo(a)anthracene	77,800 U
(73B)	50-32-8	benzo(a)pyrene	467,000 U
(74B)	205-99-2	benzo(b)fluoranthene	156,000 U
(75B)	207-08-9	benzo(k)fluoranthene	156,000 U
(76B)	218-01-9	chrysene	77,800 U
(77B)	208-96-8	acenaphthylene	77,800 U
(78B)	120-12-7	anthracene	77,800 U
(79B)	191-24-2	benzo(ghi)perylene	233,000
(80B)	86-73-7	fluorene	117,000 U
(81B)	85-01-8	phenanthrene	77,800
(82B)	53-70-3	dibenzo(a,h)anthracene	272,000
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	233,000
(84B)	129-00-0	pyrene	77,800
	62-53-3	aniline	117,000
	100-51-6	benzyl alcohol	156 U
	106-47-8	4-chloroaniline	233,000 U
	132-64-9	dibenzofuran	77,800
	91-57-6	2-methylnaphthalene	156,000
			311,000
			272,000
			272,000

AR100244

US ENVIRONMENTAL PROTECTION AGENCY
HWI Sample Management Office
P.O. Box 818 – Alexandria, Virginia 22313
703/557-2490 FTS 8-557-2490

Sample No.
MC1389

INORGANICS ANALYSIS DATA SHEET

AB NAME JTC Environmental
CASE NO. 2062
AB SAMPLE ID. NO. 90-0589
QC REPORT NO. 59

TASK 1 (Elements to be Identified and Measured)

	(ug/l) or mg/kg (circle one)			(ug/l) or mg/kg (circle one)
Aluminum	1410	10.	Zinc	NDB
Chromium	ND	11.	Boron	ND
Barium	ND	12.	Vanadium	NDS
Beryllium	6	13.	Silver	ND
Cobalt	ND			
Copper	ND			
Iron	1480			
Nickel	ND			
Manganese	38J			

TASK 2 (Elements to be Identified and Measured)

	(ug/l) or mg/kg (circle one)			(ug/l) or mg/kg (circle one)
Arsenic	ND	5.	Mercury	NDS
Antimony	ND	6.	Tin	NDB
Selenium	ND	7.	Cadmium	ND
Thallium	ND	8.	Lead	NDS

TASK 3 (Elements to be Identified and Measured)

		(ug/l) or mg/kg (circle one)
1.	Ammonia	NA
2.	Cyanide	NDS
3.	Sulfide	NA

COMMENTS: NA – Not Applicable

10/20

AR100245

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Sample N
MW 2

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LAB NAME JTC Environmental CASE NO. 2062

LAB SAMPLE ID. NO. 70-0590 QC REPORT NO. 59

TASK 1 (Elements to be Identified and Measured)

		(ug/l) or mg/kg (circle one)			(ug/l) or m (circle o
Aluminum		510	10.	Zinc	5
Chromium		ND	11.	Boron	A
Barium		ND	12.	Vanadium	A
Beryllium		5	13.	Silver	A
Cobalt		ND			
Copper		ND			
Iron		470			
Nickel		40			
Manganese		35			

TASK 2 (Elements to be Identified and Measured)

		(ug/l) or mg/kg (circle one)			(ug/l) or m (circle c
Arsenic		ND	5.	Mercury	0.4
Antimony		ND	6.	Tin	ND
Selenium		ND	7.	Cadmium	ND
Thallium		ND	8.	Lead	ND

TASK 3 (Elements to be Identified and Measured)

		(ug/l) or mg/kg (circle one)
1.	Ammonia	NA
2.	Cyanide	ND
3.	Sulfide	NA

COMMENTS: NA - Not Applicable

AR100246

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Sample No.
MC1391 A

INORGANICS ANALYSIS DATA SHEET

LAB NAME JTC Environmental
CASE NO. 2062
LAB SAMPLE ID. NO. TD-2591A
QC REPORT NO. 59

