SITE INSPECTION REPORT
FOR
MOBIL CHEMICAL PHOSPHORUS DIVISION
GARY, IN
IND000606731
F05-8702-172

PAN: FIN0110SI

JUNE 12, 1987

EPA Region 5 Records Ctr.
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00873 NB

ecology and environment, inc.

111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415

International Specialists in the Environment

MEMORANDUM

DATE: June 12, 1987

TO: File

FROM: Donald L. Clark DLC

SUBJECT: Indiana/F05-8702-172/FIN0110SI
Gary/Mobil Chemical Co. Phosphorus Division
IND000606731

The Mobil Chemical Co. Phosphorus Division site is located in Gary, Indiana at 1040 Michigan Street, approximately 2,000 feet west of the Interstate 90-65 interchange. The property in question is now owned by Montgomery Tank Lines, which leases part of the site to Gary Products Corporation. Montgomery Tank Lines presently uses part of the facility as a transfer station for trucks carrying food products and/or soap. Gary Products is involved in soap manufacturing and packaging. Mobil operated the facility from 1965-1975, and stored phosphorus in tanks located on-site. Mobil instituted a clean-up program of tanks and tank areas before the facility was sold. A concrete catch basin, used as primary separator, is also present on-site. The site was assigned to Ecology and Environment, Inc. (FIT) for a site inspection by the U.S. EPA after being identified by Mobil Chemical Co. through EPA Form 8900-1 "Notification of Hazardous Waste Site", and a Preliminary Assessment conducted by the U.S. EPA.

Ecology and Environment, Inc. (FIT) conducted an inspection of the Mobil Chemical Co. Phosphorus Division site on February 18, 1987. During the site inspection, FIT interviewed the owner and operator and collected three on-site soil/sediment samples and a background soil sample. The FIT team expected to find a lagoon on-site, but none was present, so composite sampling around the two tank areas and within the catch basin was done. Aside from changing potential

recycled paper

sampling locations, the work plan was followed. Sampling was done to determine waste characteristics.

Analytical results from the soil/sediment samples indicate that hazardous substances are present in all of the site samples. Compounds and elements that were present in concentrations which can be used for HRS scoring purposes are listed below. Organic sample results for sample S2 (catch basin) show values for toluene (15,000 ppb), ethyl benzene (33,000 ppb), total xylenes (160,000 ppb), 1,2 dichlorobenzene (11,000 ppb), naphthalene (20,000 ppb), 2-methyl-naphthalene (10,000 ppb), 3-nitroaniline (30,000 ppb), n-nitrosodi-phenylamine (20,000 ppb), pentachlorophenol (55,000 ppb), and bis-(2-ethylhexyl)phthalate (100,000 ppb). Inorganic results for sample S2 show cadmium at 3.7 ppm and mercury at 7.0 ppm. For sample S3 (north tanks area), bis-(2-ethylhexyl)phthalate was detected at 14,000 ppb. It should also be noted that the U.S. EPA sampled insulation on pipes leading to tanks at the site to check for asbestos on 8/19/80. Sample results indicate asbestos fibers are present in the insulation. This insulation was badly weathered and peeled. FIT also found the insulation in a similar condition.

The potential for groundwater contamination exists at the site since the water table is high and surface soils are contaminated. However, no target population for groundwater exists within three miles of the site. Surface water could potentially be contaminated through surface runoff to a nearby unnamed lake. The lake is used for fishing. Contaminants may also be entering the sewer system via the catch basin. The local waste water treatment plant has detected high levels of phosphorus and has contacted Gary Products Co.. The drinking water for the area is supplied by Lake Michigan. Minimal potential for direct contact with areas of contamination exists as the site is fenced and locked at night.

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EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IN	IND000606731

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO. OR SPECIFIC LOCATION IDENTIFIER
Mobil Chemical Co. Phosphorus Division	1040 Michigan St.

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Gary	IN	46403	Lake	089	01

09 COORDINATES: LATITUDE 41° 35' 30.0" N; LONGITUDE 087° 18' 45.0" W

10 TYPE OF OWNERSHIP (Check one): ■ A. PRIVATE ☐ B. FEDERAL ____ ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER ____ ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION: 2, 18, 87 (MONTH DAY YEAR)

02 SITE STATUS: ■ ACTIVE ☐ INACTIVE

03 YEARS OF OPERATION: 1964 (BEGINNING YEAR), 1975 (ENDING YEAR) ____ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply): ☐ A. EPA ■ B. EPA CONTRACTOR Ecology & Environment, Inc. (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR ____ (Name of firm) ☐ E. STATE ☐ F. STATE CONTRACTOR ____ (Name of firm) ☐ G. OTHER ____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO
Julie E. Kaiser	Biologist	Ecol. & Envrmt.	(312) 663-9415

09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO
Craig Almanza	Technician	Ecol. & Envrmt.	(312) 663-9415
Margie Hein	Biologist	Ecol. & Envrmt.	(312) 663-9415
Tom Kouris	Civil Engineer	Ecol. & Envrmt.	(312) 663-9415
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Bill Keagle	Owner	Gary Products, Inc. 1040 Michigan Ave.	(219) 885-1644
Merv Bridges	Operations Manager	Montgomery Tank Lines 7592 Melton Road Gary, IN 46403	( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
■ PERMISSION ☐ WARRANT	10:45 a.m.	Clear, 37°F

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Dr. Don Josif	U.S. EPA	(312) 886-0393

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Donald L. Clark	U.S. EPA/FIT	Ecology & Environment	(312) 663-9415	6, 15, 87 (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
IN	IND000606731

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- [x] A SOLID
- [ ] B POWDER FINES
- [ ] C SLUDGE
- [ ] D OTHER _____ (Specify)
- [ ] E SLURRY
- [x] F LIQUID
- [ ] G GAS

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

TONS Unknown
CUBIC YARDS
NO OF DRUMS

03 WASTE CHARACTERISTICS (Check all that apply)

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

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
	Misc.	unknown		PY, Asbestos
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS	unknown		salts
ACD	ACIDS	unknown		pH < 3
BAS	BASES			
MES	HEAVY METALS	unknown		arsenic, antimony, selenium, iron, manganese, magnesium

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
The following hazardous substances were detected in soil/sediment samples collected at the site, and can be used for HRS scoring:					
Organics	EJ 105 toluene			15,000	ug/Kg
	(Catch Basin) ethyl benzene			33,000	
	total xylenes			160,000	
	1,2 dichlorobenzene			11,000	
	naphthalene			20,000	
	2-methyl-naphthalene			10,000	
	3-nitroaniline			30,000	
	n-nitrosodiphenylamine			20,000	
	pentachlorophenol			55,000	
	bis-(2-ethyl hexyl) phthalate			100,000	
	EJ 106 bis-(2-ethyl hexyl) phthalate			14,000	
	(North Tanks)				
Inorganics	MEJ 376 Cadmium			3.7	mg/Kg
	(Catch Basin) Mercury			7.0	

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS	None		FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

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

Attachment to EPA Form 8900-1 "Notification of Hazardous Waste Site" - Form B, and letter from W.R. Smithey, Jr. (U.S. EPA) June 9, 1981
Sample analysis reports for Mobil Chem. Phosph. Div., E&E/FIT Site Inspection.

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IN	IND000606731

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ■ A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: -0- — 04 NARRATIVE DESCRIPTION
High potential for groundwater contamination exists since the water table is found within 15 feet of the ground surface and surface soils are contaminated. No target population for groundwater exists.

01 ■ B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION
Potential for surface water contamination exists through the possibility of contaminants entering nearby lake via surface runoff. Lake is unnamed but on-site representatives have seen people fishing in it.

01 ■ C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION
Insulation found on pipes leading to tanks is exposed and damaged, and is asbestos containing, therefore a potential hazard exists.

01 ■ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 12 — 04 NARRATIVE DESCRIPTION
A site representative reports that phosphorus ignited on contact with air when he was taking valves apart during a clean-up process.

01 ■ E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: -0- — 04 NARRATIVE DESCRIPTION
The site is surrounded by fencing and the front gate is locked at night; therefore, the potential for an incident via direct contact is low. The catch basin is not covered.

01 ■ F. CONTAMINATION OF SOIL — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: 5.3 (Acres) — 04 NARRATIVE DESCRIPTION
Composite soil samples taken near the north and south tanks show contamination.

01 ■ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: -0- — 04 NARRATIVE DESCRIPTION
N/A - Drinking water source for all populations within a 3-mile radius is Lake Michigan to which there is no surface water route attributable to the site.

01 ■ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: 12 — 04 NARRATIVE DESCRIPTION
Owner was cutting beams with a welder and felt ill afterwards. Test results were inconclusive. Possibly hydrogen gas was produced from a reaction with phosphorus.

01 ■ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: -0- — 04 NARRATIVE DESCRIPTION
There is minimal potential for population exposure/injury as site area and catch basin are fenced with good security.

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IN	IND000606731

II. HAZARDOUS CONDITIONS AND INCIDENTS *(Continued)*

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

There have been no signs of damage to flora.

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

There have been no signs of damage to fauna.

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

See J and K above.

01 ■ M. UNSTABLE CONTAINMENT OF WASTES *(Spills/Runoff/Standing liquids, Leaking drums)* — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 12 + — 04 NARRATIVE DESCRIPTION

Contaminants in soils indicate possible tank leakage or spills. Water in catch basin flows into sewer system.

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

See B, J, and K above.

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

The catch basin leads to the city's sewer system. WWTP has picked up phosphorus in their analyses on several occasions and has notified the facility. Other contaminants found in catch basin sediments could be entering sewer system.

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

There have been no incidents on site.

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

None

III. TOTAL POPULATION POTENTIALLY AFFECTED: 12

IV. COMMENTS

Potential for contamination of air cannot currently be substantiated, since no air samples have been collected.

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

FIT Site Inspection 2/12/87

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IN	IND000606731

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	04 TREATMENT (Check all that apply)	05 OTHER
☐ A. SURFACE IMPOUNDMENT			☐ A. INCENERATION	■ A. BUILDINGS ON SITE
☐ B. PILES			☐ B. UNDERGROUND INJECTION	4
☐ C. DRUMS, ABOVE GROUND			☐ C. CHEMICAL/PHYSICAL	
☐ D. TANK, ABOVE GROUND			☐ D. BIOLOGICAL	
☐ E. TANK, BELOW GROUND			☐ E. WASTE OIL PROCESSING	06 AREA OF SITE
☐ F. LANDFILL			☐ F. SOLVENT RECOVERY	5.3 (Acres)
☐ G. LANDFARM			☐ G. OTHER RECYCLING/RECOVERY	
☐ H. OPEN DUMP			■ H. OTHER Neutralization (Specify)	
■ I. OTHER Catch Basin (Specify)				

07 COMMENTS

No permits are known to exist.

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.

Storage tanks appear in sound condition. However, soil contamination indicates containment problems. Bottom and walls of catch basin are concrete, but effluent flows into sewer system through piping. Uncertain as to whether a landfill exists on site. There may have been some dumping into an on-site landfill prior to 1975.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ■ NO

02 COMMENTS

The entire site is surrounded by a fence, and the front gate is locked at night.

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

Attachment to EPA Form 8900-1 "Notification of Hazardous Waste Site", 6/9/81
FIT Site Inspection 2/18/87

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IN	IND 00060673

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check all applicable)

	SURFACE	WELL
COMMUNITY	A ■	B ☐
NON-COMMUNITY	C ■	D ☐

02 STATUS

	ENDANGERED	AFFECTED	MONITORED
COMMUNITY	A ☐	B ☐	C ■
NON-COMMUNITY	D ☐	E ☐	F ■

03 DISTANCE TO SITE

A >3 (mi)
B >3 (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 -0-

03 DISTANCE TO NEAREST DRINKING WATER WELL >3 (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
<15 (ft)	NNE	<15 (ft)	unknown (gpd)	☐ YES ■ NO

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

There are no groundwater wells known to exist within a three-mile radius of the site. All water is supplied by Lake Michigan.

10 RECHARGE AREA ■ YES ☐ NO COMMENTS: site lies in the possible recharge area of the Grand and Little Calumet Rivers.

11 DISCHARGE AREA ■ YES ☐ NO COMMENTS: Possibly a local discharge area in the vicinity of the small unnamed lake west of the site.

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
Small unnamed lake located west of facility	☐	500 ~~(mi)~~ ft.
Grand Calumet River	☐	5540 ~~(mi)~~ ft.
Little Calumet River	☐	7290 ~~(mi)~~ ft.

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. ~20,000 NO. OF PERSONS	B. ~55,000 NO. OF PERSONS	C. ~114,000 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION 1690 ~~(mi)~~ ft.

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE 14,800

04 DISTANCE TO NEAREST OFF-SITE BUILDING 300 ~~(mi)~~ ft.

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)

Densely populated urban area exists around the site, as well as highly industrialized areas nearby.

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IN	IND000606731

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
~160 (ft)	N/A (ft)	7.75

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
6 (in)	2.4 (in)	<3 %	N/A	<3 %

09 FLOOD POTENTIAL

SITE IS IN N/A YEAR FLOODPLAIN

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

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE: A N/A (mi)

OTHER: B 4650 ~~(mi)~~ ft.

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

>3 (mi)

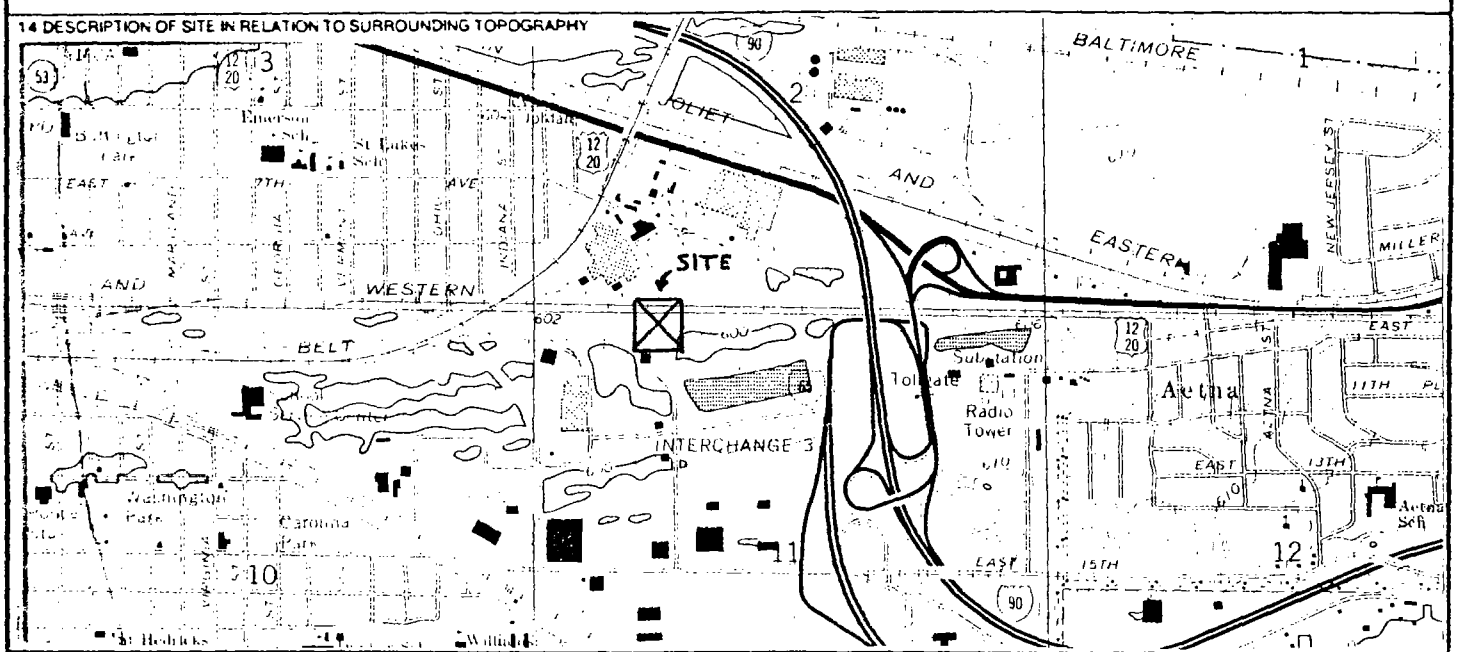
ENDANGERED SPECIES N/A

13 LAND USE IN VICINITY

DISTANCE TO

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS, NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A 1200 ~~(mi)~~ ft.	B 1850 ~~(mi)~~ ft.	C >3 (mi)	D >3 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY



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

Environmental Geology of Lake and Porter Counties, IN - An Aid to Planning: IDNR Envir. Study 8.

Freeze, R.A. and J.A. Cherry, Groundwater, Prentice Hall, NY, 1979.

Gary, IN 7½' Quad. Topographic Map (USGS)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IN	IND 000606731

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE			
AIR		Inorganics: Century Labs, Inc.	March 26, 198
RUNOFF		1501 Grandview Ave., Thorofare, NJ 08086	
SPILL		Contact: Al Tordini	
SOIL/SEDIMENT	4	Organics: Analytical Technologies, 5550 Morehouse Dr.	March 30, 1987
VEGETATION		San Diego, CA 92121	
OTHER		Contact: Bob Woods	

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
None	

IV. PHOTOGRAPHS AND MAPS

01 TYPE ■ GROUND ☐ AERIAL

02 IN CUSTODY OF Ecology & Environment, Inc. (Name of organization or individual)

03 MAPS ☐ YES ■ NO

04 LOCATION OF MAPS N/A

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

None

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

2/18/87 E&E/FIT Site Inspection

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IN	IND000606731

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
MONTGOMERY TANK LINES	unknown	MONTGOMERY TANK LINES	unknown

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
1040 MICHIGAN	unknown	3106 CENTRAL AVE. PO BOX 2628	unknown

05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE
GARY	IN	46403	PLANT CITY	FL	33566

PARENT COMPANY (If applicable)

01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER

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

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

01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER

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

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

01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER

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

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

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

01 NAME	02 D+B NUMBER
MOBIL CHEMICAL - PHOSPHORUS DIVISION	unknown

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
P.O. Box 26683	unknown

05 CITY	06 STATE	07 ZIP CODE
RICHMOND	VA	23261

01 NAME	02 D+B NUMBER

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

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

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

05 CITY	06 STATE	07 ZIP CODE

IV. PARENT COMPANY OF PREVIOUS OWNER

01 NAME	02 D+B NUMBER
MOBIL OIL CORP.	unknown

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
150 E. 42nd St.	unknown

05 CITY	06 STATE	07 ZIP CODE
NEW YORK	NY	10017

01 NAME	02 D+B NUMBER

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

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

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

05 CITY	06 STATE	07 ZIP CODE

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

E&E FIT SITE INSPECTION 2/18/87

Attachment to EPA form 8900-1 "Notification of Hazardous Waste Site" dated 6/1/81.

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IN	IND000606731

II. CURRENT OPERATOR (Provide if different from owner)		OPERATOR'S PARENT COMPANY (If applicable)	
01 NAME: Gary Products Corp.	02 D+B NUMBER: unknown	10 NAME	11 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.): 1040 Michigan St.	04 SIC CODE: unknown	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
05 CITY: Gary; 06 STATE: IN; 07 ZIP CODE: 46403		14 CITY; 15 STATE	16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER		

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

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

FIT Site Inspection 2/18/87

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IN	IND000606731

II. ON-SITE GENERATOR (PREVIOUS)

01 NAME	02 D+B NUMBER
MOBIL CHEMICAL CO.	unk

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
1040 Michigan	unk

05 CITY	06 STATE	07 ZIP CODE
GARY	IN	46403

III. OFF-SITE GENERATOR(S) (PREVIOUS)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
MOBIL CHEMICAL CO.	unk		

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
1040 Michigan	unk		

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
GARY	IN	46403			

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

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
SANITATION SERVICE	N/A	CALUMET CITY	N/A

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
UNKNOWN	N/A	UNK	N/A

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
UNK	UNK	UNK	GARY	IN	UNK

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
MOBIL CHEMICAL COMPANY	N/A		

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
P.O. Box 26683	N/A		

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
RICHMOND	VA	23261			

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

ATTACHMENT TO EPA FORM 8900-1 "NOTIFICATION OF HAZARDOUS WASTE SITE"
FORM C - HAULER INFO.

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IN	IND000606731

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
N/A

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 1975 — 03 AGENCY _____
04 DESCRIPTION 100 Tons of Waste to Gary City Landfill - mobil
1,000 gallons of meta-phosphorus to unknown company that uses phosphorus - Gary Products Corp.

01 ■ H. ON SITE BURIAL — 02 DATE unknown — 03 AGENCY _____
04 DESCRIPTION 100 Tons of mono-industrial waste in Landfill

01 ■ I. IN SITU CHEMICAL TREATMENT — 02 DATE unknown — 03 AGENCY Mobil Chem.
04 DESCRIPTION
Neutralizing treatment at site.

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
IN	IND006067731

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
Unknown

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
Mobil's records indicate that all tanks and adjoining lines were cleaned to bare metal. Gary Products contends that the reactor was ½ full of meta-phosphorus and a "heel" of phosphorus was left in the tanks. Also see Sections D & H for other indications of site not being properly cleaned up by Mobil.

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

FIT Site Inspection 2/18/87
Attachment to EPA Form 8900-1 "Notification of Hazardous Waste Site"

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IN	IND006067731

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ■ NO

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

There is no indication that any enforcement action was taken against Mobil Chemicals at this site.

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

EPA FORM 2070-13 (7-81)

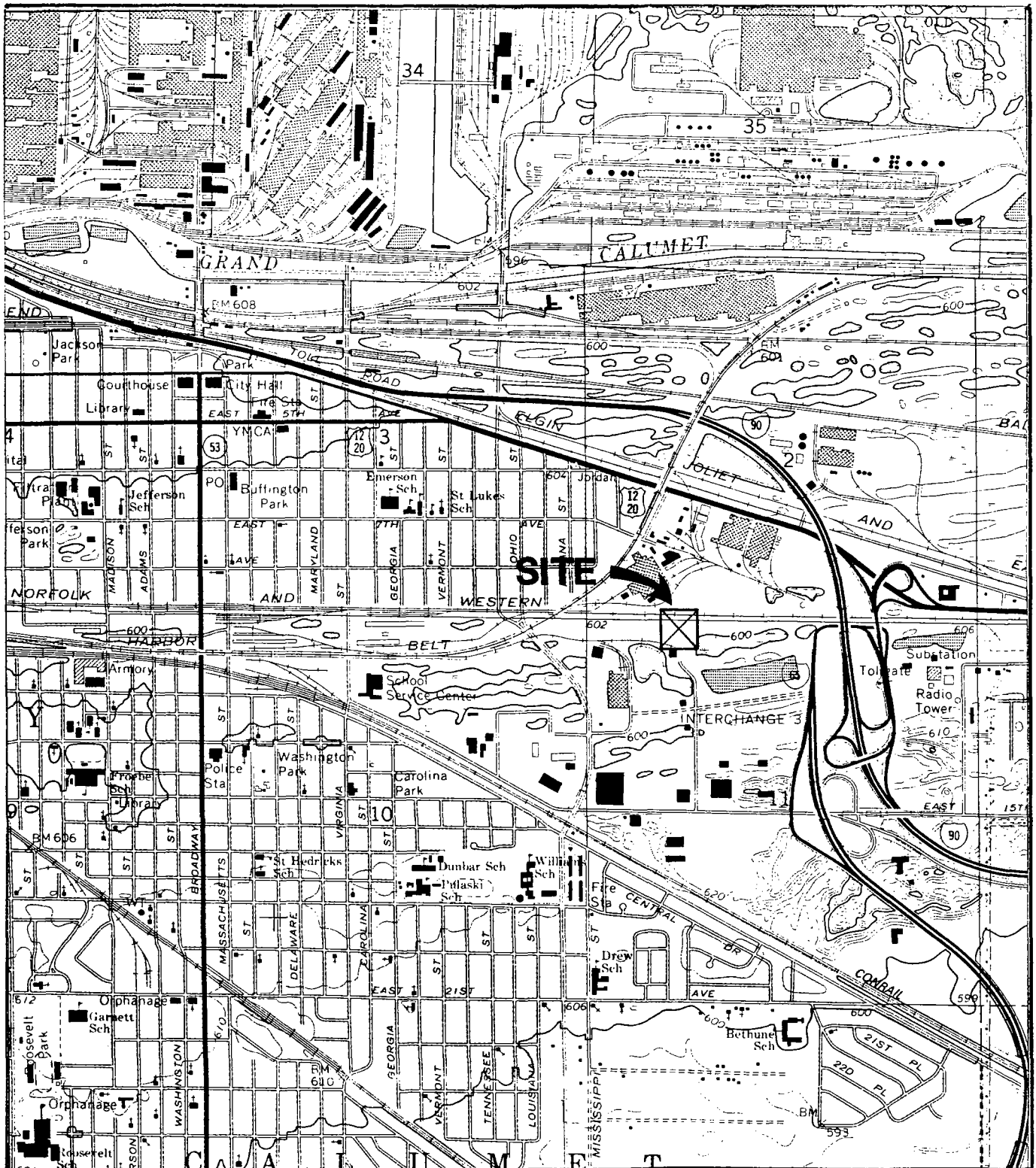
3

Immediate Removal Action Check Sheet

	High	Moderate	Low
Fire and Explosion Hazard			
Flammable Materials *Phosphorus is ignitable*		X	X
Explosives *N/A*			
Incompatable Chemicals *Unknown*			X
Direct Contact with Acutely Toxic Chemicals			
Site Security *Fenced, gate locked at night*			X
Leaking Drums or Tanks *None*			X
Open Lagoons or pits *Open catch basin*		X	
Materials on Surface *contaminated soil/sed.*		X	
Proximity of Population *1850'*			X
Evidence of Casual Site Use *None*			X
Contaminated Water Supply			
Exceeds 10 Day Snarl *N/A*			
Gross Taste or Odors *N/A*			
Alternate Water Available *Yes*			X
Potential Contamination *No*			X
Is the site abandoned or active? *Leased by Gary Products Corp.*			

Comments

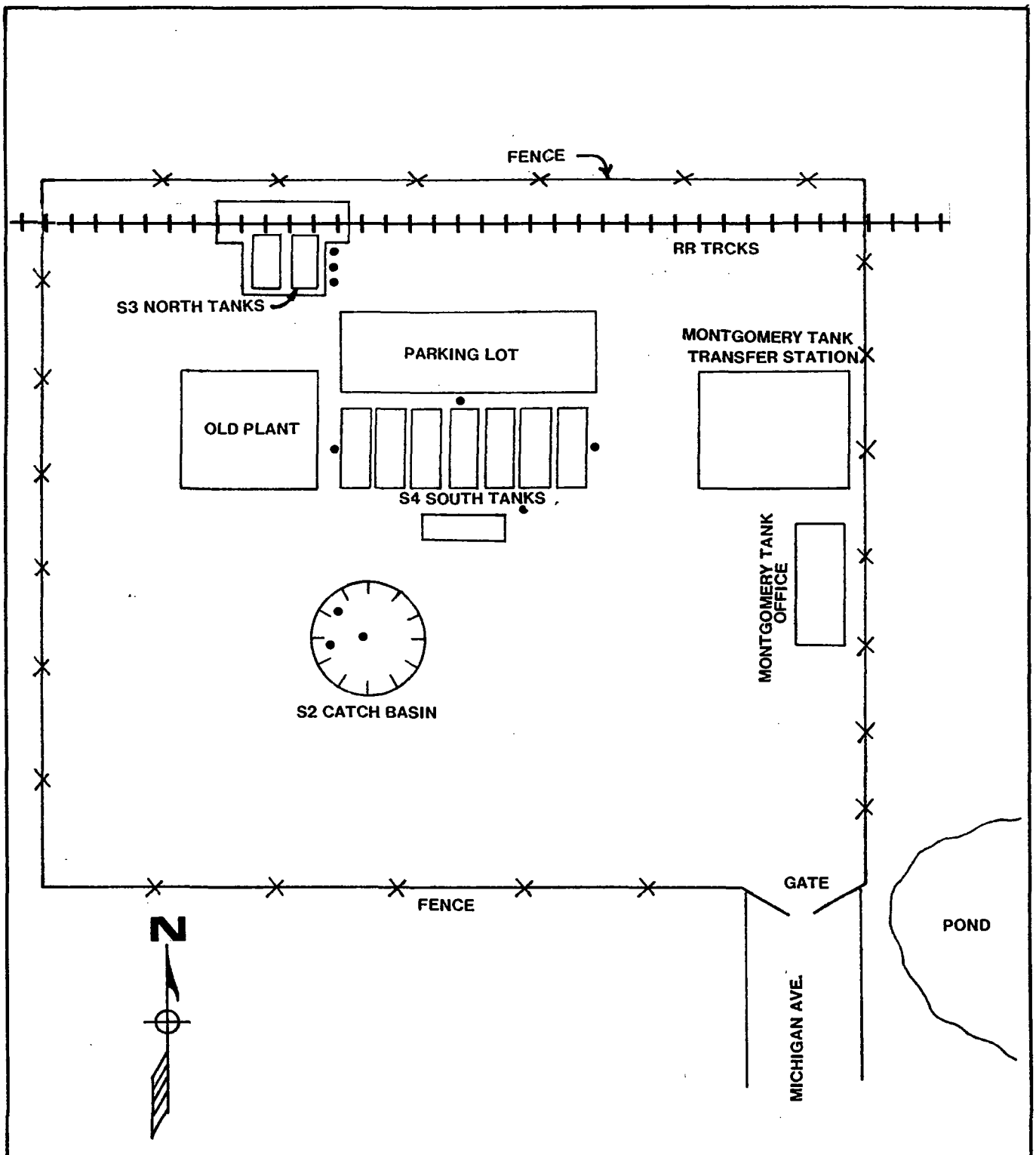
4



ecology and environment, inc.

111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415

TITLE: SITE LOCATION MAP	FIGURE #: 1
SITE: MOBIL CHEMICAL PHOSPHORUS DIV.	SCALE: 1:24,000
CITY: GARY, STATE: INDIANA	TDD #: F05-8702-175
SOURCE: USGS	DATE: 1968 / REVISED: 1980



• COMPOSITE SAMPLE LOCATIONS

ecology and environment, inc. 111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415	
TITLE SAMPLE LOCATION MAP	FIGURE # 2
SITE MOBIL CHEMICAL PHOSPHORUS DIV	SCALE NONE
CITY GARY, STATE INDIANA	TDD # F05-8702-175
SOURCE FIT SITE INSPECTION	DATE 2/18/87
	REVISED N/A

FIELD PHOTOGRAPHY LOG SHEET

DATE 2/18/87

TIME 1:18 A.M. (P.M.)

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

WEATHER clear, 37° F

SITE Mobil Chemical - Phosphorus

TDD# F05-8702-172

PHOTOGRAPHED BY:
Julie Kaiser

SAMPLE ID# (if applicable)

DESCRIPTION:

DATE 2/18/87

TIME 1:18 A.M. (P.M.)

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

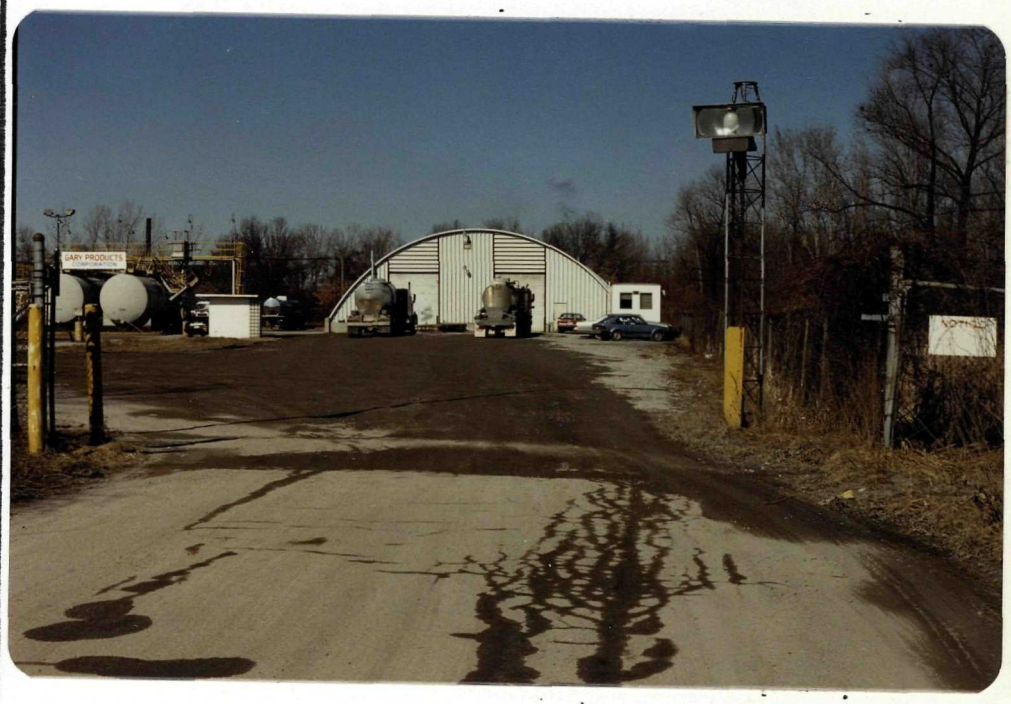
WEATHER clear, 37°F

SITE Mobil Chemical - Phosphorus

TDD# F05-8702-172

PHOTOGRAPHED BY:
Julie Kaiser

SAMPLE ID# (if applicable)



DESCRIPTION:

DATE 2/18/87

TIME 1:15 A.M. (P.M.)

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

WEATHER clear, 37°F

SITE Mobil Chemical-Phosphorus

TDD# F05-8702-172

PHOTOGRAPHED BY:
Julie Kaiser

SAMPLE ID# (if applicable)

DESCRIPTION:

DATE 2/18/87

TIME 12:25 A.M. (P.M.)

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

WEATHER clear, 37°F

SITE Mobil Chemical-Phosphorus

TDD# F05-8702-172

PHOTOGRAPHED BY:
Julie Kaiser

SAMPLE ID# (if applicable)
52 Lagoon

DESCRIPTION:

DATE 2/18/87

TIME 12:25 A.M. (P.M.)

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

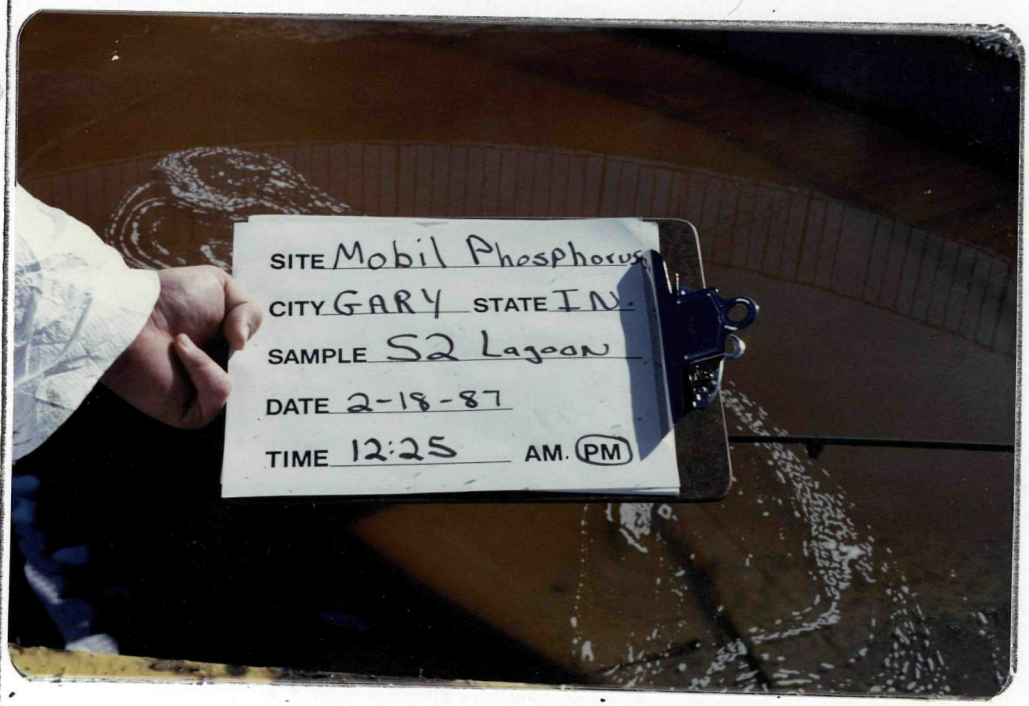
WEATHER clear, 37°F

SITE Mobil Chemical-Phosphorus

IDD# F05-8702-172

PHOTOGRAPHED BY:
Julie Kaiser

SAMPLE ID# (if applicable)
S2 Lagoon



DESCRIPTION:

DATE 2/18/87

TIME 1:10 A.M. (P.M.)

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

WEATHER clear 37°F

SITE Mobil Chemical-Phosphorus

IDD# F05-8702-172

PHOTOGRAPHED BY:
Julie Kaiser

SAMPLE ID# (if applicable)

DESCRIPTION:

DATE 2/18/87

TIME 13:05 A.M. (P.M.)

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

WEATHER clear, 37°F

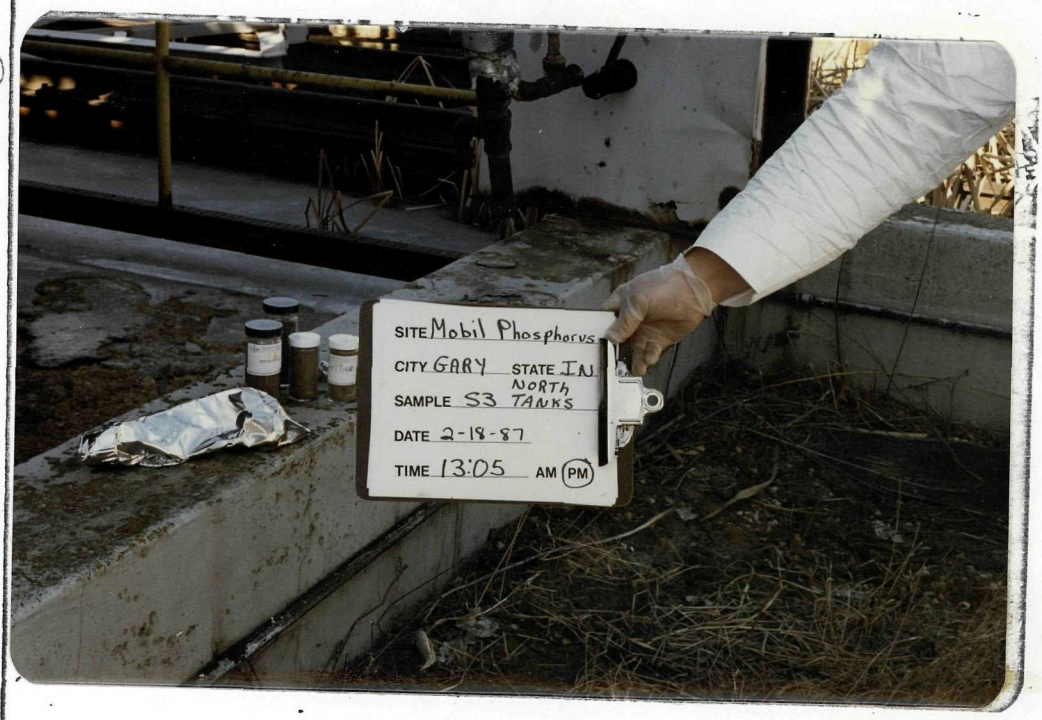
SITE Mobil Chemical-Phosphorus

IDD# F05-8702-172

PHOTOGRAPHED BY:
Julie Kaiser

SAMPLE ID# (if applicable)
S3 North Tanks

DESCRIPTION:



DATE 2/18/87

TIME 13:06 A.M. (P.M.)

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

WEATHER clear, 37°F

SITE Mobil Chemical-Phosphorus

IDD# F05-8702-172

PHOTOGRAPHED BY:
Julie Kaiser

SAMPLE ID# (if applicable)
S3 North Tanks

DESCRIPTION:

DATE 2/18/87

TIME 1:17 A.M. (P.M.)