TASK 1 (Elements to be Identified and Measured)

		ug/l (circle one) or mg/kg (circle one)			ug/l (circle one) or mg/l (circle one)
	Aluminum	840	10.	Zinc	83C
	Chromium	ND	11.	Boron	ND
	Barium	ND	12.	Vanadium	ND
	Beryllium	ND	13.	Silver	ND
	Cobalt	ND			
	Copper	ND			
	Iron	1170			
	Nickel	66			
	Manganese	100			

TASK 2 (Elements to be Identified and Measured)

		ug/l (circle one) or mg/kg (circle one)			ug/l (circle one) or mg/l (circle one)
	Arsenic	ND	5.	Mercury	0.5
	Antimony	ND	6.	Tin	ND
	Selenium	7	7.	Cadmium	ND
	Thallium	ND	8.	Lead	ND

TASK 3 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)
1.	~~Ammonia~~	
2.	Cyanide	
3.	~~Sulfide~~	

COMMENTS:

AR100247

10/20

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Sample No.
MW-17

INORGANICS ANALYSIS DATA SHEET

LAB NAME JTC Environmental
LAB SAMPLE ID. NO. 70-0591 B
CASE NO. 2062
QC REPORT NO. 59

TASK 1 (Elements to be Identified and Measured)

	ug/l or mg/kg (circle one)			ug/l or mg/l (circle one)
Aluminum	870	10.	Zinc	43C
Chromium	ND	11.	Boron	ND
Barium	ND	12.	Vanadium	ND
Beryllium	ND	13.	Silver	ND
Cobalt	ND			
Copper	ND			
Iron	1210			
Nickel	66			
Manganese	300			

TASK 2 (Elements to be Identified and Measured)

	ug/l or mg/kg (circle one)			ug/l or mg/ (circle one
Arsenic	ND	5.	Mercury	ND
Antimony	ND	6.	Tin	ND
Selenium	2	7.	Cadmium	ND
Thallium	ND	8.	Lead	ND

TASK 3 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)
1.	~~Ammonia~~	
2.	Cyanide	
3.	~~Sulfide~~	

COMMENTS:

AR100248

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MC 15

INORGANICS ANALYSIS DATA SHEET

LAB NAME United States Testing Co., Inc. CASE NO. 2062

LAB SAMPLE ID. NO. 76048-2 QC REPORT NO. 49

TASK 1 (Elements to be Identified and Measured)

		ug/l or (mg/kg) (circle one)			ug/l or ((circle
1.	Aluminum	8500	10.	Zinc	58.5
2.	Chromium	12.8	11.	Boron	<5
3.	Barium	94	12.	Vanadium	16
4.	Beryllium	0.8	13.	Silver	<0.5
5.	Cobalt	12			
6.	Copper	18			
7.	Iron	15700			
8.	Nickel	19.3			
9.	Manganese	293			

TASK 2 (Elements to be Identified and Measured)

		ug/l or (mg/kg) (circle one)			ug/l or ((circle
1.	Arsenic	1.9	5.	Mercury	4.3
2.	Antimony	<1.0	6.	Tin	19
3.	Selenium	0.1	7.	Cadmium	0.7
4.	Thallium	<0.5	8.	Lead	21.5

TASK 3 (Elements to be Identified and Measured)

		ug/l or (mg/kg) (circle one)
1.	Ammonia	
2.	Cyanide	54
3.	Sulfide	

COMMENTS:

Final Analysis
12/14/87

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Sample No.
MC

INORGANICS ANALYSIS DATA SHEET

B NAME JTC Environmental
B SAMPLE ID. NO. 70.0592A
CASE NO. 2062
QC REPORT NO. 59

TASK 1 (Elements to be Identified and Measured)

	ug/l or mg/kg (circle one)			ug/l or mg/ (circle one
Aluminum		10.	Zinc	
Chromium		11.	Boron	
Barium		12.	Vanadium	
Beryllium		13.	Silver	
Cobalt				
Copper				
Iron				
Nickel				
Manganese				

TASK 2 (Elements to be Identified and Measured)

	ug/l or mg/kg (circle one)			ug/l or mg/ (circle one
Arsenic		5.	Mercury	
Antimony		6.	Tin	
Selenium		7.	Cadmium	
Thallium		8.	Lead	