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

WEATHER Clear 37°F

SITE Mobil Chemical-Phosphorus

TDD# F05-8702-172

PHOTOGRAPHED BY:
Julie Kaiser

SAMPLE ID# (if applicable)

DESCRIPTION:

DATE 2/18/87

TIME 1:25 A.M. (P.M.)

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

WEATHER Clear 37°F

SITE Mobil Chemical-Phosphorus

TDD# F05-8702-172

PHOTOGRAPHED BY:
Julie Kaiser

SAMPLE ID# (if applicable)
S4 South Tanks

DESCRIPTION:

DATE 2/18/87

TIME 1:25 A.M. (P.M.)

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

WEATHER clear 37°F

SITE Mobil Chemical-Phosphorus

DD# F05-8702-172

PHOTOGRAPHED BY:
Julie Kaiser

SAMPLE ID# (if applicable)

DESCRIPTION:

DATE 2/18/87

TIME 3:05 A.M. (P.M.)

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

WEATHER clear 37°F

SITE Mobil Chemical-Phosphorus

DD# F05-8702-172

PHOTOGRAPHED BY:
Julie Kaiser

SAMPLE ID# (if applicable)

DESCRIPTION:

DATE 2/18/87

TIME 3:00 A.M. (P.M.)

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

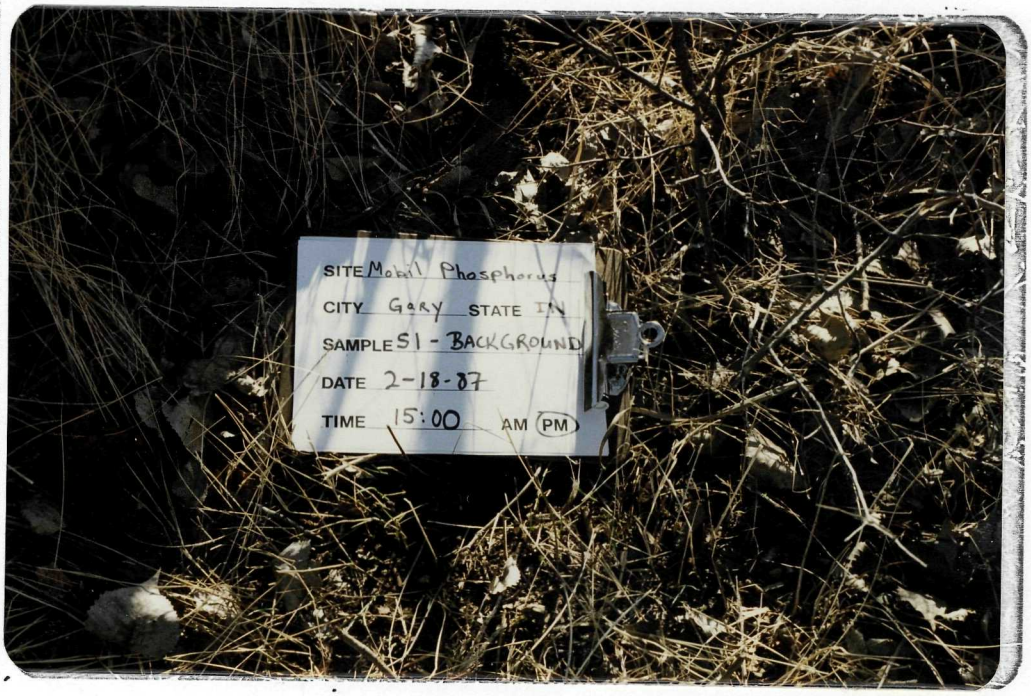
WEATHER clear 37° F

SITE Mobil Chemical-Phosphorus

DD# F05-8702-172

PHOTOGRAPHED BY:
Julie Kaiser

SAMPLE ID# (if applicable)
S1 Background



DESCRIPTION:

DATE

TIME A.M. P.M.

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

WEATHER

SITE

DD#

PHOTOGRAPHED BY:

SAMPLE ID# (if applicable)

PHOTO

DESCRIPTION:

COMPOUND											
ITC	MEI 375	MEI 376	MEI 377	MEI 948							
OTC	EJ 104	EJ 105	EJ 106	EJ 920							
SAMPLE	S1 Background	S2 catch basin	S3 north tanks	S4 south tanks							
pentachlorophenol	130 J	55 000									
phenanthrene	180 J	5500 J		800 J							
anthracene											
di-n-butylphthalate	1300		1100 J								
fluoranthene	140 J		240 J	770 J							
benzidine											
pyrene	120 J		250 J	540 J							
butylbenzylphthalate											
3,3'-dichlorobenzidine											
benzo(a)anthracene	110 J			450 J							
bis(2-ethylhexyl)phthalate		100 000	14000								
chrysene	120 J			540 J							
di-n-octylphthalate											
benzo(b&k)fluoranthene	170 J			550 J							
benzo(a)pyrene	100 J			560 J							
indeno(1,2,3-cd)pyrene											
dibenzo(a,h)anthracene											
benzo(g,h,i)perylene											
alpha-BHC											
beta-BHC											
delta-BHC											
gamma-BHC(lindane)											
heptachlor											
aldrin											
heptachlor epoxide											
endosulfan I											
dieldrin											
4,4'-DDE											
endrin											
endosulfan II											
4,4'-DDD											
endrin aldehyde											
endosulfan sulfate											
4,4'-DDT											
methoxychlor											
endrin ketone											
chlordane											
toxaphene											
Aroclor-1016											
Aroclor-1221											
Aroclor-1232											
Aroclor-1242											
Aroclor-1248											
Aroclor-1254											
Aroclor-1260											
ELEMENT											
aluminum	1220	1020	1190	7840							
antimony	[9.6] N										
arsenic	[2.1]			4.2							
barium	[14]	[61]		100							
beryllium											
cadmium		3.7									
calcium	2240	21,200	5810	60 000							
chromium	7.0 *	81 *	6.7 *	19 *							
cobalt			[4.3]								
copper	5.8	49	7.5	24							
iron	5620	11400	6100	15400							
lead	63 J	407 J	57 J	36 J							
magnesium	[632]	4480	2820	26200							
manganese	126	175	107	343							
mercury		7.0	0.09								
nickel		8.1									
potassium	[328]	4070	[212]	1220							
selenium											
silver											
sodium		[896]		[237]							
thallium											
tin											
vanadium	[6.1]		[5.8]	12							
zinc	98 *	407 *	49 *	96 *							
cyanide CHECK IF ANALYZED (✓)											
TENTATIVELY IDENTIFIED ORGANICS											
2-Methyl propane		88 000 J									

STATE INDIANA SITE MOBIL CHEM. PHOSPHORUS DIV. TDD F05-8702-172 PAGE 2 OF 2, SET # 1

COMPOUND	ITC	MEI 375	MEI 376	MEI 377	MEI 948							
	OTC	EJ 104	EJ 105	EJ 106	EJ 920							
	SAMPLE	S1 Background	S2 Catch basin	S3 north tanks	S4 South tanks							
chloromethane												
bromomethane												
vinyl chloride												
chloroethane												
methylene chloride		9 B	13000 B	7 B	10 B							
acetone		17 B	5600 JB	11 B	23 B							
carbon disulfide												
1,1-dichloroethene			4100 J									
1,1-dichloroethane			8800 J									
trans-1,2,-dichloroethene			3000 J									
chloroform												
1,2-dichloroethane												
2-butanone			5100 JB									
1,1,1-trichloroethane				1 J								
carbon tetrachloride												
vinyl acetate												
bromodichloromethane												
1,1,2,2-tetrachloroethane												
1,2-dichloropropane												
trans-1,3-dichloropropene												
trichloroethene			5900 J									
dibromochloromethane												
1,1,2-trichloroethane												
benzene		41	7200 J	3 J	4 J							
cis-1,3-dichloropropene												
2-chloroethylvinylether												
bromoform				3 JB								
2-hexanone												
4-methyl-2-pentanone												
tetrachloroethene			4600 J									
toluene		16 B	15000 B	4 JB	5 JB							
chlorobenzene												
ethylbenzene		8 B	33000 B	3 JB	3 JB							
styrene												
total xylenes		23 B	1600000 B	12 B	11 B							
N-nitrosodimethylamine												
phenol												
aniline												
bis(2-chloroethyl)ether												
2-chlorophenol												
1,3-dichlorobenzene												
1,4-dichlorobenzene												
benzyl alcohol												
1,2-dichlorobenzene			11000									
2-methylphenol												
bis(2-chloroisopropyl)ether												
4-methylphenol												
N-nitroso-di-n-propylamine												
hexachloroethane												
nitrobenzene												
isophrone					830 J							
2-nitrophenol												
2,4-dimethylphenol												
benzoic acid												
bis(2-chloroethoxy)methane												
2,4-dichlorophenol												
1,2,4-trichlorobenzene												
napthalene			20000									
4-chloroaniline												
hexachlorobutadiene												
4-chloro-3-methylphenol												
2-methylnapthalene		62 J	10000									
hexachlorocyclopentadiene												
2,4,6-trichlorophenol												
2,4,5-trichlorophenol												
2-chloronaphthalene												
2-nitroaniline												
dimethyl phthalate												
acenapthylene												
3-nitroaniline			30000									
acenaphthene												
2,4-dinitrophenol												
4-nitrophenol												
dibenzofuran												
2,4-dinitrotoluene												
2,6-dinitrotoluene												
diethylphthalate												
4-chlorophenyl-phenylether												
fluorene												
4-nitroaniline												
4,6-dinitro-2-methylphenol												
N-nitrosodiphenylamine		140 J	20000									
4-bromophenyl-phenylether												
hexachlorobenzene												

STATE INDIANA SITE MOBIL CHEM. PHOSPHORUS DIV. TDD F05-8702-172 PAGE 1 OF 2, SET # 1

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

Date Received for Review: 3/27/87 Date Review Completed: _____

TO: Julie Kaiser

FROM: Zena Gold-Kaufman ZGK

SUBJECT: MOBIL CHEM
F5-8612-012
FIN011OST

Sample Description: Case # 6855/2726E

Project Data Status: *incomplete* awaiting organics (4)

FIT Date Review Findings:
All Se, Ag, and Cyanide data are estimated (J)
All Pb data is estimated (J)
All Sb is unusable.
All Chromium data is estimated

Additional Comments:
None

Book No. 6
Page No. 12

recycled paper

CHEMICAL EVALUATION SHEET

mg/kg

COMPOUND	CRDL	3-5x CRDL	MEJ S1 BK 375 smpl	MEJ S2 376 smpl	MEJ S3 377 smpl	MEJ 948 S4 smpl	smpl	smpl	smpl	smpl	smpl	smpl
Aluminum	40	120-200	1220	1020	1190	7840						
~~Calcium~~			~~2290~~	~~21200~~								
Copper	5	15-25	5.8	49	7.5	24						
Iron	20	60-100	8620	11400	6100	15400						
Lead	1	3-5	63	407	57	86						
~~Manganese~~			~~126~~	~~4480~~								
~~Zinc~~			~~98~~									
Cadmium	1	3-5		3.7								
Mercury	.008	0.024-0.04		7.0	0.09							
Nickel	8	24-40		8.1								
Arsenic	2	6-10				4.2						
Barium	40	120-200				100						
Vanadium	10	30-50				12						

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 3·24·87

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SUBJECT: Review of Region V CLP Data
Received for Review on 3/4/87

FROM: Curtis Ross, Director
Central Regional Laboratory Jay Thakkar

TO: Data User: Fit

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

SITE NAME Mobil Chem SMO Case No. 68555AS2726E

EPA Data Set No. SF 3778 No. of Samples 4 D.U./Activity Numbers Y9051 C72100

CRL No. 87FP01559 - 87FP01562

SMO Traffic No. MEJ375 - MEJ377 ; MEI948

Contract Laboratory: Century Hours Required for Review: 12

Following are our findings.

This review covers four soil samples which were analyzed for metals and cyanide.

Spike recovery for Se (65%), Ag (44%) and CN^- (60%) are biased low and data should be construed as estimated (J).

Spike recovery for Pb is 22% and the sample results are quantitatively questionable — the results biased significantly low. The detection limit should be elevated.

Spike recovery for Sb is 11% and the possibility of false negatives exists. Data are unusable (R).

RPD for Cr is 37% and the results are estimated.

Lab has done serial dilution on sample outside this case. Sample MB1-780.

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

Raymond Piccoin 3/23/87

cc: Dr. Alfred Haeberer/Joan Fisk/Gary Ward, EPA Support Services
Ross K. Robeson, EMSL-Las Vegas
Robert Pritchard, CLP/SMO

EPA FORM 1320-6 (REV 3-76)

SF3778

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REPORT NARRATIVE

The following report contains the results for EPA case #6855. Total metals and cyanide analysis was performed on all four soil samples.

The analytical furnace spikes were performed by taking nine-tenths of the sample and adding one-tenth of a spiking solution. The calculation for analytical spike recovery is as follows: SSR-9/10 SR/SA x 100.

Please note that lead results were taken from the ICP analysis.

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U.S. EPA, CENTRAL REGIONAL LAB.
536 S. CLARK STREET
CHICAGO, ILLINOIS 60605

DATA REVIEW SHEET

CASE # 6855
DATA SET # SF 3778
LAB Q.C.# 016
DATE: 3/23/87

SITE Mobil Chem
LAB Century
REVIEWED BY R. Pucciarone

MATRIX: soil
CONC. : low

WATER SAMPLE SPK.
WATER SAMPLE DUP.
SOIL SAMPLE SPK. MEJ-377
SOIL SAMPLE DUP. MEJ-377

Metals:	CALIBRATION ICV	CCV	CCV	CCV	BLANKS ICB	PREP	PREP	ICP INTER. INT	FINAL	SPIKE WATER	SOIL	DUPLICATE WATER	SOIL	LCS WATER	SOIL	linear range
1. Aluminum	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓	✓	✓
2. Antimony											11%					
3. Arsenic																
4. Barium																
5. Beryllium																
6. Cadmium																
7. Calcium													rpd 37%			
8. Chromium																
9. Cobalt																
10. Copper																
11. Iron																
12. Lead											22%					
13. Magnesium																
14. Manganese																
15. Mercury																
16. Nickel																
17. Potassium											65%					
18. Selenium											44%					
19. Silver																
20. Sodium																
21. Thallium																
22. Vanadium													rpd 32%			
23. Zinc											60%					
24. Cyanide																
Other:																

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

RECEIVED MAR 2 6 1987

Date 3/3/87

COVER PAGE
INORGANIC ANALYSES DATA PACKAGE

Lab Name CENTURY LABORATORIES

Case No. 6855

SOW No. 705

Q.C. Report No. 016

Lab Receipt Date 2/19/87

Sample Numbers

EPA No.	Lab ID No.	EPA No.	Lab ID No.
MEJ-375	0016-01		
MEJ-376	0016-02		
MEJ-377	0016-03		
MEJ-94V	0016-04		

Comments:

ICP interelement and background corrections applied? Yes ✓ No ___.

If yes, corrections applied before ✓ or after ___ generation of raw data.

Footnotes:

NR - Not required by contract at this time

Form I:

Value - If the result is a value greater than or equal to the instrument detecion limit but less than the contract-required detection limit, report the value in brackets (i.e., [10]). Indicate the analytical method used with P (for ICP), A (for Flame AA) or F (for Furnace AA).

U - Indicates element was analyzed for but not detected. Report with the instrument detection limit value (e.g., 10U).

E - Indicates a value estimated or not reported due to the presence of interference. Explanatory note included on cover page.

s - Indicates value determined by Method of Standard Addition.

N - Indicates spike sample recovery is not within control limits.

* - Indicates duplicate analysis is not within control limits.

\+ - Indicates the correlation coefficient for method of standard addition is less than 0.995

M - Indicates duplicate injection results exceeded control limits.

Indicate method used: P for ICP; A for Flame AA and F for Furnace.

000003

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Form I

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

EPA Sample No. MEJ-375

Date 3/3/97

INORGANIC ANALYSIS DATA SHEET

LAB NAME Century Laboratories, Inc. CASE NO. 6755

SOW NO. 785

LAB SAMPLE ID. NO. 0010-01 QC REPORT NO. 016

Elements Identified and Measured

Concentration: Low ✓ Medium ____

Matrix: Water ____ Soil ✓ Sludge ____ Other ____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	1220 P	13.	Magnesium	[632] P
2.	Antimony	[9.6] PN	14.	Manganese	126 P
3.	Arsenic	[2.1] F	15.	Mercury	0.11 UCVAA
4.	Barium	[14] P	16.	Nickel	4.7 UP
5.	Beryllium	1.2 UP	17.	Potassium	[324] P
6.	Cadmium	0.9 UP	18.	Selenium	0.46 UFN
7.	Calcium	2290 P	19.	Silver	2.3 UPN
8.	Chromium	7.0 P*	20.	Sodium	117 UP
9.	Cobalt	2.3 UP	21.	Thallium	0.23 UF
10.	Copper	5.8 P	22.	Vanadium	[6.1] P
11.	Iron	5620 PN-LB	23.	Zinc	98 P*
12.	Lead	63 PN		Percent Solids (%)	86.32
	Cyanide	0.23 UN			

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

Comments: MEDIUM BROWN SOIL

Lab Manager: Kenneth Bond

000004

Form I

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87FP01560

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

EPA Sample No. MET-376

Date 3-3-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Century Laboratories, Inc. CASE NO. 6855

SOW NO. 785

LAB SAMPLE ID. NO. 0016-02 QC REPORT NO. 016

Elements Identified and Measured

Concentration: Low ✓ Medium ____

Matrix: Water ____ Soil ✓ Sludge ____ Other ____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	1020P	13.	Magnesium	4480P
2.	Antimony	12UPN	14.	Manganese	175P
3.	Arsenic KS	~~[61]~~ ~~LOW~~ 2.2UF	15.	Mercury	7.0 CVAA
4.	Barium	[61]P	16.	Nickel	8.1P
5.	Beryllium	2.0UP	17.	Potassium	4070P
6.	Cadmium	3.7P	18.	Selenium	0.88UFN
7.	Calcium	21,200P	19.	Silver	4.1UPN
8.	Chromium	81P*	20.	Sodium	[896]P
9.	Cobalt	4.1UP	21.	Thallium	0.44UF
10.	Copper	49P	22.	Vanadium	4.1UP
11.	Iron	11,400P	23.	Zinc	407P*
12.	Lead	407PN		Precent Solids (%)	45.06
	Cyanide	0.44UN			

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

Comments: MEDIUM BROWN SOIL

Lab Manager Kenneth Bond

000005

Form I

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77FP0136

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

EPA Sample No. MEJ-377

Date 3/3/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Century Laboratories, Inc. CASE NO. 6855

SOW NO. 785

LAB SAMPLE ID. NO. 0016-03 QC REPORT NO. 016

Elements Identified and Measured

Concentration: Low ✓ Medium ____

Matrix: Water ____ Soil ✓ Sludge ____ Other ____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	1190P	13.	Magnesium	2820P
2.	Antimony	8.7UPN	14.	Manganese	107P
3.	Arsenic	1.4UF	15.	Mercury	0.09 CVAA
4.	Barium	[14]P	16.	Nickel	5.8UP
5.	Beryllium	1.4UP	17.	Potassium	[212]P
6.	Cadmium	1.2UP	18.	Selenium	0.56UFN
7.	Calcium	5810P	19.	Silver	2.9UPN
8.	Chromium	6.7P*	20.	Sodium	145UP
9.	Cobalt	[4.3]P	21.	Thallium	0.2UF
10.	Copper	7.5P	22.	Vanadium	[5.4]P
11.	Iron	6100P	23.	Zinc	49P*
12.	Lead	57PN		Percent Solids (%)	68.41
	Cyanide	0.29UN			

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

Comments: MEDIUM BROWN SOIL

Lab Manager: Kenneth Bond

000006

Form I

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

EPA Sample No. MEI-94V

Date 3/3/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Century Laboratories, Inc. CASE NO. 6458

SOW NO. 785

LAB SAMPLE ID. NO. 0616-04 QC REPORT NO. 016

Elements Identified and Measured

Concentration: Low ✓ Medium ____

Matrix: Water ____ Soil ✓ Sludge ____ Other ____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	7840P	13.	Magnesium	26,200P
2.	Antimony	7.3UPN	14.	Manganese	343P
3.	Arsenic	4.2F	15.	Mercury	0.09UCVAA
4.	Barium	100P	16.	Nickel	4.9UP
5.	Beryllium	1.2UP	17.	Potassium	1220P
6.	Cadmium	1.0UP	18.	Selenium	0.44UFN
7.	Calcium	60,000P	19.	Silver	2.4UPN
8.	Chromium	19P *	20.	Sodium	[237]P
9.	Cobalt	2.4UP	21.	Thallium	6.22UF
10.	Copper	24P	22.	Vanadium	12P
11.	Iron	15,400P	23.	Zinc	96P *
12.	Lead	36PN		Percent Solids (%)	85.00
	Cyanide	0.23UN			

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

Comments: Medium brown soil

Lab Manager: Kenneth Bond

000007

Form III-1

Q. C. Report No. 016

BLANKS

LAB NAME CENTURY LABORAT

CASE NO. 6455

DATE 3-3-87

UNITS ug/l (soil P.B. mg/kg)

Matrix SOIL

Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank Matrix: WATER 1	Matrix: SOIL 2
Metals:							
1. Aluminum	[30]	[35]	20u	20u	20u	[29]	[7.0]
2. Antimony	30u	[54]	30u	56	30u	54	~~60u~~ 12
3. Arsenic	~~5.0u~~ 3.0u	~~5.0u~~ 3.0u	~~5.0u~~ 3.0u	~~5.0u~~ 3.0u	~~5.0u~~ 3.0u	~~5.0u~~ 3.0	~~1.0u~~ 0.4u
4. Barium	10u	10u	10u	10u	10u	10u	2.0u
5. Beryllium	5.0u	5.0u	5.0u	5.0u	5.0u	5.0u	1.0u
6. Cadmium	4.0u	4.0u	4.0u	4.0u	4.0u	4.0u	0.8u
7. Calcium	100u	100u	100u	100u	100u	[72u]	[66]
8. Chromium	10u	10u	10u	10u	10u	10u	2.0u
9. Cobalt	[11]	[15]	10u	10u	10u	10u	[3.8]
10. Copper	6.0u	6.0u	6.0u	6.0u	6.0u	6.0u	1.2u
11. Iron	80u	80u	80u	80u	80u	80u	16u
12. Lead	35uP	35uP	35uP	35uP	35uP	35uP	7.0uP
13. Magnesium	100u	100u	100u	100u	100u	100u	20u
14. Manganese	5.0u	5.0u	5.0u	5.0u	5.0u	5.0u	1.0u
15. Mercury	~~2.0u~~ 0.2u	~~2.0u~~ 0.2u	~~2.0u~~ 0.2u	~~2.0u~~ 0.2u		~~2.0u~~ 0.2u	~~0.4u~~ 0.1u
16. Nickel	20u	20u	20u	20u	20u	20u	4.0u
17. Potassium	500u	500u	500u	500u	500u	500u	100u
18. Selenium	2.0u	2.0u	2.0u	2.0u		2.0u	0.4u
19. Silver	10u	10u	10u	10u	10u	10u	2.0u
20. Sodium	500u	500u	500u	500u	500u	500u	100u
21. Thallium	1.0u	1.0u	1.0u	1.0u	1.0u	1.0u	0.2u
22. Vanadium	10u	10u	10u	10u	10u	10u	2.0u
23. Zinc	6.0u	6.0u	6.0u	6.0u	6.0u	6.0u	[1.6]
Other:							
Cyanide	10u	10u	10u	~~10~~		10u	0.2u

000012

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Form III-2

Q. C. Report No. 016

BLANKS

LAB NAME CENTURY LABORATORIES CASE NO. 6A5

DATE 3-3-87 UNITS ug/l

Matrix SOIL

Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank Matrix: 1	Matrix: 2
Metals:							
1. Aluminum		20u					
2. Antimony		30u					
3. Arsenic		~~5.0u~~ 3.0	~~5.0u~~ 3.0				
4. Barium		10u					
5. Beryllium		5.0u					
6. Cadmium		4.0u					
7. Calcium		100u					
8. Chromium		10u					
9. Cobalt		10u					
10. Copper		6.0u					
11. Iron		50u					
12. Lead		35uP					
13. Magnesium		100u					
14. Manganese		5.0u					
15. Mercury							
16. Nickel		20u					
17. Potassium		500u					
18. Selenium							
19. Silver		10u					
20. Sodium		500u					
21. Thallium		1.0u	1.0u	1.0u			
22. Vanadium		10u					
23. Zinc		6.0u					
Other:							
Cyanide							

000013

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Form V

Q. C. Report No. 016

SPIKE SAMPLE RECOVERY

LAB NAME CENTURY LABORATORIES

DATE 3-3-87

CASE NO. 6855

EPA Sample No. MES-377

Lab Sample ID No. 0016-03

Units MG/KG

Matrix SOIL

Compound	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spiked Added (SA)	%R[1]
Metals:					
1. Aluminum	75-125	~~820~~ NR	820	NR	
2. Antimony	-	[11] ~~6.0U~~	6.0U	100	11N
3. Arsenic	-	9.6	1.0U	8.0	120
4. Barium	-	X 396	[9.4]	400	96
5. Beryllium	-	8.9	1.0U	10	89
6. Cadmium	-	7.9	0.8U	10	79
7. Calcium	-	NR	4000	NR	NR
8. Chromium	-	42	4.6	40	93
9. Cobalt	-	97	[3.0]	100	94
10. Copper	-	49	5.2	50	88
11. Iron	-	NR	4200	NR	NR
12. Lead	-	61	39	100	22N
13. Magnesium	-	NR	1940	NR	NR
14. Manganese	-	172	74	100	98
15. Mercury	-	0.55	0.09	0.50	92
16. Nickel	-	95	4.0U	100	95
17. Potassium	-	NR	[146]	NR	NR
18. Selenium	-	1.3	0.39U	2.0	65N
19. Silver	-	~~N~~ 4.4	2.0U	10	44N
20. Sodium	-	NR	100 ~~40U~~	NR	NR
21. Thallium	-	10	0.19U	10	100
22. Vanadium	-	89	[4.0]	100	85
23. Zinc	-	125	34	100	91
Other:					
Cyanide	-	1.2	0.20U	2.0	60N

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

"N" - out of control

"NR" - Not required

Comments:

000015

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Form VI

Q. C. Report No. 016

DUPLICATES

LAB NAME CENTURY LABORATORIES

DATE 3-3-87

CASE NO. 6455

EPA Sample No. MET-377

Lab Sample ID No. 0016-03

Units MG/KG

Matrix SOIL

Compound	Control Limit[1]	Sample(S)	Duplicate(D)	RPD[2]
Metals:				
1. Aluminum		820	871	6.0
2. Antimony		6.0u	5.9u	NC
3. Arsenic		1.0u	[1.3]	NC
4. Barium		[9.8]	[11]	NC
5. Beryllium		1.0u	1.0u	NC
6. Cadmium		0.8u	1.1	NC
7. Calcium		4000	4158	3.9
8. Chromium	±2.0	4.6	6.7	37 *
9. Cobalt		[3.0]	[2.2]	NC
10. Copper		5.2	4.7	10
11. Iron		4200	5148	20
12. Lead		39	47	19
13. Magnesium		1940	1900	2.1
14. Manganese		74	81	9.0
15. Mercury		0.09	0.1	10
16. Nickel		4.0u	4.0u	NC
17. Potassium		[146]	[154]	NC
18. Selenium		0.3tu	0.3tu	NC
19. Silver		2.0u	2.0u	NC
20. Sodium		100~~40~~u	100u	NC
21. Thallium		0.19u	0.19u	NC
22. Vanadium		[4.0]	[4.8]	NC
23. Zinc		34	47	32 *
Other:				
Cyanide		0.2u	0.2u	NC

* Out of Control

[1] To be added at a later date.

[2] RPD = [|S - D|/((S + D)/2)] x 100

NC - Non calculable RPD due to value(s) less than CRDL

000016

INORGANICS
LABORATORY RESPONSE TO RESULTS OF CCS

Criterion	Comments
B1	ENCLOSED PLEASE FIND FORM I for MES-375 Corrected for Hg
B2	MEI-941 Ca + Mg values do exceed linear range. Must be diluted
C	Form II-3 corrected for Ba
D	An aqueous blank was reported because this case was analyzed along with other water samples. Reporting forms were filled out for all three cases per simultaneously.
E1	Form IV, Pb mean and standard deviation taken from 5 point run. Values are 4340, 4340, 4530, 4310, 4230
E2	ICS was diluted and run for Mg. Look at per that Al, Ca + Fe also appear on diluted analysis. Diluted value now appears on corrected Form IV
K1	ICP instrument does not print date + time for standardization. Please note it has been filled in. This has never been a problem before. Why now? Is this a new requirement
K2	Initial run of prep blk showed high Pb values. Rerun again Pb was O.K. Only Pb value should have been crossed out. See corrected data page.

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INORGANICS
LABORATORY RESPONSE TO RESULTS OF CCS

Criterion	Comments
M	Mg value for serial dilution is incorrect and has been corrected
K3	See submitted copy of raw data
B3	Method of Analysis for As provided on Form II
B4	description provided and resubmitted
H	Unit for LCS + Se IDL corrected
I	As detection limit is 5.0. Old detection limit was three. Blank Form have been corrected

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SF3778

Page ____ of ____

COVER SHEET

LABORATORY RESPONSE TO RESULTS OF
CONTRACT COMPLIANCE SCREENING (CCS)

RECEIVED
MAR 10 1987
US EPA CENTRAL REGIONAL LAB.
535 S. CLARK STREET
CHICAGO, ILLINOIS 60605

Response To: (check one) ☐ Organics CCS

☑ Inorganics CCS

Response materials sent to Organics CCS should be sent to the attention of Doris Ling, SMO.

Response materials sent to Inorganics CCS should be sent to the attention of Sa'ad Masri, SMO.

Laboratory Name: CENTURY LABORATORIES

Response Date: 3-17-87

Date Screening Results Received at Laboratory: 3-11-87

EPA Contract No. 731F

Case No. 685

Sample Nos.*

*Only list sample numbers that require reconciliation.

This form is used to identify materials sent in response to results of Contract Compliance Screening (CCS). A separate form must accompany the response for each Case.

Please indicate (on the attached continuation form) which fractions and/or which criteria correspond with your resubmission. Response materials sent to CCS should also be copied to the Region and to EMSL/LV, each with this blue Cover Sheet.

6/5/86

SF 3778

RECEIVED MAR 2 6 1987

CONTRACT COMPLIANCE SCREENING SUMMARY FOR INORGANICS

CASE: 6855 CONTRACT : 68-01-7318 SAMPLES: 4 QCNUM: 016 DATE: 3/10/87

LAB NAME: CENTRY MAR 13 1987 REGION: 5 SCREENED BY: JR

SAMPLE NO.	A COVER PAGE	B DATA SHEETS	C CALIBRATION INIT.	C CALIBRATION CONT.	D BLANK	E ICS	F MATRIX SPIKE	G DUP.	H IDL	H LCS	I MSA	J HOLD. TIME CN	J HOLD. TIME HG	K RAW DATA	L TR	M SER. DIL.	N LIN. RANGE
IMEI948-1	✓	SU RS	✓	RS	EX	RS SU	✓	✓	RS	RS	EX	✓	✓	RS EX RS	✓	RS	✓
IMEJ375-1		RS RS		"	"	" "			"	"	"			" " "		"	
IMEJ376-1				"	"	" "			"	"	"			" " "		"	
IMEJ377-1				RS	EX	RS SU			RS	RS	EX			RS EX RS		RS	

PROBLEM CODE: EX = EXPLAIN, RS = RESUBMIT, SU = SUBMIT, NC = NONCOMPLIANT

RECEIVED MAR 2 6 1987

MAR 13 1987

CONTRACT COMPLIANCE SCREENING FOR INORGANICS — WORKSHEET A - ICAP — PAGE 2 OF 3

CASE: 6855 — CONTRACT: 68-01-7318 — SAMPLES: 4 — QCNUM: 016 — DATE: 3/10/87

LAB NAME: CENTRY — REGION: 5 — SCREENED BY: JR

SAMPLE NO.	C/M	DATE RECD.	DATE ANAL.	CALIBRATION INIT.	CALIBRATION CONT.	BLANKS	ICS	LINEAR RANGE	LCS	SERIAL DILUTION	PROBLEMS
MEI948-1	ILS	19FEB87	28 FEB 87 12:29	st ✓ ICV 11:00 11:02		ICB 10:57 prep. blk. 11:16 11	initial 11:04 11:07	initial 11:09	LCS 11:19 or 11:21 or 11:34		(B1) MEJ 375: "N" flag is required on Pb, not on Fe. (RS) B2 C D E1 E2 K1 K2
MEJ375-1	ILS	19FEB87	" 12:11		CCV 11:29 11:33	CCB 11:27 ~~CCB~~					(B2) MEI 948: Values above Linear Range. Cu - 244,710 ppb (upper limit 100,000 ppb) Mg - 106,906 ppb (upper limit 50,000 ppb) Dilution is required. (SU) B1 C D E1 E2 K1 K2
MEJ376-1	ILS	19FEB87	" ?		CCV 12:04 12:07	CCB 12:02					(C) Form II-3. %R for Bi = 102% ≠ 203% (RS) C D E1 E2 K1 K2
MEJ377-1	ILS	19FEB87	" 12:17								(D) Form III. Why was an aqueous prep. blk reported? (EX) C D E1 E2 K1 K2
MEJ377-8	ILS	19FEB87	" 12:25								(E1) Form III: A "mean" and "standard deviation" based on at least 5 measurements for Pb is required on Form III. (RS) C D E1 E2 K1 K2
MEJ377-9	ILS	19FEB87	" 12:20		CCV 12:42. 12:44.	CCB 12:38					(E2) ICS: Values above the Linear Range Fe, Al, Ca, and Mg. Dilute and rerun. (SU) C D E1 E2 K1 K2
					CCV 13:13 13:15	CCB 13:11				4X 0017-07 13:17	(K1) ICP standardization: Neither the date nor the time is on the data. (RS)
					CCV 13:38. 13:40	CCB 13:28	final 13:34 13:36	final 13:32			(K2) Why was ICP data cancelled and rerun. prep blk - 11:14 ccb - 12:00, 12:35 ccv - 12:40, 13:30 (EX)

CONTRACT COMPLIANCE SCREENING FOR INORGANICS WORKSHEET B - AA AND CN

CASE: 6855 CONTRACT: 68-01-7318 SAMPLES: 4 QCNUM: 016 DATE: 3/10/87

LAB NAME: CENTRY REGION: 5 SCREENED BY: JR

SAMPLE	C/M	DATE	as F	pb F	hg CV	se F	tl F	cn C	PROBLEMS
MEI948-1	ILS	19FEB87	2/26	I C P	2/28	2/27	2/28	2/25	(M) According to raw data (and using a dilution factor of 4) the % Difference for Mg = 5.2%. Form IX has a value of 38 % Diff for Mg. Please correct the value and resubmit the Form. (RS) m K2 B4 H I
MEJ375-1	ILS	19FEB87							(K3) Value cut-off of ICP raw data. ccb (11:27) - Mg. (RS) m K2 B3 H I
MEJ376-1	ILS	19FEB87							(B3) Form I: Method of analysis is missing. MEJ 375 - As. (RS) m K2 H I
MEJ377-1	ILS	19FEB87							(B4) MEI 948: Descriptions of colorition, clarity, texture, and artifacts are required in the comments section on Form I. (RS) m K2 H I
MEJ377-8	ILS	19FEB87							(H) Circle units for LCS (RS) Also Se: 2.0 is the IDL for furnace not ICP (RS) m K2 H I
MEJ377-9	ILS	19FEB87							(I) As: Why was undected raw data reported as <0.003, if the IDL on Form VII is 0.005 ppm. (EX) m K3 H I

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CENTRAL REGIONAL LABORATORY SAMPLE DATA REPORT
ORGANICS/INORGANICS

LOG IN DATE: 2/24/87
DUE DATE: 3/11/87

SUPERFUND 3778

THIS FORM IS TO BE USED FOR SAMPLES SENT TO CONTRACT ONLY

CASE NUMBER/SAS No. 16855/27266 SITE NAME Mobil Chem #2 LABORATORY ATI #4/Century #4 DATE SHIPPED 2/18/87

SUPERFUND DU NUMBER 1905 EPA RPM or OSC (S.M.S.)/(CES) _____ CERCLIS NUMBER IND006006739 PAGE 1 OF 1

ACTIVITY NUMBER C72100

RECEIVED DATE	CRL LOG NUMBER	ORGANIC TRAFFIC REPORT NUMBER or SAS Packing List No.	INORGANIC TRAFFIC REPORT NUMBER or SAS Packing List No.	WATER OR LIQUIDS: ACID-BASE NEUTRAL CPDS ORGANIC SCAN UG/L TOX17574	VOLATILE ORGANIC ANALYSIS ORGANIC SCAN UG/L TOX17564	WATER POLYCHLORINATED BIPHENYLS UG/L PES17144	WATER CHLORINATED PESTICIDES UG/L PES17134	TOTAL METALS IN WATER UG/L MET111	WATER CYANIDE UG/L MIN74919	NITRATE/NITRITE MG/L MIN7284	AMMONIA MG/L MIN7294	RESIDUE, FILTERABLE TDS MG/L MIN7362	RESIDUE, NON-FILT TSS MG/L MIN7372			SEDIMENTS or SOILS: ACID-BASE NEUTRAL CPDS ORGANIC SCAN MG/KG TOX215722	VOLATILE ORGANIC ANALYSIS ORGANIC SCAN MG/KG TOX215622	SEDIMENTS POLYCHLORINATED BIPHENYLS MG/KG PES211422	SEDIMENT CHLORINATED PESTICIDES MG/KG 211322	TOTAL METALS MG/KG MET413	CYANIDE MG/KG MIN44930	EP TOXICITY METALS MG/KG	AMMONIA MG/KG MIN42925				
	87FP01559	ES104	MES375													✓	✓	✓	✓	✓	✓						
	87FP01560	ES105	MES376													✓	✓	✓	✓	✓	✓						
	87FP01561	ES106	MES377													✓	✓	✓	✓	✓	✓						
	87FP01562	ES920	MEI948													✓	✓	✓	✓	✓	✓						

RECEIVED MAR 2 6 1987

TABLE OF ICV'S & LCS'S

	ICV	LCS
ICP Analysis	ICV #1	WP 475 C3 (All Elements) WP 581 C2 Na, K, Mg, Ba, Ca WP 186
Furnace Analysis	ICV #2 (As, Se) ICV #4 (Pb, Tl)	WP 284 C1 (Pb, As, Se) WP 980 C2 (Tl)(2:100)
Hg Analysis	WS 378 C2	
Cn Analysis	WP 179 C2	

RECEIVED MAR 2 6 1987

Form II - 1

Q. C. Report No. 016

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME CENTURY LABORATORIES

CASE NO. 6155

SOW NO. 785

DATE 3-3-87

UNITS ug/l

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum	2160	2010	93	2000	1980	99	2080	104	P
2. Antimony	807	801	99	1000	1050	105	1040	104	P
3. Arsenic	41	44	107	50	49	98	45	90	F
4. Barium	2120	1940	91	2000	1890	94	1940	97	P
5. Beryllium	527	476	90	1000	965	96	966	97	P
6. Cadmium	488	446	91	200	185	92	188	94	P
7. Calcium	51800	46,500	90	10,000	9380	94	9740	97	P
8. Chromium	529	482	91	200	195	97	199	99	P
9. Cobalt	496	489	99	1000	1000	100	1040	104	P
10. Copper	524	505	96	1000	948	95	980	98	P
11. Iron	2060	1920	93	10,000	9830	98	10,050	100	P
12. Lead	5160	4640	90	1,000	984	90	959	96	P
13. Magnesium	25,500	24,000 ~~23,500~~	94	10,000	9880	99	10,100	101	P
14. Manganese	520	490	94	1,000	973	97	994	99	P
15. Mercury	0.90	1.07	119	1.0	1.17	117	1.20	120	CVAA
16. Nickel	495	466	94	1000	999	100	1030	103	P
17. Potassium	51800	49500	93	10,000	9660	97	10,600	106	P
18. Selenium	43	47	109	25	24	96	24	96	F
19. Silver	495	496	100	1,000	1030	103	1000	100	P
20. Sodium	50300	47,600	95	10,000	9,000	90	10,030	100	P
21. Thallium	47	50 ~~49~~	106 ~~104~~	50	53	106	52	104	F
22. Vanadium	520	464	90	1,000	948	95	961	96	P
23. Zinc	8070	2880	94	1000	970	97	1010	101	P
Other:									
Cyanide	188	188	100	200	216	108	207	103	