TASK 3 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)
1.	Ammonia	NA
2.	Cyanide	NA
3.	Sulfide	NA

COMMENTS: NA - Not Applicable

AR100250

12/20

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Sample No.
MC1393

INORGANICS ANALYSIS DATA SHEET

LAB NAME JTC Environmental CASE NO. 2062
LAB SAMPLE ID. NO. 70-0592 B QC REPORT NO. 59

TASK 1 (Elements to be Identified and Measured)

	ug/l or mg/kg (circle one)		ug/l or mg/kg (circle one)
Aluminum		10. Zinc	
Chromium		11. Boron	
Barium		12. Vanadium	
Beryllium		13. Silver	
Cobalt			
Copper			
Iron			
Nickel			
Manganese			

TASK 2 (Elements to be Identified and Measured)

	ug/l or mg/kg (circle one)		ug/l or mg/kg (circle one)
Arsenic		5. Mercury	
Antimony		6. Tin	
Selenium		7. Cadmium	
Thallium		8. Lead	

TASK 3 (Elements to be Identified and Measured)

	ug/l or mg/kg (circle one)
1. Ammonia	NA
2. Cyanide	ND
3. Sulfide	NA

COMMENTS: NA - Not Applicable

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Sample
mc 139

INORGANICS ANALYSIS DATA SHEET

LAB NAME United States Testing Co., Inc. CASE NO. 2062

LAB SAMPLE ID. NO. 76048-3 QC REPORT NO. 49

TASK 1 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or (circle
1.	Aluminum	7650	10.	Zinc	56.5
2.	Chromium	12.2	11.	Boron	<5
3.	Barium	83	12.	Vanadium	15.5
4.	Beryllium	0.8	13.	Silver	<0.5
5.	Cobalt	12.1			
6.	Copper	16.3			
7.	Iron	16900			
8.	Nickel	18.7			
9.	Manganese	328			

TASK 2 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or (circle
1.	Arsenic	2.2	5.	Mercury	0.35
2.	Antimony	<1.0	6.	Tin	17.5
3.	Selenium	<0.1	7.	Cadmium	0.9
4.	Thallium	<0.5	8.	Lead	18

TASK 3 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)
1.	Ammonia	
2.	Cyanide	9 ug/l
3.	Sulfice	

COMMENTS:

Fred Griffith 10/14/87

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Sample No.
MC1395

INORGANICS ANALYSIS DATA SHEET

LAB NAME JTC Environmental
CASE NO. 2062
LAB SAMPLE ID. NO. 70-0593
QC REPORT NO. 59

TASK 1 (Elements to be Identified and Measured)

	ug/l or mg/kg (circle one)			ug/l or mg/kg (circle one)
Aluminum	ND	10.	Zinc	52 C
Chromium	ND	11.	Boron	ND
Barium	ND	12.	Vanadium	ND
Beryllium	ND	13.	Silver	ND
Cobalt	ND			
Copper	ND			
Iron	470			
Nickel	76			
Manganese	210			

TASK 2 (Elements to be Identified and Measured)

	ug/l or mg/kg (circle one)			ug/l or mg/kg (circle one)
Arsenic	ND	5.	Mercury	ND
Antimony	ND	6.	Tin	ND
Selenium	4	7.	Cadmium	ND
Thallium	ND	8.	Lead	ND

TASK 3 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)
1.	Ammonia	NA
2.	Cyanide	ND
3.	Sulfide	NA

COMMENTS: NA - Not Applicable

AR100253

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Sample MC 14

INORGANICS ANALYSIS DATA SHEET

LAB NAME: United States Testing Co., Inc. CASE NO.: 2062

LAB SAMPLE ID. NO.: 76048-1 QC REPORT NO.: 49

TASK 1 (Elements to be Identified and Measured)

		ug/l or (mg/kg) (circle one)			ug/l or (circle
1.	Aluminum	<10	10.	Zinc	<0.5
2.	Chromium	<0.5	11.	Boron	<5
3.	Barium	<5	12.	Vanadium	<10
4.	Beryllium	<0.25	13.	Silver	<0.5
5.	Cobalt	<2.5			
6.	Copper	<2.5			
7.	Iron	<2.5			
8.	Nickel	<2.0			
9.	Manganese	<0.5			