[1] Initial Calibration Source SEE NARRATIVE [2] Continuing Calibration Source MID-RANGE STD

[3] Control Limits: Mercury and Tin 80-120; Other Metals 90-110; Cyanide 85-115

[4] Indicate Analytical Method Used: P - ICP; A - Flame AA; F - Furnace AA

000008

AS ICVS FOR 2ND ICVS AFTER RESTANDARDIZATION

RECEIVED MAR 2 6 1987

Form II-2

Q. C. Report No. 016

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME CENTURY LABORATORIES

CASE NO. 6855

SOW NO. 785

DATE 3-3-87

UNITS ug/l

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum				2000	2150	107	2110	105	P
2. Antimony				1000	1100	110	1030	103	P
3. Arsenic	* 41	43	105	50	52	104	53	106	F
4. Barium				2000	2030	101	1980	99	P
5. Beryllium				1000	1000	100	986	99	P
6. Cadmium				200	191	95	186	93	P
7. Calcium				10,000	979	98	9710	97	P
8. Chromium				200	198	99	202	101	P
9. Cobalt				1000	1050	105	1040	104	P
10. Copper				1000	1020	102	999	100	P
11. Iron				10,000	10,300	103	10,100	101	P
12. Lead				1000	922	92	993	99	P
13. Magnesium				10,000	10,300	103	10,300	103	P
14. Manganese				1000	1020	102	1010	101	P
15. Mercury				1.0	0.96	96			CVAA
16. Nickel				1000	1040	104	104	104	P
17. Potassium				10,000	11,000	110	10,500	105	P
18. Selenium				25	24	96			F
19. Silver				1,000	1010	101	1,000	100	P
20. Sodium				10,000	10,600	106	10,100	101	P
21. Thallium				50	52	104	54	108	F
22. Vanadium				1,000	985	98	973	99	P
23. Zinc				1000	1030	103	1020	102	P
Other:									
Cyanide									

1 Initial Calibration Source SEE NARRATIVE 2 Continuing Calibration Source MID-RANGE STD.

3 Control Limits: Mercury and Tin 80-120; Other Metals 90-110; Cyanide 85-115

4 Indicate Analytical Method Used: (P) - ICP; (A) - Flame AA; (F) - Furnace AA

000009

Form II-3

Q. C. Report No. 016

RECEIVED MAR 2 6 1987

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME CENTURY LABORATORIES

CASE NO. 0455

SOW NO. 75

DATE 3-3-87

UNITS ug/l

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1 Aluminum				2000	2150	107			P
2. Antimony				1000	1100	110			P
3 Arsenic				50	48	96	46	92	F
4. Barium				2000	2030	102 ~~203~~ KB			P
5 Beryllium				1000	1010	101			P
6. Cadmium				200	195	97			P
7. Calcium				10,000	9940	99			P
8. Chromium				200	202	101			P
9. Cobalt				1000	1050	105			P
0. Copper				1000	1020	102			P
1. Iron				10,000	10400	104			P
2. Lead				1,000	1000	100			P
3. Magnesium				10,000	10,400	104			P
4. Manganese				1000	1030	103			P
5. Mercury									
6. Nickel				1000	1060	106			P
7. Potassium				10,000	10,600	106			P
8. Selenium									
9. Silver				1000	1000	100			P
0. Sodium				10,000	10,200	102			P
. Thallium				50	50	100	52	104	F
. Vanadium				1,000	999	100			P
. Zinc				1000	1040	104			P
h :									
anide									

[1] Initial Calibration Source _____ [2] Continuing Calibration Source MID-RANGE STD.

Control Limits: Mercury and Tin 80-120; Other Metals 90-110; Cyanide 85-115

Indicate Analytical Method Used: P - ICP; A - Flame AA; F - Furnace AA

000010

Form II-4

Q. C. Report No. 016

RECEIVED MAR 2 6 1987

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME CENTURY LABORATORIES

CASE NO. 6455

SOW NO. 78

DATE 3-3-87

UNITS ug/l

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									
2. Antimony									
3. Arsenic									
4. Barium									
5. Beryllium									
6. Cadmium									
7. Calcium									
8. Chromium									
9. Cobalt									
10. Copper									
11. Iron									
12. Lead									
13. Magnesium									
14. Manganese									
15. Mercury									
16. Nickel									
17. Potassium									
18. Selenium									
19. Silver									
20. Sodium									
21. Thallium				50	49	98			F
22. Vanadium									
23. Zinc									
Other:									
Cyanide									

[1] Initial Calibration Source _____ [2] Continuing Calibration Source _____

[3] Control Limits: Mercury and Tin 80-120; Other Metals 90-110; Cyanide 85-115

[4] Indicate Analytical Method Used: P - ICP; A - Flame AA; F - Furnace AA

RECEIVED MAR 2 6 1987

Form IV

Q. C. Report No. 016

ICP INTERFERENCE CHECK SAMPLE

AB NAME CENTURY LABORATORIES

ATE 3-2-87

CASE NO. 6855

Check Sample I.D. ICS-XISB

Check Sample Source EMSL/LV

Units ug/l

ompound	Control Limits[1] Mean	Control Limits[1] Std. Dev.	True[2]	Initial Observed	Initial %R	Final Observed	Final %R
t ls:				496,000	99	572,000	114
Aluminum			503,000	~~489,000~~	~~97~~	~~509,000~~	101
Antimony				30u		30u	
Arsenic							
Barium			472	425	90	423	90
Beryllium			456	437	96	436	96
Cadmium			964	797	83 ~~83~~	812	84
Calcium			497,000 ~~489~~	~~466,000~~ 474	95 ~~89~~	~~452,000~~ 540,000	~~90~~ 108
Chromium			985	893	91	921	93
Cobalt			478	423	88	419	88
Copper			509	502	99	516	102
Iron			198,000	~~178,000~~ 198,000	~~90~~ 100	~~183,000~~ 225,000	~~92~~ 114
Lead	4350	0.11	4630	4170	90	4290	93
Magnesium			497,000	474,000	95	534,000	107
Manganese			522	506	97	514	98
Mercury							
Nickel			913	833	91	853	93
Potassium				500u		500u	
Selenium							
Silver			986	931	94	939	95
Sodium				500u		500u	
Thallium							
Vanadium			471	423	90	427	91
Zinc			948	866	91	895	94
[illegible]							

Mean value based on n = 5.

True value of EPA ICP Interference Check Sample or contractor standard.

000014

CASE: 6855
SAS 2726F

	1	2	3	4	5	6	7	8	9	10
ITC	EJ	EJ	EJ	EJ						
DTC	104	105	106	920						
SAMPLE	S1 Bkgrd	S2 catch basin	S3 N. tanks	S4 S. tanks						
COMPOUND										
chloromethane										
bromomethane										
vinyl chloride										
chloroethane										
methylene chloride	9 B	13000 B	7 B	10 B						
acetone	17 B	5600 J B	11 B	23 B						
carbon disulfide										
1,1-dichloroethene		4100 J								
1,1-dichloroethane		8800 J								
trans-1,2,-dichloroethene		3000 J								
chloroform										
1,2-dichloroethane										
2-butanone		5100 BJ								
1,1,1-trichloroethane			1 J							
carbon tetrachloride										
vinyl acetate										
bromodichloromethane										
1,1,2,2-tetrachloroethane										
1,2-dichloropropane										
trans-1,3-dichloropropene										
trichloroethene		5900 J								
dibromochloromethane										
1,1,2-trichloroethane										
benzene	(H1)	7200 J	3 J	4 J						
cis-1,3-dichloropropene										
2-chloroethylvinylether										
bromoform			3 J B							
2-hexanone										
4-methyl-2-pentanone										
tetrachloroethene		4600 J								
toluene	16 B	15000 B	4 J B	5 J B						
chlorobenzene										
ethylbenzene	8 B	33000 B	3 J B	3 J B						
styrene										
total xylenes	23 B	160000 B	12 B	11 B						
N-nitrosodimethylamine										
phenol										
aniline										
bis(2-chloroethyl)ether										
2-chlorophenol										
1,3-dichlorobenzene										
1,4-dichlorobenzene										
benzyl alcohol										
1,2-dichlorobenzene		(11000)								
2-methylphenol										
bis(2-chloroisopropyl)ether										
4-methylphenol										
N-nitroso-di-n-propylamine										
hexachloroethane										
nitrobenzene										
isophrone				830 J						
2-nitrophenol										
2,4-dimethylphenol										
benzoic acid										
bis(2-chloroethoxy)methane										
2,4-dichlorophenol										
1,2,4-trichlorobenzene										
napthalene		(20000)								
4-chloroaniline										
hexachlorobutadiene										
4-chloro-3-methylphenol										
2-methylnapthalene	62 J	(10000)								
hexachlorocyclopentadiene										
2,4,6-trichlorophenol										
2,4,5-trichlorophenol										
2-chloronaphthalene										
2-nitroaniline										
dimethyl phthalate										
acenapthylene										
3-nitroaniline		(30000)								
acenaphthene										
2,4-dinitrophenol										
4-nitrophenol	(R) 12 J									
dibenzofuran										
2,4-dinitrotoluene										
2,6-dinitrotoluene										
diethylphthalate										
4-chlorophenyl-phenylether										
flourene										
4-nitroaniline										
4,6-dinitro-2-methylphenol										
N-nitrosodiphenylamine	140 J	(20000)								
4-bromophenyl-phenylether										
hexachlorobenzene										

C = Use for HRS
J = Tinic quantitative
= unmarked means an artifact
TC

B = found in blank
J = estimate

R = do not use calibration problem

STATE IN SITE MOBIL PHOSPHORUS TDD 8702-172 PAGE 1 OF 2, SH 1 #

CASE: 6855
SAS 2776E

	1	2	3	4	5	6	7	8	9	10
TIC	EJ	EJ	EJ	EJ						
OTC	104	105	106	920						
SAMPLE	Bkgrd.	S2 catch basin	S3 N. tanks	S4 S. tanks						
COMPOUND										
pentachlorophenol	130J	(55000)								
phenanthrene	180J	9900J		800J						
anthracene										
di-n-butylphthalate	1900		400J							
fluoranthene	440J		240J	790J						
benzidine				540J						
pyrene	120J		250J							
butylbenzylphthalate										
3,3'-dichlorobenzidine										
benzo(a)anthracene	110J			450J						
bis(2-ethylhexyl)phthlate		(100,000)	(14000)							
chrysene	120J			540J						
di-n-octyl phthlate										
benzo(bk)fluoranthene	170J			550J						
benzo(a)pyrene	100J			560J						
indeno(1,2,3-cd)pyrene										
dibenzo(a,h)anthracene										
benzo(g,h,i)perylene										
alpha-BHC										
beta-BHC										
delta-BHC										
gamma-BHC(lindane)										
heptachlor			BDL							
aldrin										
heptachlor epoxide										
endosulfan I										
dieldrin										
4,4'-DDE										
endrin										
endosulfan II										
4,4'-DDD										
endrin aldehyde										
endosulfan sulfate										
4,4'-DDT										
methoxychlor										
endrin ketone										
chlordane										
toxaphene										
Aroclor-1016										
Aroclor-1221										
Aroclor-1232										
Aroclor-1242										
Aroclor-1248										
Aroclor-1254										
Aroclor-1260										
ELEMENT										
aluminum										
antimony										
arsenic										
barium										
beryllium										
cadmium										
calcium										
chromium										
cobalt										
copper										
iron										
lead										
magnesium										
manganese										
mercury										
nickel										
potassium										
selenium										
silver										
sodium										
thallium										
tin										
vanadium										
zinc										
cyanide CHECK IF ANALYZED ( )										
TENTATIVELY IDENTIFIED ORGANICS										

BDL
Below detection Limit

○ = use for HRS
□ = semi quantative
= unmarked means an artifact
TC

STATE_____ SITE_____ TDD_____ PAGE 2 OF 2, SET # ____

87FP01560X

Sample Number
EJ-105

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ATI
Case No: 6855/SAS 2726E
Lab Sample ID No: EJ-105
QC Report No: —
Sample Matrix: Soil
Contract No: 6801-7014
Data Release Authorized By: C Sites
Date Sample Received: 2-19-87

Volatile Compounds

Concentration: Low (Medium) (Circle One)
Date Extracted/Prepared: 2-25-87
Date Analyzed: 2-25-87
Conc/Dil Factor: $\left(\frac{10mL}{4.0g}\right)\left(\frac{5mL}{.01mL}\right)\left(\frac{1}{.56}\right)$ 3,2200 pH 8.82
Percent Moisture: (Not Decanted) 43.8

CAS Number		ug/l or (ug/Kg) (Circle One)
74-87-3	Chloromethane	22,000U
74-83-9	Bromomethane	↓
75-01-4	Vinyl Chloride	
75-00-3	Chloroethane	↓
75-09-2	Methylene Chloride	13,000B
67-64-1	Acetone	5,600JB
75-15-0	Carbon Disulfide	11,000U
75-35-4	1, 1-Dichloroethene	4,100J
75-34-3	1, 1-Dichloroethane	8,800J
156-60-5	Trans-1, 2-Dichloroethene	3,000J
67-66-3	Chloroform	11,000U
107-06-2	1, 2-Dichloroethane	↓
78-93-3	2-Butanone	5,100JB
71-55-6	1, 1, 1-Trichloroethane	200,000
56-23-5	Carbon Tetrachloride	11,000U
108-05-4	Vinyl Acetate	22,000U
75-27-4	Bromodichloromethane	11,000U

CAS Number		ug/l or (ug/Kg) (Circle One)
78-87-5	1, 2-Dichloropropane	11,000U
10061-02-6	Trans-1, 3-Dichloropropene	↓
79-01-6	Trichloroethene	5,900J
124-48-1	Dibromochloromethane	11,000U
79-00-5	1, 1, 2-Trichloroethane	↓
71-43-2	Benzene	7,200J
10061-01-5	cis-1, 3-Dichloropropene	11,000U
110-75-8	2-Chloroethylvinylether	22,000U
75-25-2	Bromoform	11,000U
108-10-1	4-Methyl-2-Pentanone	22,000U
591-78-6	2-Hexanone	↓
127-18-4	Tetrachloroethene	4,600J
79-34-5	1, 1, 2, 2-Tetrachloroethane	11,000U
108-88-3	Toluene	15,000B
108-90-7	Chlorobenzene	11,000U
100-41-4	Ethylbenzene	33,000B
100-42-5	Styrene	11,000U
	Total Xylenes	160,000B

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report

Laboratory Name ATI

Case No 6855/SAS 2726 E

Sample Number EJ 105

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 2/19/87

Date Analyzed: 3/3/87

Conc./Dil Factor: 5.26 ml / 30.5(0.5)(.562) ×10³ = x610

Percent Moisture (Decanted) —

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	6100U
111-44-4	bis(-2-Chloroethyl)Ether	
95-57-8	2-Chlorophenol	
541-73-1	1 3-Dichlorobenzene	
106-46-7	1 4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	
95-50-1	1 2-Dichlorobenzene	11,000
95-48-7	2-Methylphenol	6100U
39638-32-9	bis(2-chloroisopropyl)Ether	
106-44-5	4-Methylphenol	
621-64-7	N-Nitroso-Di-n-Propylamine	
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	
78-59-1	Isophorone	
88-75-5	2-Nitrophenol	
105-67-9	2 4-Dimethylphenol	
65-85-0	Benzoic Acid	30,000U
111-91-1	bis(-2-Chloroethoxy)Methane	6100 U
120-83-2	2. 4-Dichlorophenol	
120-82-1	1 2. 4-Trichlorobenzene	
91-20-3	Naphthalene	20,000
106-47-8	4-Chloroaniline	6100U
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	
91-57-6	2-Methylnaphthalene	10,000
77-47-4	Hexachlorocyclopentadiene	6100U
88-06-2	2. 4 6-Trichlorophenol	
95-95-4	2 4 5-Trichlorophenol	30,000U
91-58-7	2-Chloronaphthalene	6100U
88-74-4	2-Nitroaniline	30,000U
131-11-3	Dimethyl Phthalate	6100U
208-96-8	Acenaphthylene	
99-09-2	3-Nitroaniline	30,000

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	6100U
51-28-5	2. 4-Dinitrophenol	30,000
100-02-7	4-Nitrophenol	
132-64-9	Dibenzofuran	6100U
121-14-2	2 4-Dinitrotoluene	
606-20-2	2 6-Dinitrotoluene	
84-66-2	Diethylphthalate	
7005-72-3	4-Chlorophenyl-phenylether	
86-73-7	Fluorene	
100-01-6	4-Nitroaniline	30000U
534-52-1	4. 6-Dinitro-2-Methylphenol	
86-30-6	N-Nitrosodiphenylamine (1)	20,000
101-55-3	4-Bromophenyl-phenylether	6100U
118-74-1	Hexachlorobenzene	
87-86-5	Pentachlorophenol	55000
85-01-8	Phenanthrene	5500
120-12-7	Anthracene	6100U
84-74-2	Di-n-Butylphthalate	
206-44-0	Fluoranthene	
129-00-0	Pyrene	
85-68-7	Butylbenzylphthalate	
91-94-1	3 3-Dichlorobenzidine	12,000U
56-55-3	Benzo(a)Anthracene	6100
117-81-7	bis(2-Ethylhexyl)Phthalate	100,000
218-01-9	Chrysene	6100U
117-84-0	Di-n-Octyl Phthalate	
205-99-2	Benzo(b)Fluoranthene	
207-08-9	Benzo(k)Fluoranthene	
50-32-8	Benzo(a)Pyrene	
193-39-5	Indeno(1. 2. 3-cd)Pyrene	
53-70-3	Dibenz(a h)Anthracene	
191-24-2	Benzo(g h i)Perylene	

(1)-Cannot be separated from diphenylamine

Laboratory Name ATi

Case No 6855 / SAS 2726 E

Sample Number 1:10 EJ105

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 19 FEB 87

Date Analyzed: 5 MARCH 87

Conc/Dil Factor: 0.1

Percent Moisture (decanted) 43.8

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	140u
319-85-7	Beta-BHC	
319-86-8	Delta-BHC	
58-89-9	Gamma-BHC (Lindane)	
76-44-8	Heptachlor	
309-00-2	Aldrin	
1024-57-3	Heptachlor Epoxide	
959-98-8	Endosulfan I	
60-57-1	Dieldrin	280u
72-55-9	4, 4'-DDE	
72-20-8	Endrin	
33213-65-9	Endosulfan II	
72-54-8	4, 4'-DDD	
1031-07-8	Endosulfan Sulfate	
50-29-3	4, 4'-DDT	
72-43-5	Methoxychlor	1400u
53494-70-5	Endrin Ketone	280u
57-74-9	Chlordane	1400u
8001-35-2	Toxaphene	2800u
12674-11-2	Aroclor-1016	1400u
11104-28-2	Aroclor-1221	
11141-16-5	Aroclor-1232	
53469-21-9	Aroclor-1242	
12672-29-6	Aroclor-1248	
11097-69-1	Aroclor-1254	2800u
11096-82-5	Aroclor-1260	

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 30.5 V_t 20000 V_i 2

X

Laboratory Name: ATI

Case No 6855/SAS 2726E

Sample Number
EJ-105

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. 75-28-5	2-Methyl propane	VOA	216	88,000 J
2. —	an Acid	↓	613	4,400 J
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Laboratory Name: ATI