TASK 2 (Elements to be Identified and Measured)

		ug/l or (mg/kg) (circle one)			ug/l or (circle
1.	Arsenic	<0.5	5.	Mercury	<0.1
2.	Antimony	<1.0	6.	Tin	<1.0
3.	Selenium	<0.1	7.	Cadmium	<0.35
4.	Thallium	<0.5	8.	Lead	<0.25

TASK 3 (Elements to be Identified and Measured)

		ug/l or (mg/kg) (circle one)
1.	Ammonia	
2.	Cyanide	<0.1
3.	Sulfide	

COMMENTS:

AR100254

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Sample
MC 140

INORGANICS ANALYSIS DATA SHEET

LAB NAME United States Testing Co., Inc. CASE NO. 2062

LAB SAMPLE ID. NO. 76048-4 QC REPORT NO. 49

TASK 1 (Elements to be Identified and Measured)

		ug/l or (mg/kg) (circle one)			ug/l or (circle
1.	Aluminum	29000	10.	Zinc	118
2.	Chromium	22.9	11.	Boron	<5
3.	Barium	19.2	12.	Vanadium	<10
4.	Beryllium	<0.25	13.	Silver	<0.5
5.	Cobalt	6.0			
6.	Copper	106			
7.	Iron	7900			
8.	Nickel	22.4			
9.	Manganese	<0.5			

TASK 2 (Elements to be Identified and Measured)

		ug/l or (mg/kg) (circle one)			ug/l or (circle
1.	Arsenic	6.9	5.	Mercury	17.2
2.	Antimony	<1.0	6.	Tin	95
3.	Selenium	0.2	7.	Cadmium	1.5
4.	Thallium	<0.5	8.	Lead	64.5

TASK 3 (Elements to be Identified and Measured)

		ug/l or (mg/kg) (circle one)
1.	Ammonia	
2.	Cyanide	8.62
3.	Sulfide	

COMMENTS:

Frank Anczynski
10/14/83

AR100255

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Sample
M 44

INORGANICS ANALYSIS DATA SHEET

LAB NAME United States Testing Co., Inc. CASE NO. 2062

LAB SAMPLE ID. NO. 76048-12 QC REPORT NO. 49

TASK 1 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or (circle
1.	Aluminum	18	10.	Zinc	13.4
2.	Chromium	<0.5	11.	Boron	<5
3.	Barium	<5	12.	Vanadium	<10
4.	Beryllium	<0.25	13.	Silver	<0.5
5.	Cobalt	<2.5			
6.	Copper	<2.5			
7.	Iron	1700			
8.	Nickel	<2.0			
9.	Manganese	3.5			

TASK 2 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or (circle
1.	Arsenic	<0.5	5.	Mercury	2.55
2.	Antimony	<1.0	6.	Tin	<1.0
3.	Selenium	<0.1	7.	Cadmium	<0.05
4.	Thallium	<0.5	8.	Lead	<0.25

TASK 3 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)
1.	Ammonia	
2.	Cyanide	2.51
3.	Sulfide	

COMMENTS:

Frank Guzzo
10/14/83

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MC 14

INORGANICS ANALYSIS DATA SHEET

LAB NAME United States Testing Co., Inc. CASE NO. 2062

LAB SAMPLE ID. NO. 76048-5 QC REPORT NO. 49

TASK 1 (Elements to be Identified and Measured)

		ug/l or (mg/kg) (circle one)			ug/l or (circle
1.	Aluminum	202	10.	Zinc	4.1
2.	Chromium	<0.5	11.	Boron	<5
3.	Barium	<5	12.	Vanadium	<10
4.	Beryllium	<0.25	13.	Silver	<0.5
5.	Cobalt	<2.5			
6.	Copper	2.6			
7.	Iron	235			
8.	Nickel	<2.0			
9.	Manganese	1.3			