Case No 6855/SAS 2726E

Sample Number: EJ105

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. —	unknown ≥ C12 hydrocarbon	BNA	1108	60,000 J
2. —	unk. branched hyd. ≥ C10		1207	78,000 J
3. —	unk. branched phenol		1313	340,000 J
4. —	unk. branched hyd. ≥ C13		1345	92,000 J
5. —	unk. branched hyd ≥ C17		1392	320,000 J
6. —	unk. branched phenol		1403	180,000 J
7. —	unk. branched phenol		1411	240,000 J
8. —	unknown		1416	200,000 J
9. —	unk. branched phenol		1442	130,000 J
10. —	unk. phthalate		1449	100,000 J
11. —	unknown		1532	200,000 J
12. —	unknown		1604	280,000 J
13. —	unknown		1614	360,000 J
14. —	unknown		1621	540,000 J
15. —	unk. branched alcohol		1629	220,000 J
16. —	unk. organic acid		1639	440,000 J
17. —	unknown		1653	480,000 J
18. —	unknown		1660	140,000 J
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87FP01561X

Sample Number
EJ-106

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ATI
Case No: 6855/SAS 2726E
Lab Sample ID No: EJ-106
QC Report No: —
Sample Matrix: SOIL
Contract No: 6801-7014
Data Release Authorized By: C. Sites
Date Sample Received: 2/19/87

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 2-24-87
Date Analyzed: 2-24-87
Conc/Dil Factor: 5ml/5g (.86) = 1.0 pH 7.71
Percent Moisture: (Not Decanted) 4.4

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10U
74-83-9	Bromomethane	
75-01-4	Vinyl Chloride	
75-00-3	Chloroethane	
75-09-2	Methylene Chloride	7 B
67-64-1	Acetone	11 B
75-15-0	Carbon Disulfide	5U
75-35-4	1, 1-Dichloroethene	
75-34-3	1, 1-Dichloroethane	
156-60-5	Trans-1, 2-Dichloroethene	
67-66-3	Chloroform	
107-06-2	1, 2-Dichloroethane	
78-93-3	2-Butanone	10U
71-55-6	1, 1, 1-Trichloroethane	1 J
56-23-5	Carbon Tetrachloride	5U
108-05-4	Vinyl Acetate	10U
75-27-4	Bromodichloromethane	5U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5U
10061-02-6	Trans-1, 3-Dichloropropene	
79-01-6	Trichloroethene	
124-48-1	Dibromochloromethane	
79-00-5	1, 1, 2-Trichloroethane	
71-43-2	Benzene	3 J
10061-01-5	cis-1, 3-Dichloropropene	5U
110-75-8	2-Chloroethylvinylether	10U
75-25-2	Bromoform	3 JB
108-10-1	4-Methyl-2-Pentanone	10U
591-78-6	2-Hexanone	
127-18-4	Tetrachloroethene	5U
79-34-5	1, 1, 2, 2-Tetrachloroethane	
108-88-3	Toluene	4 JB
108-90-7	Chlorobenzene	5U
100-41-4	Ethylbenzene	3 JB
100-42-5	Styrene	5U
	Total Xylenes	12 B

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample

J Indicates an estimated value This flag is used either when estimating a concentration for tentatively identified compounds where a 1 1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e g., 10J) If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action

Other Other specific flags and footnotes may be required to properly define the results If used, they must be fully described and such description attached to the data summary report

Laboratory Name ATI

Case No 6855 / SAS 2726 E

Sample Number
EJ 106

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 2/19/87

Date Analyzed: 2/28/87

Conc./Dil Factor: $\frac{1mL}{50.1g(.956)} \times 10^3 \times 4 = \times 140$

Percent Moisture (Decanted) —

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	1400 U
111-44-4	bis(2-Chloroethyl)Ether	
95-57-8	2-Chlorophenol	
541-73-1	1 3-Dichlorobenzene	
106-46-7	1 4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	
95-50-1	1 2-Dichlorobenzene	
95-48-7	2-Methylphenol	
39638-32-9	bis(2-chloroisopropyl)Ether	
106-44-5	4-Methylphenol	
621-64-7	N-Nitroso-Di-n-Propylamine	
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	
78-59-1	Isophorone	
88-75-5	2-Nitrophenol	
105-67-9	2 4-Dimethylphenol	1400U
65-85-0	Benzoic Acid	7000 U
111-91-1	bis(2-Chloroethoxy)Methane	1400U
120-83-2	2. 4-Dichlorophenol	
120-82-1	1. 2. 4-Trichlorobenzene	
91-20-3	Naphthalene	
106-47-8	4-Chloroaniline	
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	
91-57-6	2-Methylnaphthalene	
77-47-4	Hexachlorocyclopentadiene	
88-06-2	2. 4 6-Trichlorophenol	1400U
95-95-4	2 4 5-Trichlorophenol	7000U
91-58-7	2-Chloronaphthalene	1400U
88-74-4	2-Nitroaniline	7000U
131-11-3	Dimethyl Phthalate	1400U
208-96-8	Acenaphthylene	
99-09-2	3-Nitroaniline	7000U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	1400U
51-28-5	2. 4-Dinitrophenol	7000U
100-02-7	4-Nitrophenol	
132-64-9	Dibenzofuran	1400U
121-14-2	2 4-Dinitrotoluene	
606-20-2	2 6-Dinitrotoluene	
84-66-2	Diethylphthalate	
7005-72-3	4-Chlorophenyl-phenylether	
86-73-7	Fluorene	1400U
100-01-6	4-Nitroaniline	7000U
534-52-1	4. 6-Dinitro-2-Methylphenol	
86-30-6	N-Nitrosodiphenylamine (1)	1400U
101-55-3	4-Bromophenyl-phenylether	
118-74-1	Hexachlorobenzene	
87-86-5	Pentachlorophenol	7000U
85-01-8	Phenanthrene	1400U
120-12-7	Anthracene	
84-74-2	Di-n-Butylphthalate	1100 J
206-44-0	Fluoranthene	240 J
129-00-0	Pyrene	250 J
85-68-7	Butylbenzylphthalate	1400U
91-94-1	3 3'-Dichlorobenzidine	2800U
56-55-3	Benzo(a)Anthracene	1400U
117-81-7	bis(2-Ethylhexyl)Phthalate	14000
218-01-9	Chrysene	1400U
117-84-0	Di-n-Octyl Phthalate	
205-99-2	Benzo(b)Fluoranthene	
207-08-9	Benzo(k)Fluoranthene	
50-32-8	Benzo(a)Pyrene	
193-39-5	Indeno(1. 2. 3-cd)Pyrene	
53-70-3	Dibenz(a h)Anthracene	
191-24-2	Benzo(g h i)Perylene	

(1)-Cannot be separated from diphenylamine

Laboratory Name ATI

Case No 6855/SAS 2726E

Sample Number 7:5 EJ 106

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 19 FEB 87

Date Analyzed: 4 MARCH 87

Conc/Dil Factor: 0.2

Percent Moisture (decanted) 4.44

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	42u
319-85-7	Beta-BHC	
319-86-8	Delta-BHC	
58-89-9	Gamma-BHC (Lindane)	
76-44-8	Heptachlor	
309-00-2	Aldrin	
1024-57-3	Heptachlor Epoxide	
959-98-8	Endosulfan I	
60-57-1	Dieldrin	84u
72-55-9	4, 4'-DDE	
72-20-8	Endrin	
33213-65-9	Endosulfan II	
72-54-8	4, 4'-DDD	
1031-07-8	Endosulfan Sulfate	
50-29-3	4, 4'-DDT	
72-43-5	Methoxychlor	420u
53494-70-5	Endrin Ketone	84u
57-74-9	Chlordane	420u
8001-35-2	Toxaphene	840u
12674-11-2	Aroclor-1016	420u
11104-28-2	Aroclor-1221	
11141-16-5	Aroclor-1232	
53469-21-9	Aroclor-1242	
12672-29-6	Aroclor-1248	
11097-69-1	Aroclor-1254	840u
11096-82-5	Aroclor-1260	

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 30.1 V_t 20000 V_i 2

Laboratory Name: ATI

Case No 6855 / SAS 2726E

Sample Number
EJ-106

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. —	NONE FOUND	VOA	—	—
2.				
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Laboratory Name: ATI

Case No 6855 / SAS 2726 E

Sample Number
EJ 106

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. —	Unknown	BNA	623	1100 J
2.				
3.				
4.				
5.				
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Sample Number
EJ920

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ATI
Lab Sample ID No: EJ920
Sample Matrix: Soil
Data Release Authorized By: C. Sites

Case No: 6855/SAS 2726 E
QC Report No:
Contract No: 68017014
Date Sample Received: 2/19/87

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 2/24/87
Date Analyzed: 2/24/87
Conc/Dil Factor: ~~5g~~ 30g (.838) = 1.2 pH 7.02
Percent Moisture: (Not Decanted) 16.2

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	12U
74-83-9	Bromomethane	
75-01-4	Vinyl Chloride	
75-00-3	Chloroethane	
75-09-2	Methylene Chloride	10 B
67-64-1	Acetone	23 B
75-15-0	Carbon Disulfide	6U
75-35-4	1, 1-Dichloroethene	
75-34-3	1, 1-Dichloroethane	
156-60-5	Trans-1, 2-Dichloroethene	
67-66-3	Chloroform	
107-06-2	1, 2-Dichloroethane	
78-93-3	2-Butanone	12U
71-55-6	1, 1, 1-Trichloroethane	6U
56-23-5	Carbon Tetrachloride	
108-05-4	Vinyl Acetate	12U
75-27-4	Bromodichloromethane	6U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	6U
10061-02-6	Trans-1, 3-Dichloropropene	
79-01-6	Trichloroethene	
124-48-1	Dibromochloromethane	
79-00-5	1, 1, 2-Trichloroethane	
71-43-2	Benzene	4 J
10061-01-5	cis-1, 3-Dichloropropene	6U
110-75-8	2-Chloroethylvinylether	12U
75-25-2	Bromoform	6U
108-10-1	4-Methyl-2-Pentanone	12U
591-78-6	2-Hexanone	
127-18-4	Tetrachloroethene	6U
79-34-5	1, 1, 2, 2-Tetrachloroethane	
108-88-3	Toluene	5JB
108-90-7	Chlorobenzene	6U
100-41-4	Ethylbenzene	3JB
100-42-5	Styrene	6U
	Total Xylenes	1B

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample

J Indicates an estimated value This flag is used either when estimating a concentration for tentatively identified compounds where a 1 1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e g., 10J) If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action

Other Other specific flags and footnotes may be required to properly define the results If used, they must be fully described and such description attached to the data summary report

Laboratory Name ATI

Case No: 6855/SAS 2726 E

Sample Number EJ920

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 2/19/87

Date Analyzed: 2/23/87

Conc./Dil Factor: $\frac{5.26ml}{30.6g(.838)} \times 10^3 = \times 200$

Percent Moisture (Decanted) —

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	2000U
111-44-4	bis(-2-Chloroethyl)Ether	
95-57-8	2-Chlorophenol	
541-73-1	1 3-Dichlorobenzene	
106-46-7	1 4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	
95-50-1	1 2-Dichlorobenzene	
95-48-7	2-Methylphenol	
39638-32-9	bis(2-chloroisopropyl)Ether	
106-44-5	4-Methylphenol	
621-64-7	N-Nitroso-Di-n-Propylamine	
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	
78-59-1	Isophorone	830J
88-75-5	2-Nitrophenol	2000U
105-67-9	2 4-Dimethylphenol	
65-85-0	Benzoic Acid	10,000U
111-91-1	bis(-2-Chloroethoxy)Methane	2,000U
120-83-2	2 4-Dichlorophenol	
120-82-1	1 2 4-Trichlorobenzene	
91-20-3	Naphthalene	
106-47-8	4-Chloroaniline	
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	
91-57-6	2-Methylnaphthalene	
77-47-4	Hexachlorocyclopentadiene	
88-06-2	2 4 6-Trichlorophenol	
95-95-4	2 4 5-Trichlorophenol	10,000U
91-58-7	2-Chloronaphthalene	2,000U
88-74-4	2-Nitroaniline	10,000U
131-11-3	Dimethyl Phthalate	2,000U
208-96-8	Acenaphthylene	
99-09-2	3-Nitroaniline	10,000U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	2000U
51-28-5	2 4-Dinitrophenol	10,000U
100-02-7	4-Nitrophenol	
132-64-9	Dibenzofuran	2,000U
121-14-2	2 4-Dinitrotoluene	
606-20-2	2 6-Dinitrotoluene	
84-66-2	Diethylphthalate	
7005-72-3	4-Chlorophenyl-phenylether	
86-73-7	Fluorene	
100-01-6	4-Nitroaniline	10,000U
534-52-1	4 6-Dinitro-2-Methylphenol	
86-30-6	N-Nitrosodiphenylamine (1)	2,000U
101-55-3	4-Bromophenyl-phenylether	
118-74-1	Hexachlorobenzene	
87-86-5	Pentachlorophenol	10,000U
85-01-8	Phenanthrene	800J
120-12-7	Anthracene	2000U
84-74-2	Di-n-Butylphthalate	1300
206-44-0	Fluoranthene	770J
129-00-0	Pyrene	540J
85-68-7	Butylbenzylphthalate	2000U
91-94-1	3 3-Dichlorobenzidine	4000U
56-55-3	Benzo(a)Anthracene	450J
117-81-7	bis(2-Ethylhexyl)Phthalate	2200
218-01-9	Chrysene	540J
117-84-0	Di-n-Octyl Phthalate	2000U
205-99-2	Benzo(b)Fluoranthene	550J
207-08-9	Benzo(k)Fluoranthene	2000U
50-32-8	Benzo(a)Pyrene	560J
193-39-5	Indeno(1 2 3-cd)Pyrene	2000U
53-70-3	Dibenz(a h)Anthracene	
191-24-2	Benzo(g h i)Perylene	

(1)-Cannot be separated from diphenylamine

Laboratory Name ATI

Case No 6855 / SAS 2726E

Sample Number 1:10 EJ 920

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 19 FEB 87

Date Analyzed: 4 MARCH 87

Conc/Dil Factor: 0.1

Percent Moisture (decanted) 16.2

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	94u
319-85-7	Beta-BHC	↓
319-86-8	Delta-BHC	↓
58-89-9	Gamma-BHC (Lindane)	↓
76-44-8	Heptachlor	↓
309-00-2	Aldrin	↓
1024-57-3	Heptachlor Epoxide	↓
959-98-8	Endosulfan I	↓
60-57-1	Dieldrin	190u
72-55-9	4, 4'-DDE	↓
72-20-8	Endrin	↓
33213-65-9	Endosulfan II	↓
72-54-8	4, 4'-DDD	↓
1031-07-8	Endosulfan Sulfate	↓
50-29-3	4, 4'-DDT	↓
72-43-5	Methoxychlor	940u
53494-70-5	Endrin Ketone	190u
57-74-9	Chlordane	940u
8001-35-2	Toxaphene	1900u
12674-11-2	Aroclor-1016	940u
11104-28-2	Aroclor-1221	↓
11141-16-5	Aroclor-1232	↓
53469-21-9	Aroclor-1242	↓
12672-29-6	Aroclor-1248	↓
11097-69-1	Aroclor-1254	1900u
11096-82-5	Aroclor-1260	↓

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 30.6 V_t 20000 V_i 2

Laboratory Name: ATI

Case No 6855 / SAS 2726 E

Sample Number
EJ-920

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. —	NONE FOUND	VOA	—	—
2.				
3.				
4.				
5.				
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Laboratory Name: ATI

Case No 6855/SAS 2726 E

Sample Number EJ920

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. —	Unknown Xylene	BNA	418	1000 J
2. —	Unknown Xylene	"	459	800 J
3. —	Unknown branched phenol		1233	1200 J
4. —	Unknown		1548	2600 J
5. —	Unknown		1660	1400 J
6. —	Unknown		1768	1300 J
7. —	Unknown		2026	400 J
8. —	Unknown		2199	3200 J
9. —	Unknown		2268	3000 J
10. —	Unknown		2387	2600 J
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87FP01559 K

Sample Number
EJ-104

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ATI
Case No: 6855 /SAS 2726E
Lab Sample ID No: EJ-104
QC Report No: —
Sample Matrix: SOIL
Contract No: 6801-7014
Data Release Authorized By: C. Sites
Date Sample Received: 2/19/87

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 2-24-87
Date Analyzed: 2-24-87
Conc/Dil Factor: ~~5g (.870) = 1.1~~ 5ml pH 7.45
Percent Moisture: (Not Decanted) 13.0

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	11U
74-83-9	Bromomethane	
75-01-4	Vinyl Chloride	
75-00-3	Chloroethane	
75-09-2	Methylene Chloride	9B
67-64-1	Acetone	17B
75-15-0	Carbon Disulfide	5U
75-35-4	1, 1-Dichloroethene	
75-34-3	1, 1-Dichloroethane	
156-60-5	Trans-1, 2-Dichloroethene	
67-66-3	Chloroform	
107-06-2	1, 2-Dichloroethane	
78-93-3	2-Butanone	11U
71-55-6	1, 1, 1-Trichloroethane	5U
56-23-5	Carbon Tetrachloride	
108-05-4	Vinyl Acetate	11U
75-27-4	Bromodichloromethane	5U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5U
10061-02-6	Trans-1, 3-Dichloropropene	
79-01-6	Trichloroethene	
124-48-1	Dibromochloromethane	
79-00-5	1, 1, 2-Trichloroethane	
71-43-2	Benzene	41 HH
10061-01-5	cis-1, 3-Dichloropropene	5U
110-75-8	2-Chloroethylvinylether	11U
75-25-2	Bromoform	5U
108-10-1	4-Methyl-2-Pentanone	11U
591-78-6	2-Hexanone	
127-18-4	Tetrachloroethene	5U
79-34-5	1, 1, 2, 2-Tetrachloroethane	
108-88-3	Toluene	16B
108-90-7	Chlorobenzene	5U
100-41-4	Ethylbenzene	8B
100-42-5	Styrene	5U
	Total Xylenes	23B

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report

Laboratory Name ATI

Case No 6855/SAS 2726 E

Sample Number
EJ104

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 2/19/87

Date Analyzed: 2/22/87

Conc./Dil Factor: 30.7g(.870) x10³ = x37

Percent Moisture (Decanted) ____

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	370U
111-44-4	bis(-2-Chloroethyl)Ether	
95-57-8	2-Chlorophenol	
541-73-1	1 3-Dichlorobenzene	
106-46-7	1 4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	
95-50-1	1 2-Dichlorobenzene	
95-48-7	2-Methylphenol	
39638-32-9	bis(2-chloroisopropyl)Ether	
106-44-5	4-Methylphenol	
621-64-7	N-Nitroso-Di-n-Propylamine	
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	
78-59-1	Isophorone	
88-75-5	2-Nitrophenol	
105-67-9	2, 4-Dimethylphenol	
65-85-0	Benzoic Acid	1800U
111-91-1	bis(-2-Chloroethoxy)Methane	370U
120-83-2	2 4-Dichlorophenol	
120-82-1	1 2, 4-Trichlorobenzene	
91-20-3	Naphthalene	
106-47-8	4-Chloroaniline	
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	
91-57-6	2-Methylnaphthalene	62J
77-47-4	Hexachlorocyclopentadiene	370U
88-06-2	2, 4 6-Trichlorophenol	
95-95-4	2 4 5-Trichlorophenol	1800U
91-58-7	2-Chloronaphthalene	370U
88-74-4	2-Nitroaniline	1800U
131-11-3	Dimethyl Phthalate	370U
208-96-8	Acenaphthylene	
99-09-2	3-Nitroaniline	1800U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	370U
51-28-5	2, 4-Dinitrophenol	1800U
100-02-7	4-Nitrophenol	72J
132-64-9	Dibenzofuran	370U
121-14-2	2 4-Dinitrotoluene	
606-20-2	2 6-Dinitrotoluene	
84-66-2	Diethylphthalate	
7005-72-3	4-Chlorophenyl-phenylether	
86-73-7	Fluorene	
100-01-6	4-Nitroaniline	1800U
534-52-1	4 6-Dinitro-2-Methylphenol	370U
86-30-6	N-Nitrosodiphenylamine (1)	140J
101-55-3	4-Bromophenyl-phenylether	370U
118-74-1	Hexachlorobenzene	
87-86-5	Pentachlorophenol	130J
85-01-8	Phenanthrene	180J
120-12-7	Anthracene	370U
84-74-2	Di-n-Butylphthalate	1300
206-44-0	Fluoranthene	140J
129-00-0	Pyrene	120J
85-68-7	Butylbenzylphthalate	370U
91-94-1	3 3-Dichlorobenzidine	740U
56-55-3	Benzo(a)Anthracene	110J
117-81-7	bis(2-Ethylhexyl)Phthalate	160J
218-01-9	Chrysene	120J
117-84-0	Di-n-Octyl Phthalate	370U
205-99-2	Benzo(b)Fluoranthene	170J
207-08-9	Benzo(k)Fluoranthene	370U
50-32-8	Benzo(a)Pyrene	100J
193-39-5	Indeno(1 2, 3-cd)Pyrene	370U
53-70-3	Dibenz(a h)Anthracene	
191-24-2	Benzo(g h i)Perylene	

(1)-Cannot be separated from diphenylamine

X

Laboratory Name ATi

Case No 6855/SAS 2726 E

Sample Number
1:5 DIL
EJ104

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 19 FEB 87

Date Analyzed: 5 MARCH 87

Conc/Dil Factor: 0.2

Percent Moisture (decanted) 13.0

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	45u
319-85-7	Beta-BHC	↓
319-86-8	Delta-BHC	↓
58-89-9	Gamma-BHC (Lindane)	↓
76-44-8	Heptachlor	↓
309-00-2	Aldrin	↓
1024-57-3	Heptachlor Epoxide	↓
959-98-8	Endosulfan I	↓
60-57-1	Dieldrin	90u
72-55-9	4, 4'-DDE	↓
72-20-8	Endrin	↓
33213-65-9	Endosulfan II	↓
72-54-8	4, 4'-DDD	↓
1031-07-8	Endosulfan Sulfate	↓
50-29-3	4, 4'-DDT	↓
72-43-5	Methoxychlor	450u
53494-70-5	Endrin Ketone	90u
57-74-9	Chlordane	450u
8001-35-2	Toxaphene	900u
12674-11-2	Aroclor-1016	450u
11104-28-2	Aroclor-1221	↓
11141-16-5	Aroclor-1232	↓
53469-21-9	Aroclor-1242	↓
12672-29-6	Aroclor-1248	↓
11097-69-1	Aroclor-1254	900u
11096-82-5	Aroclor-1260	↓

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 30.7 V_t 20000 V_i 2

Laboratory Name: ATI

Case No 6855/SAS 2726E

Sample Number
EJ-104

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. —	NONE FOUND	VOA	—	—
2.				
3.				
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Laboratory Name: ATT

Case No 6855/SAS 2726E

Sample Number EJ104

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ~~ug/kg~~)
1. —	unknown chlorinated hydrocarbon	BNA	516	520 J
2. —	unknown aldehyde		587	330 J
3. —	unknown		835	780 J
4. —	unknown phthalate ester		953	480 J
5. —	unknown hydrocarbon		960	560 J
6. —	unk. branched alend		1233	700 J
7. —	unk. branched hydrocarbon		1406	330 J
8. —	unk. branched hydrocarbon		1747	590 J
9. —	unk. branched alend		1914	810 J
10. —	unknown hydrocarbon		2050	370 J
11. —	unk. C ≥ 16 hydrocarbon		2113	2200 J
12. —	unk. hydrocarbon		2134	1300 J
13. —	unk. hydrocarbon		2173	1200 J
14. —	unk. hydrocarbon C ≥ 35		2242	13,000 J
15. —	unknown		2259	8100 J
16. —	unk. hydrocarbon		2334	1300 J
17. —	unknown		2350	1800 J
18. —	unknown		2419	5300 J
19. —	unknown		2503	3300 J
20. —	unknown		2547	2900 J
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INTRODUCTION TO DATA TABLES

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

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

II) DEFINITION OF FOOTNOTES TO ANALYTICAL DATA

A) ORGANICS

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

B) METALS

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

CASE: 6855
SAS 2726F

VOA

	1	2	3	4	5	6	7	8	9	10
ITC	EJ	EJ	EJ	EJ						
DTC	104	105	106	920						
SAMPLE										
COMPOUND										
chloromethane										
bromomethane										
vinyl chloride										
chloroethane										
methylene chloride	9 B	13,000 B	7 B	10 B						
acetone	77 B	5600 J B	11 B	23 B						
carbon disulfide										
1,1-dichloroethene		4100 J								
1,1-dichloroethane		8800 J								
trans-1,2,-dichloroethene		3000 J								
chloroform										
1,2-dichloroethane										
2-butanone		5100 BJ								
1,1,1-trichloroethane			1 J							
carbon tetrachloride										
vinyl acetate										
bromodichloromethane										
1,1,2,2-tetrachloroethane										
1,2-dichloropropane										
trans-1,3-dichloropropene										
trichloroethene		5900 J								
dibromochloromethane										
1,1,2-trichloroethane										
benzene	41	7200 J	3 J	4 J						
cis-1,3-dichloropropene										
2-chloroethylvinylether										
bromoform			3 J B							
2-hexanone										
4-methyl-2-pentanone										
tetrachloroethene		4600 J								
toluene	16 B	15000 B	4 J B	5 J B						
chlorobenzene										
ethylbenzene	8 B	33000 B	3 J B	3 J B						
styrene										
total xylenes	23 B	160000 B	12 B	11 B						
N-nitrosodimethylamine										
phenol										
aniline										
bis(2-chloroethyl)ether										
2-chlorophenol										
1,3-dichlorobenzene										
1,4-dichlorobenzene										
benzyl alcohol										
1,2-dichlorobenzene		11000								
2-methylphenol										
bis(2-chloroisopropyl)ether										
4-methylphenol										
N-nitroso-di-n-propylamine										
hexachloroethane										
nitrobenzene										
isophrone				830 J						
2-nitrophenol										
2,4-dimethylphenol										
benzoic acid										
bis(2-chloroethoxy)methane										
2,4-dichlorophenol										
1,2,4-trichlorobenzene										
naphthalene		20000								
4-chloroaniline										
hexachlorobutadiene										
4-chloro-3-methylphenol										
2-methylnaphthalene	62 J	10000								
hexachlorocyclopentadiene										
2,4,6-trichlorophenol										
2,4,5-trichlorophenol										
2-chloronaphthalene										
2-nitroaniline										
dimethyl phthalate										
acenapthylene										
3-nitroaniline		30000								
acenaphthene										
2,4-dinitrophenol										
4-nitrophenol	R 92 J									
dibenzofuran										
2,4-dinitrotoluene										
2,6-dinitrotoluene										
diethylphthalate										
4-chlorophenyl-phenylether										
flourene										
4-nitroaniline										
4,6-dinitro-2-methylphenol										
N-nitrosodiphenylamine	140 J	20000								
4-bromophenyl-phenylether										
hexachlorobenzene										

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= Use for HRS
= Semi quantitative
= unmarked means an artifact
TC

SVA

B = found in blank
J = estimate

R = do not use calibration problem

STATE _____ SITE _____ TDD _____ PAGE 1 OF 2, SET # ____

CASE: 6865
SAS 7716E

COMPOUND	1	2	3	4	5	6	7	8	9	10
TIC	EJ	EJ	EJ	EJ						
DIC	104	105	106	920						
SAMPLE										
pentachlorophenol	130J	55000								
phenanthrene	180J	1500J		800J						
anthracene										
di-n-butylphthalate	1300		1100J							
fluoranthene	140J		240J	970J						
benzidine				540J						
pyrene	120J		250J							
butylbenzylphthalate										
3,3'-dichlorobenzidine										
benzo(a)anthracene	110J			450J						
bis(2-ethylhexyl)phthlate		100,000	14000							
chrysene	120J			540J						
di-n-octyl phthlate										
benzo(b&k)fluoranthene	170J			550J						
benzo(a)pyrene	100J			560J						
indeno(1,2,3-cd)pyrene										
dibenzo(a,h)anthracene										
benzo(g,h,i)perylene										
alpha-BHC										
beta-BHC										
delta-BHC										
gamma-BHC(lindane)										
heptachlor			BDL							
aldrin										
heptachlor epoxide										
endosulfan I										
dieldrin										
4,4'-DDE										
endrin										
endosulfan II										
4,4'-DDD										
endrin aldehyde										
endosulfan sulfate										
4,4'-DDT										
methoxychlor										
endrin ketone										
chlordane										
toxaphene										
Aroclor-1016										
Aroclor-1221										
Aroclor-1232										
Aroclor-1242										
Aroclor-1248										
Aroclor-1254										
Aroclor-1260										
ELEMENT										
aluminum										
antimony										
arsenic										
barium										
beryllium										
cadmium										
calcium										
chromium										
cobalt										
copper										
iron										
lead										
magnesium										
manganese										
mercury										
nickel										
potassium										
selenium										
silver										
sodium										
thallium										
tin										
vanadium										
zinc										
cyanide CHECK IF ANALYZED ( )										
TENTATIVELY IDENTIFIED ORGANICS										

Bat/PCB

BDL Below detection Limit

○ = use for HRS

□ = semi quantative

= unmarked means an artifact TC

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STATE _____ SITE _____ TDD _____ PAGE 2 OF 2, SET # ____

5F3778

AnalyticalTechnologies, Inc. Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

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Analytical Technologies, Inc.
5550 Morehouse Drive
San Diego, CA 92121

March 5, 1987

Case Narrative for EPA Case ~~8655~~ 6855/SAS 2726E
Contract No: 6801-7014

Soil Samples: EJ-104, EJ-105, EJ-106, EJ-920

This case was received at Analytical Technologies, Inc. on 2/19/87. Comments regarding the analytical fractions are contained in the following attachments.

Sincerely,

Robert V. Woods

Robert V. Woods

RVW/sm
Attachments

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MAR 6 1987
U.S. EPA, CENTRAL REGIONAL LAB.
536 S. CLARK STREET
CHICAGO, ILLINOIS 60605

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Attachment 1

General Notes

1. GC/MS files that have a M1 in the name denote analyses were done using GC/MS system #1. 'M2' and 'M3' are used to identify files acquired using GC/MS systems #2 and #3 respectively.

2. The GC/MS dual display of the HSL 'hit' and the library standard spectra with the difference between the two is not a comparison with the NBS Library but rather a library created using spectra obtained on the specific GC/MS instrument.

3. GC/MS 'TIC' compounds are calculated using the appropriate internal standard's peak height (measured by caliper and converted to RIC units). The 'TIC' compound's peak height used in calculations is the RIC enhanced value displayed on the forward library search printout. The calculations written on the p/o's are for ng/ul of the TIC compound in the extract. The formula written is typically as follows:

$$\frac{\text{(RIC height of TIC)*(ISTD amount)}}{\text{(RIC peak height Istd)*(response factor=1)}} = \text{ng/ul TIC}$$

4. On the primary GC column, 'NC' refers to a compound not confirmed on the confirmation column.

5. For the the confirmation column, 'NPR' refers to a compound not found during the primary run.

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CASE 6855/SAS 2726E
COMMENTS ON VOA ANALYSES

1) Soil sample EJ-105 was analyzed as a medium level soil in accordance with CLP medium level soil extraction.

   a. 10 uL of the extract was purged with 5 mL water.
   b. Surrogate values listed on the quantitation report must be multiplied by a factor of 10. All surrogate recoveries met QA/QC limits.
   c. Spike values listed on the quantitation report also must be multiplied by a factor of 10. All spike recoveries were low. Benzene recoveries did not meet QA/QC criteria for both MS and MSD. Recoveries for trichloroethene and toluene were low in the MS sample. The low recoveries may be due to the required sample dilution, which lowered the spike concentration levels close to the instrument detection limits. For some of the compounds, the amount spiked was much lower than the sample concentrations which may have contributed to the low recoveries.
   d. The medium level methanol blank contained chloroform, ethyl benzene and xylene at or above the CRDL. The methanol used for the sample extractions was the least contaminated available to us at that time. We have notified the manufacturer and they are aware of the problem. They are sending us a new lot of methanol which is supposed to be less contaminated, but it was not possible to wait for that methanol without exceeding the VOA holding time.

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COMMENTS ON BNA ANALYSES

1) One of the BNA 5-point calibration curves included standards analyzed on two different days. There were four (4) standards analyzed on February 20, 1987, and 50 Ng Standard was analyzed on February 21, 1987. This 5-point curve is referenced as February 21, 1987.

2) The continuing calibration standards analyzed on February 23, 1987, and February 28, 1987, exceeded R.f. criteria for a C.C.C. Compound, N-Nitrosodiphenylamine. We attempted to fix the problem by remaking the standard, changing the injection port liner, and removing the front section of the column. However, this was not successful. This problem affected two (2) samples: EJ106 and EJ920. N-Nitrosodiphenylamine was not found in either sample.

3) The Sample EJ920 extract could not be concentrated below 5 mls due to the high concentration of high molecular weight compounds. The BNA chromatograms shows a high concentration of hydrocarbons in the range of C_{18} to $\geq C_{28}$.

Comments on Pesticide Analysis:

On 3/3/87 most components in IND Mix B CONT 1 (2054) exceeded calibration factor criteria because IND Mix B Initial was not allowed to reach room temperature before it was analyzed. There were not any samples ran after this standard, and the 12 hour sequence was restarted.

On 3/3/87 Endosulfan II in IND A Cont 1 (1711) exceeded calibration factor criteria due to a contaminant which coeluted with this compound. There were not any hits for this compound and no samples were affected.

On 3/3/87 Endosulfan Sulfate in IND B Cont 2 (0448) exceeded calibration factor criteria. However, there were not any samples ran after this sample.

On 3/2/87 the retention times of DDT and DBC in EVAL Mix A (2344) were not labeled by the integrator. Thus the retention time shift for Dibutyl Chlorendate is based upon EVAL Mix B (0038).

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21 DAY CLOCK

RECEIVED MAR 30 1987

CASE: 6855/SA S 2726 E

DATE OF START: 12 Mar 87

SITE:

ISSUED BY: C. Eddy

% OF SAMPLES: 4

ACCEPTED BY: [illegible]

STOP NOTICE

DATE OF STOP: 12 Mar 87

ISSUED BY:

REASON:

ACCEPTED BY:

(1) Friday required field training
(2) Restart review 16 Mar 87; Including training.
(3) Stoped on 16
(4) Restarted and completed on 24 Mar 87
(5) Stoped for typing.

Delays caused by mandatory training travel and sickness.
Reviewed time included data review training.
completed w/1 14 day
[illegible] 24 Mar 87

DATE OF RESTART

ISSUED BY

ACCEPTED BY

DATE OF COMPLETION

ACCEPTED BY

SOIL SURROGATE PERCENT RECOVERY SUMMARY

Case No. 6855/SAS 2726E Contract Laboratory ATI Contract No. 68017014

Low ✓ Medium _____

	VOLATILE			SEMI-VOLATILE								PESTICIDE
SMO TRAFFIC NO.	TOLUENE-D8 (81-117)	BFB (74-121)	1,2 DICHLORO-ETHANE-D4 (70-121)	NITRO-BENZENE-D5 (23-120)	2-FLUORO-BIPHENYL (30-115)	TERPHENYL-D14 (18-137)			PHENOL-D5 (24-113)	2-FLUORO-PHENOL (25-121)	2,4,6 TRIBROMO PHENOL (19-122)	DIBUTYL-CHLORENDATE ** (20-150)
EJ104	111	82	114	87	86	83			74	95	68	89
EJ105	N/A →			83	81	100			63	110	91	73
EJ106	100	99	105	39	48	88			*23	47	65	93
EJ920	107	91	111	85	98	93			40	80	121	109
EJ106MS	112	89	113	60	64	104			48	70	82	100
EJ106MSD	106	93	109	52	68	116			48	82	77	106
RB 2/19/87	N/A →			73	78	85			71	81	65	103
RB 2/24/87	101	104	103	N/A →								N/A

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* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

**ADVISORY LIMITS ONLY

Volatiles: Ø out of 18 ; outside of QC limits

Semi-Volatiles: 1 out of 42 ; outside of QC limits

Pesticides: 0 out of 7 ; outside of QC limits

7/85

Comments: N/A = Not Applicable

FORM II

SOIL SURROGATE PERCENT RECOVERY SUMMARY

Case No. 6855/SAS 2726E Contract Laboratory ATI Contract No. 6801-7014

Low _____ Medium X

SMO TRAFFIC NO.	VOLATILE: TOLUENE-D8 (81-117)	VOLATILE: BFB (74-121)	VOLATILE: 1,2 DICHLORO-ETHANE-D4 (70-121)	SEMI-VOLATILE: NITRO-BENZENE-D5 (23-120)	SEMI-VOLATILE: 2-FLUORO-BIPHENYL (30-115)	SEMI-VOLATILE: TERPHENYL-D14 (18-137)	SEMI-VOLATILE:	SEMI-VOLATILE:	SEMI-VOLATILE: PHENOL-D5 (24-113)	SEMI-VOLATILE: 2-FLUORO-PHENOL (25-121)	SEMI-VOLATILE: 2,4,6 TRIBROMO PHENOL (19-122)	PESTICIDE: ** DIBUTYL-CHLORENDATE (20-150)
RB; MeOH	99	107	101	N/A								N/A
EJ-105	89	107	94									
EJ-105MS	79 *	89	86									
EJ-105MSD	83	100	94									

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* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

**ADVISORY LIMITS ONLY

Volatiles: 1 out of 12 ; outside of QC limits

Semi-Volatiles: N/A out of N/A ; outside of QC limits

Pesticides: _____ out of _____ ; outside of QC limits

7/85

Comments: N/A = Not Applicable

FORM II

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. 6855/SAS 2726E **Contractor** ATI **Contract No.** 6801-7014

Low Level X **Medium Level** _____

FRACTION	COMPOUND	CONC. SPIKE ADDED (ug/Kg)	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS* RPD	QC LIMITS* RECOVERY
VOA SMO SAMPLE NO. EJ-106	1,1-Dicholorethene	50	BDL	50	100	48	96	4	22	59-172
	Trichloroethene			41	82	43	86	5	24	62-137
	Chlorobenzene			51	102	49	98	4	21	60-133
	Toluene		4	55	102	51	94	8	21	59-139
	Benzene		3	51	96	49	92	4	21	66-142
B/N SMO SAMPLE NO. EJ106	1,2,4-Trichlorobenzene	175	BDL	146	83	135	77	8	23	38-107
	Acenaphthene	100		78	78	89	89	13	19	31-137
	2,4 Dinitrotoluene			69	69	75	75	8	47	28-89
	Pyrene		2	118	116	131	129	11	36	35-142
	N-Nitrosodi-n-Propylamine		BDL	52	52	48	48	8	38	41-126
	1,4-Dichlorobenzene			77	77	76	76	1	27	28-104
ACID SMO SAMPLE NO. EJ106	Pentachlorophenol	200		99	50	87	44	13	47	17-109
	Phenol			55	28	63	32	13	35	26-90
	2-Chlorophenol			119	60	126	63	5	50	25-102
	4-Chloro-3-Methylphenol			120	60	128	64	6	33	26-103
	4-Nitrophenol			130	65	103	52	22	50	11-114
PEST SMO SAMPLE NO. EJ	Lindane	27.4		28.1	103	28.8	105	1.9	50	46-127
	Heptachlor	27.4		29.5	108	30.8	113	4.5	31	35-130
	Aldrin	27.4		34.9	128	48.2	*176	32	43	34-132
	Dieldrin	68.6		70.0	102	85.8	125	20	38	31-134
	Endrin	68.6		90.6	132	92.6	135	2.2	45	42-139
	4,4'-DDT	68.6		81.6	119	88.5	129	8.1	50	23-134

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

RPD: VOAs 0 out of 5 : outside QC limits
B/N 0 out of 6 : outside QC limits
ACID 0 out of 5 : outside QC limits
PEST 0 out of 6 : outside QC limits

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

Comments: BNA Matrix spike concentration determined by comparison with EPA traceable standard

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FORM III

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. 6855/SAS 2726E Contractor ATI Contract No. 68017014