TASK 2 (Elements to be Identified and Measured)

		ug/l or (mg/kg) (circle one)			ug/l or (circle
1.	Arsenic	<0.5	5.	Mercury	4.95
2.	Antimony	<1.0	6.	Tin	4.0
3.	Selenium	<0.1	7.	Cadmium	0.65
4.	Thallium	<0.5	8.	Lead	1.1

TASK 3 (Elements to be Identified and Measured)

		ug/l or (mg/kg) (circle one)
1.	Ammonia	
2.	Cyanide	3.80
3.	Sulfide	

COMMENTS:

Frank Bruzzynski
10/24/85

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MS/14

INORGANICS ANALYSIS DATA SHEET

LAB NAME United States Testing Co., Inc. CASE NO. 2062
LAB SAMPLE ID. NO. 76048-6 QC REPORT NO. 49

TASK 1 (Elements to be Identified and Measured)

		ug/l or (mg/kg) (circle one)			ug/l or (circle
1.	Aluminum	70000	10.	Zinc	262
2.	Chromium	75	11.	Boron	10.8
3.	Barium	24.4	12.	Vanadium	17.5
4.	Beryllium	0.6	13.	Silver	<0.5
5.	Cobalt	12.2			
6.	Copper	1790			
7.	Iron	9200			
8.	Nickel	38.5			
9.	Manganese	104			

TASK 2 (Elements to be Identified and Measured)

		ug/l or (mg/kg) (circle one)			ug/l or (circle
1.	Arsenic	13.6	5.	Mercury	1.85
2.	Antimony	1.0	6.	Tin	165
3.	Selenium	0.8	7.	Cadmium	2.0
4.	Thallium	<0.5	8.	Lead	96

TASK 3 (Elements to be Identified and Measured)

		ug/l or (mg/kg) (circle one)
1.	Ammonia	
2.	Cyanide	3.51
3.	Sulfide	

COMMENTS:

Frank Buzzard
10/14/83

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Samp.: MC 1

INORGANICS ANALYSIS DATA SHEET

LAB NAME: United States Testing Co., Inc. CASE NO.: 2062
LAB SAMPLE ID. NO.: 76048-7 QC REPORT NO.: 49

TASK 1 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or (circle
1.	Aluminum	89	10.	Zinc	7.2
2.	Chromium	4.9	11.	Boron	<5
3.	Barium	<5	12.	Vanadium	<10
4.	Beryllium	<0.25	13.	Silver	<0.5
5.	Cobalt	<2.5			
6.	Copper	<2.5			
7.	Iron	575			
8.	Nickel	2.2			
9.	Manganese	5.1			

TASK 2 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or (circle
1.	Arsenic	0.6	5.	Mercury	3.45
2.	Antimony	<1.0	6.	Tin	<1.0
3.	Selenium	<0.1	7.	Cadmium	0.91
4.	Thallium	<0.5	8.	Lead	5.4

TASK 3 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)
1.	Ammonia	
2.	Cyanide	2 ppb
3.	Sulfide	

COMMENTS:

Frank Buzzynski
10/14/83

AR100259

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Sample
MC14

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NAME JTC Environmental CASE NO. 2062

SAMPLE ID. NO. 70-0594 QC REPORT NO. 59

TASK 1 (Elements to be Identified and Measured)

	ug/l or mg/kg (circle one)			ug/l or (circl
Aluminum	ND	10.	Zinc	
Chromium	ND	11.	Boron	
Barium	ND	12.	Vanadium	
Beryllium	ND	13.	Silver	
Cobalt	ND			
Copper	ND			
Iron	53			
Nickel	ND			
Manganese	ND			

TASK 2 (Elements to be Identified and Measured)

	ug/l or mg/kg (circle one)			ug/l or (circl
Arsenic	ND	5.	Mercury	
Antimony	ND	6.	Tin	
Selenium	ND	7.	Cadmium	
Thallium	ND	8.	Lead	

TASK 3 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)
1.	Ammonia	NA
2.	Cyanide	ND
3.	Sulfide	NA

COMMENTS: NA - Not Applicable

10/20

AR100260

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MC 141

INORGANICS ANALYSIS DATA SHEET

LAB NAME United States Testing Co., Inc. CASE NO. 2062
LAB SAMPLE ID. NO. 76048-8 QC REPORT NO. 49

TASK 1 (Elements to be Identified and Measured)

		ug/l or (mg/kg) (circle one)			ug/l or (circle
.	Aluminum	9200	10.	Zinc	41.9
.	Chromium	32.5	11.	Boron	8.3
.	Barium	24	12.	Vanadium	23.6
.	Beryllium	0.6	13.	Silver	<0.5
.	Cobalt	3.8			
.	Copper	48.4			
.	Iron	9200			
	Nickel	13			
.	Manganese	117			

TASK 2 (Elements to be Identified and Measured)

		ug/l or (mg/kg) (circle one)			ug/l or (circle
.	Arsenic	0.8	5.	Mercury	1.3
.	Antimony	<1.0	6.	Tin	35
.	Selenium	<0.1	7.	Cadmium	2.5
.	Thallium	<0.5	8.	Lead	32

TASK 3 (Elements to be Identified and Measured)

		ug/l or (mg/kg) (circle one)
1.	Ammonia	
2.	Cyanide	10.5
3.	Sulfide	

COMMENTS:

Frank Ruggirello
10/14/83

AR100261

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Sample No.
MC 1416

INORGANICS ANALYSIS DATA SHEET

B NAME United States Testing Co., Inc. CASE NO. 2062

B SAMPLE ID. NO. 76048-9 QC REPORT NO. 49

TASK 1 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or mg (circle on
	Aluminum	785	10.	Zinc	25.5
	Chromium	<0.5	11.	Boron	<5
	Barium	<5	12.	Vanadium	<10
	Beryllium	<0.25	13.	Silver	<0.5
	Cobalt	<2.5			
	Copper	2.6			
	Iron	8.5			
	Nickel	<2.0			
	Manganese	7.3			

TASK 2 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or mg (circle on
	Arsenic	<0.5	5.	Mercury	1.45
	Antimony	<1.0	6.	Tin	1.7
	Selenium	<0.1	7.	Cadmium	0.21
	Thallium	<0.5	8.	Lead	0.8

TASK 3 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)
1.	Ammonia	
2.	Cyanide	5.0
3.	Sulfide	

COMMENTS:

Frank Buzzynski
10/14/83

US ENVIRONMENTAL PROTECTION AGENCY
HWI Sample Management Office
P.O. Box 818 – Alexandria, Virginia 22313
703/557-2490 FTS 8-557-2490

Sample No.
MC1417

INORGANICS ANALYSIS DATA SHEET

IB NAME JTC Environmental CASE NO. 2062
IB SAMPLE ID. NO. 70-0595 QC REPORT NO. 59

TASK 1 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or mg/kg (circle one)
	Aluminum	19,200	10.	Zinc	75C
	Chromium	47 ~~ND~~ D/w	11.	Boron	ND*
	Barium	1370 ~~ND~~ D/w	12.	Vanadium	ND
	Beryllium	13	13.	Silver	ND
	Cobalt	290 ~~ND~~ D/w			
	Copper	250			
	Iron	975,000			
	Nickel	520			
	Manganese	39,100			

TASK 2 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or mg/kg (circle one)
	Arsenic	340	5.	Mercury	0.2
	Antimony	27	6.	Tin	ND
	Selenium	ND	7.	Cadmium	20
	Thallium	ND	8.	Lead	78

TASK 3 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)
1.	Ammonia	NA
2.	Cyanide	0.022
3.	Sulfide	NA

COMMENTS: NA - Not Applicable

AR100263

US ENVIRONMENTAL PROTECTION AGENCY
HW1 Sample Management Office
P.O. Box 818 - Alexandria, Virginia 22313
703/557-2490 FTS 8-557-2490

Sample
MC 14

INORGANICS ANALYSIS DATA SHEET

LAB NAME United States Testing Co., Inc. CASE NO. 2062
LAB SAMPLE ID. NO. 76048-10 QC REPORT NO. 49

TASK 1 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or (circle
1.	Aluminum	1400	10.	Zinc	252
2.	Chromium	2.4	11.	Boron	<5
3.	Barium	79	12.	Vanadium	<10
4.	Beryllium	0.7	13.	Silver	< 0.5
5.	Cobalt	10.8			
6.	Copper	17.6			
7.	Iron	85500			
8.	Nickel	30.5			
9.	Manganese	695			

TASK 2 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or (circle
1.	Arsenic	26.6	5.	Mercury	2.3
2.	Antimony	<1.0	6.	Tin	2.5
3.	Selenium	0.5	7.	Cadmium	2.33
4.	Thallium	<0.5	8.	Lead	11.8

TASK 3 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)
1.	Ammonia	
2.	Cyanide	302
3.	Sulfide	

COMMENTS:

Frank Cuyp
10/14/83

US ENVIRONMENTAL PROTECTION AGENCY
HWI Sample Management Office
P.O. Box 818 – Alexandria, Virginia 22313
703/557-2490 FTS 8-557-2490

Sample MC 14

INORGANICS ANALYSIS DATA SHEET

LAB NAME United States Testing Co., Inc. CASE NO. 2062
LAB SAMPLE ID. NO. 76048-11 QC REPORT NO. 49

TASK 1 (Elements to be Identified and Measured)

		ug/l or (mg/kg) (circle one)			ug/l or (circle
1.	Aluminum	96	10.	Zinc	4.1
2.	Chromium	1.0	11.	Boron	13.3
3.	Barium	<5	12.	Vanadium	<10
4.	Beryllium	<0.25	13.	Silver	<0.5
5.	Cobalt	<2.5			
6.	Copper	<2.5			
7.	Iron	305			
8.	Nickel	2.2			
9.	Manganese	3.9			

TASK 2 (Elements to be Identified and Measured)

		ug/l or (mg/kg) (circle one)			ug/l or (circle
1.	Arsenic	<0.5	5.	Mercury	4.2
2.	Antimony	<1.0	6.	Tin	7.7
3.	Selenium	<0.1	7.	Cadmium	<0.05
4.	Thallium	<0.5	8.	Lead	<0.25

TASK 3 (Elements to be Identified and Measured)

		ug/l or (mg/kg) (circle one)
1.	Ammonia	
2.	Cyanide	4.78
3.	Sulfide	

COMMENTS:

Frank Cuzzi
10/14/82

U.S ENVIRONMENTAL PROTECTION AGENCY
CLP Sample Management Office
P.O. Box 818 — Alexandria, Virginia 22313
703/557-2490 FTS 8-557-2490

L

Sample No.
BLANK

INORGANICS ANALYSIS DATA SHEET

LAB NAME JTC Environmental
LAB SAMPLE ID. NO. ———
CASE NO. 2062
QC REPORT NO. 59

TASK 1 (Elements to be Identified and Measured)

		ug/L or mg/kg (circle one)
	Aluminum	ND
	Chromium	ND
	Barium	ND
	Beryllium	ND
	Cobalt	ND
	Copper	ND
	Iron	ND
	Nickel	ND
	Manganese	ND
10.	Zinc	25
11.	Boron	ND
12.	Vanadium	ND
13.	Silver	ND

TASK 2 (Elements to be Identified and Measured)

		ug/L or mg/kg (circle one)
	Arsenic	ND
	Antimony	ND
	Selenium	ND
	Thallium	ND
5.	Mercury	ND
6.	Tin	29
7.	Cadmium	ND
8.	Lead	ND

TASK 3 (Elements to be Identified and Measured)

		ug/L or mg/kg (circle one)
1.	Ammonia	NA
2.	Cyanide	ND
3.	Sulfide	NA

COMMENTS: NA - Not Applicable

AR100266

10/20