Low Level _____ Medium Level X

FRACTION	COMPOUND	CONC. SPIKE ADDED (ug/Kg)	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS* RPD	QC LIMITS* RECOVERY
VOA SMO SAMPLE NO. EJ-105	1,1-Dichloroethene	50	19	54	70	58	78	11	22	59-172
	Trichloroethene		27	52	150*	58	62	21	24	62-137
	Chlorobenzene		BDL	32	64	37	74	14	21	60-133
	Toluene		67	88	42*	97	60	35*	21	59-139
	Benzene		33	31	18*	35	14*	2	21	66-142
B/N SMO SAMPLE NO. N/A	1,2,4-Trichlorobenzene	N/A							23	38-107
	Acenaphthene								19	31-137
	2,4 Dinitrotoluene								47	28-89
	Pyrene								36	35-142
	N-Nitrosodi-n-Propylamine								38	41-126
	1,4-Dichlorobenzene								27	28-104
ACID SMO SAMPLE NO. N/A	Pentachlorophenol								47	17-109
	Phenol								35	26-90
	2-Chlorophenol								50	25-102
	4-Chloro-3-Methylphenol								33	26-103
	4-Nitrophenol								50	11-114
PEST SMO SAMPLE NO. N/A	Lindane								50	46-127
	Heptachlor								31	35-130
	Aldrin								43	34-132
	Dieldrin								38	31-134
	Endrin								45	42-139
	4,4'-DDT								50	23-134

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

RPD: VOAs 1 out of 5 : outside QC limits
B/N N/A out of N/A : outside QC limits
ACID ↓ out of ↓ : outside QC limits
PEST ↓ out of ↓ : outside QC limits

RECOVERY: VOAs 4 out of 10 : outside QC limits
B/N N/A out of N/A : outside QC limits
ACID ↓ out of ↓ : outside QC limits
PEST ↓ out of ↓ : outside QC limits

Comments: N/A = Not Applicable

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FORM III

METHOD BLANK SUMMARY

Case 6855
Case No. SAS 2716E Region 5 Contractor ATI Contract No. 68017014

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	CONC. LEVEL	INST. ID	CAS NUMBER	COMPOUND (HSL, TIC OR UNKNOWN)	CONC.	UNITS	CRDL
RB 2/19/87	3 MARCH 87	PEST	SOIL	L	HP5890A	—	NONE	—	—	—
RB 2/19/87	2/22/87	BNA	Soil	L	M3	84-74-2	Di-n-Butylphthalate	780	ug/kg	330U
						—	unknown Dioxolane	200J		—
						—	unknown silane	230J		—
						—	unknown silane	230J		—
						—	unknown branched glycol	430J		—
						—	unknown phthalate	130J		—
RB2 2/24/87	2/24/87	VOA	H_2O	L	M1	75-09-2	Methylene Chloride	6.	ug/l	5U
						67-64-1	Acetone	3J		10U
						75-25-2	Bromoform	3J		5U
						108-88-3	Toluene	3J		5U
						100-41-4	Ethylbenzene	2J		5U
						—	Total Xylenes	8		5U
RB2 MeOH	2/25/87	VOA	H_2O	M	M1	75-09-2	Methylene Chloride	1000		250U
						67-64-1	Acetone	150J		500U
						67-66-3	Chloroform	250		250U
						78-93-3	2-Butanone	210J		500U
						108-88-3	Toluene	160J		250U
						100-41-4	Ethylbenzene	300		250U
						—	Total Xylenes	300		250U

Comments:

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FORM IV 7/85

87FP01559

Sample Number
EJ-104

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Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ATI
Lab Sample ID No: EJ-104
Sample Matrix: SOIL
Data Release Authorized By: C. Sites

Case No: 6855 / SAS 2726E
QC Report No: —
Contract No: 6801-7014
Date Sample Received: 2/19/87

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 2-24-87
Date Analyzed: 2-24-87
Conc/Dil Factor: ~~5g (.870)~~ 5ml : 1.1 pH 7.45 1.15
Percent Moisture: (Not Decanted) 13.0

$\frac{100-13}{100} = 87$

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	11U
74-83-9	Bromomethane	↓
75-01-4	Vinyl Chloride	↓
75-00-3	Chloroethane	↓
75-09-2	Methylene Chloride	9B
67-64-1	Acetone	17B
75-15-0	Carbon Disulfide	5U
75-35-4	1, 1-Dichloroethene	↓
75-34-3	1, 1-Dichloroethane	↓
156-60-5	Trans-1, 2-Dichloroethene	↓
67-66-3	Chloroform	↓
107-06-2	1, 2-Dichloroethane	↓
78-93-3	2-Butanone	11U RBK
71-55-6	1, 1, 1-Trichloroethane	5U
56-23-5	Carbon Tetrachloride	↓
108-05-4	Vinyl Acetate	11U
75-27-4	Bromodichloromethane	5U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5U
10061-02-6	Trans-1, 3-Dichloropropene	↓
79-01-6	Trichloroethene	↓
124-48-1	Dibromochloromethane	↓
79-00-5	1, 1, 2-Trichloroethane	↓
71-43-2	Benzene	141 / 111
10061-01-5	cis-1, 3-Dichloropropene	5U
110-75-8	2-Chloroethylvinylether	11U RBK
75-25-2	Bromoform	5U
108-10-1	4-Methyl-2-Pentanone	11U
591-78-6	2-Hexanone	↓ 11U RBK
127-18-4	Tetrachloroethene	5U
79-34-5	1, 1, 2, 2-Tetrachloroethane	↓
108-88-3	Toluene	116B
108-90-7	Chlorobenzene	5U
100-41-4	Ethylbenzene	18B
100-42-5	Styrene	5U
	Total Xylenes	123B

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report

Laboratory Name ATI

Case No 6855/SAS 2726 E

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Sample Number EJ104

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 2/19/87

Date Analyzed: 2/22/87

Conc./Dil Factor: 30.7g(.870) x10³ = x37

Percent Moisture (Decanted) ____

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	370U
111-44-4	bis(-2-Chloroethyl)Ether	
95-57-8	2-Chlorophenol	
541-73-1	1 3-Dichlorobenzene	
106-46-7	1 4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	
95-50-1	1 2-Dichlorobenzene	
95-48-7	2-Methylphenol	
39638-32-9	bis(2-chloroisopropyl)Ether	
106-44-5	4-Methylphenol	
621-64-7	N-Nitroso-Di-n-Propylamine	
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	
78-59-1	Isophorone	
88-75-5	2-Nitrophenol	
105-67-9	2. 4-Dimethylphenol	
65-85-0	Benzoic Acid	1800U
111-91-1	bis(-2-Chloroethoxy)Methane	370U
120-83-2	2 4-Dichlorophenol	
120-82-1	1 2. 4-Trichlorobenzene	
91-20-3	Naphthalene	
106-47-8	4-Chloroaniline	
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	
91-57-6	2-Methylnaphthalene	62J
77-47-4	Hexachlorocyclopentadiene	370U
88-06-2	2. 4 6-Trichlorophenol	
95-95-4	2 4 5-Trichlorophenol	1800U
91-58-7	2-Chloronaphthalene	370U
88-74-4	2-Nitroaniline	1800U
131-11-3	Dimethyl Phthalate	370U
208-96-8	Acenaphthylene	
99-09-2	3-Nitroaniline	1800U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	370U
51-28-5	2. 4-Dinitrophenol	1800U
100-02-7	4-Nitrophenol	72J
132-64-9	Dibenzofuran	370U
121-14-2	2 4-Dinitrotoluene	
606-20-2	2 6-Dinitrotoluene	
84-66-2	Diethylphthalate	
7005-72-3	4-Chlorophenyl-phenylether	
86-73-7	Fluorene	
100-01-6	4-Nitroaniline	1800U
534-52-1	4 6-Dinitro-2-Methylphenol	370U
86-30-6	N-Nitrosodiphenylamine (1)	140J
101-55-3	4-Bromophenyl-phenylether	370U
118-74-1	Hexachlorobenzene	
87-86-5	Pentachlorophenol	130J
85-01-8	Phenanthrene	180J
120-12-7	Anthracene	370U
84-74-2	Di-n-Butylphthalate	1300
206-44-0	Fluoranthene	740J
129-00-0	Pyrene	120J
85-68-7	Butylbenzylphthalate	370U
91-94-1	3 3-Dichlorobenzidine	740U
56-55-3	Benzo(a)Anthracene	110J
117-81-7	bis(2-Ethylhexyl)Phthalate	160J
218-01-9	Chrysene	120J
117-84-0	Di-n-Octyl Phthalate	370U
205-99-2	Benzo(b)Fluoranthene	170J
207-08-9	Benzo(k)Fluoranthene	370U
50-32-8	Benzo(a)Pyrene	100J
193-39-5	Indeno(1 2. 3-cd)Pyrene	370U
53-70-3	Dibenz(a h)Anthracene	
191-24-2	Benzo(g h i)Perylene	

(1)-Cannot be separated from diphenylamine

Laboratory Name ATi RECEIVED MAR 30 1987

Case No 6855/SAS 2726 E

Sample Number
1:5 DIL
EJ 104

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 19 FEB 87

Date Analyzed: 5 MARCH 87

Conc/Dil Factor: 0.2

Percent Moisture (decanted) 13.0

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	45u
319-85-7	Beta-BHC	↓
319-86-8	Delta-BHC	↓
58-89-9	Gamma-BHC (Lindane)	↓
76-44-8	Heptachlor	↓
309-00-2	Aldrin	↓
1024-57-3	Heptachlor Epoxide	↓
959-98-8	Endosulfan I	↓
60-57-1	Dieldrin	90u
72-55-9	4, 4'-DDE	↓
72-20-8	Endrin	↓
33213-65-9	Endosulfan II	↓
72-54-8	4, 4'-DDD	↓
1031-07-8	Endosulfan Sulfate	↓
50-29-3	4, 4'-DDT	↓
72-43-5	Methoxychlor	450u
53494-70-5	Endrin Ketone	90u
57-74-9	Chlordane	450u
8001-35-2	Toxaphene	900u
12674-11-2	Aroclor-1016	450u
11104-28-2	Aroclor-1221	↓
11141-16-5	Aroclor-1232	↓
53469-21-9	Aroclor-1242	↓
12672-29-6	Aroclor-1248	↓
11097-69-1	Aroclor-1254	900u
11096-82-5	Aroclor-1260	↓

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 30.7 V_t 20000 V_i 2

RECEIVED MAR 3 0 1987

Laboratory Name: ATI

Case No 6855/SAS 2726E

Sample Number
EJ-104

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. —	NONE FOUND	VOA	—	—
2.				
3.				
4.				
5.				
6.				
7.				
8.				
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Laboratory Name: ATT

Case No 6855/SAS 2726E

RECEIVED MAR 3 0 1987

Sample Number EJ104

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ~~ug/kg~~)
1. —	unknown chlorinated hydrocarbon	BNA	516	520 J
2. —	unknown aldehyde		587	330 J
3. —	unknown		835	780 J
4. —	unknown phthalate ester		953	480 J
5. —	unknown hydrocarbon		960	560 J
6. —	unk. branched alend		1233	700 J
7. —	unk. branched hydrocarbon		1406	330 J
8. —	unk. branched hydrocarbon		1747	590 J
9. —	unk. branched alend		1914	810 J
10. —	unknown hydrocarbon		2050	370 J
11. —	unk. C ≥ 16 hydrocarbon		2113	2200 J
12. —	unk. hydrocarbon		2134	1300 J
13. —	unk. hydrocarbon		2173	1200 J
14. —	unk. hydrocarbon C ≥ 35		2242	13,000 J
15. —	unknown		2259	8100 J
16. —	unk. hydrocarbon		2334	1300 J
17. —	unknown		2350	1800 J
18. —	unknown		2419	5500 J
19. —	unknown		2503	3300 J
20. —	unknown		2547	2900 J
21.				
22.				
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87FP01560

Sample Number
EJ-105

Organics Analysis Data Sheet
(Page 1)

RECEIVED MAR 30 1987

Laboratory Name: ATI

Lab Sample ID No: EJ-105

Sample Matrix: SOIL

Data Release Authorized By: C Sites

Case No: 6855/SAS 2726E

QC Report No: —

Contract No: 6801-7014

Date Sample Received: 2-19-87

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 2-25-87

Date Analyzed: 2-25-87

Conc/Dil Factor: $\left(\frac{10mL}{4.0g}\right)\left(\frac{5mL}{.01mL}\right)\left(\frac{1}{.562}\right) = 2200$ pH 8.82

Percent Moisture: (Not Decanted) 43.8

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	22,000U
74-83-9	Bromomethane	↓
75-01-4	Vinyl Chloride	↓
75-00-3	Chloroethane	↓
75-09-2	Methylene Chloride	13,000B
67-64-1	Acetone	5,600JB
75-15-0	Carbon Disulfide	11,000U
75-35-4	1, 1-Dichloroethene	4,100J
75-34-3	1, 1-Dichloroethane	8,800J
156-60-5	Trans-1, 2-Dichloroethene	3,000J
67-66-3	Chloroform	11,000U
107-06-2	1, 2-Dichloroethane	↓
78-93-3	2-Butanone	5,100JB ZLK KJ
71-55-6	1, 1, 1-Trichloroethane	200,000
56-23-5	Carbon Tetrachloride	11,000U
108-05-4	Vinyl Acetate	22,000U
75-27-4	Bromodichloromethane	11,000U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	11,000U
10061-02-6	Trans-1, 3-Dichloropropene	↓
79-01-6	Trichloroethene	5,900J
124-48-1	Dibromochloromethane	11,000U
79-00-5	1, 1, 2-Trichloroethane	↓
71-43-2	Benzene	7,200J
10061-01-5	cis-1, 3-Dichloropropene	11,000U
110-75-8	2-Chloroethylvinylether	22,000U K
75-25-2	Bromoform	11,000U
108-10-1	4-Methyl-2-Pentanone	22,000U
591-78-6	2-Hexanone	↓ J
127-18-4	Tetrachloroethene	4,600J
79-34-5	1, 1, 2, 2-Tetrachloroethane	11,000U
108-88-3	Toluene	15,000B
108-90-7	Chlorobenzene	11,000U
100-41-4	Ethylbenzene	33,000B
100-42-5	Styrene	11,000U
	Total Xylenes	160,000B

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. (e.g., 10J) If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report

Laboratory Name ATI

Case No 6855/SAS 2726 E

Sample Number EJ105

Organics Analysis Data Sheet
(Page 2)

RECEIVED MAR 30 1987

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared 2/19/87

Date Analyzed: 3/3/87

Conc./Dil Factor: 5.20 g / 5.0 g (.522) x10³ = x610

Percent Moisture (Decanted) —

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)	
108-95-2	Phenol	6100U	
111-44-4	bis(2-Chloroethyl)Ether		J 36K
95-57-8	2-Chlorophenol		
541-73-1	1,3-Dichlorobenzene		
106-46-7	1,4-Dichlorobenzene		
100-51-6	Benzyl Alcohol		
95-50-1	1,2-Dichlorobenzene	11,000	
95-48-7	2-Methylphenol	6100U	J
39638-32-9	bis(2-chloroisopropyl)Ether		J
106-44-5	4-Methylphenol		
621-64-7	N-Nitroso-Di-n-Propylamine		J
67-72-1	Hexachloroethane		
98-95-3	Nitrobenzene		
78-59-1	Isophorone		
88-75-5	2-Nitrophenol		
105-67-9	2,4-Dimethylphenol		
65-85-0	Benzoic Acid	30,000U	J
111-91-1	bis(2-Chloroethoxy)Methane	6100U	J
120-83-2	2,4-Dichlorophenol		
120-82-1	1,2,4-Trichlorobenzene		
91-20-3	Naphthalene	20,000	
106-47-8	4-Chloroaniline	6100U	
87-68-3	Hexachlorobutadiene		
59-50-7	4-Chloro-3-Methylphenol		
91-57-6	2-Methylnaphthalene	10,000	
77-47-4	Hexachlorocyclopentadiene	6100U	J 36K
88-06-2	2,4,6-Trichlorophenol		
95-95-4	2,4,5-Trichlorophenol	30,000U	
91-58-7	2-Chloronaphthalene	6100U	
88-74-4	2-Nitroaniline	30,000U	
131-11-3	Dimethyl Phthalate	6100U	
208-96-8	Acenaphthylene		
99-09-2	3-Nitroaniline	30,000 R	

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	6100U	
51-28-5	2,4-Dinitrophenol	30,000U	
100-02-7	4-Nitrophenol		
132-64-9	Dibenzofuran	6100U	
121-14-2	2,4-Dinitrotoluene		
606-20-2	2,6-Dinitrotoluene		
84-66-2	Diethylphthalate		
7005-72-3	4-Chlorophenyl-phenylether		
86-73-7	Fluorene		
100-01-6	4-Nitroaniline	30000U	
534-52-1	4,6-Dinitro-2-Methylphenol		
86-30-6	N-Nitrosodiphenylamine (1)	20,000	
101-55-3	4-Bromophenyl-phenylether	6100U	
118-74-1	Hexachlorobenzene		
87-86-5	Pentachlorophenol	15000	
85-01-8	Phenanthrene	15500 J	
120-12-7	Anthracene	6100U	
84-74-2	Di-n-Butylphthalate		
206-44-0	Fluoranthene		
129-00-0	Pyrene		
85-68-7	Butylbenzylphthalate		
91-94-1	3,3'-Dichlorobenzidine	12,000U	
56-55-3	Benzo(a)Anthracene	6100U	
117-81-7	bis(2-Ethylhexyl)Phthalate	100,000	
218-01-9	Chrysene	6100U	
117-84-0	Di-n-Octyl Phthalate		
205-99-2	Benzo(b)Fluoranthene		J
207-08-9	Benzo(k)Fluoranthene		J
50-32-8	Benzo(a)Pyrene		
193-39-5	Indeno(1,2,3-cd)Pyrene		
53-70-3	Dibenz(a,h)Anthracene		
191-24-2	Benzo(g,h,i)Perylene		J

(1)-Cannot be separated from diphenylamine

Laboratory Name ATi

Case No 6855 / SAS 2726E

Sample Number 1:10 EJ105

Organics Analysis Data Sheet
(Page 3)

RECEIVED MAR 30 1987

Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 19 FEB 87

Date Analyzed: 5 MARCH 87

Conc/Dil Factor: 0.1

Percent Moisture (decanted) 43.8

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	140u
319-85-7	Beta-BHC	↓
319-86-8	Delta-BHC	↓
58-89-9	Gamma-BHC (Lindane)	↓
76-44-8	Heptachlor	↓
309-00-2	Aldrin	↓
1024-57-3	Heptachlor Epoxide	↓
959-98-8	Endosulfan I	↓
60-57-1	Dieldrin	280u
72-55-9	4, 4'-DDE	↓
72-20-8	Endrin	↓
33213-65-9	Endosulfan II	↓
72-54-8	4, 4'-DDD	↓
1031-07-8	Endosulfan Sulfate	↓
50-29-3	4, 4'-DDT	↓
72-43-5	Methoxychlor	1400u
53494-70-5	Endrin Ketone	280u
57-74-9	Chlordane	1400u
8001-35-2	Toxaphene	2800u
12674-11-2	Aroclor-1016	1400u
11104-28-2	Aroclor-1221	↓
11141-16-5	Aroclor-1232	↓
53469-21-9	Aroclor-1242	↓
12672-29-6	Aroclor-1248	↓
11097-69-1	Aroclor-1254	2800u
11096-82-5	Aroclor-1260	↓

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 30.5 V_t 20000 V_i 2

Laboratory Name: ATI

Case No 6855/SAS 2726E

Sample Number
EJ-105

RECEIVED MAR 30 1987

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. 75-28-5	2-Methyl propane	VOA	216	88,000 J
2. —	an Acid	↓	613	4,400 J
3.				
4.				
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Laboratory Name: ATI

Case No 6855/SAS 2726 E

Sample Number EJ105

Organics Analysis Data Sheet
(Page 4)

RECEIVED MAR 30 1987

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. —	unknown ≥ C12 hydrocarbon	BNA	1108	60,000 J
2. —	unk. branched hyd. ≥ C10		1207	78000 J
3. —	unk. branched phenol		1313	340,000 J
4. —	unk. branched hyd. ≥ C13		1345	92,000 J
5. —	unk. branched hyd ≥ C17		1392	320,000 J
6. —	unk. branched phenol		1403	180,000 J
7. —	unk. branched phenol		1411	240,000 J
8. —	unknown		1416	200,000 J
9. —	unk. branched phenol		1442	130,000 J
10. —	unk. phthalate		1449	100,000 J
11. —	unknown		1532	200,000 J
12. —	unknown		1604	280,000 J
13. —	unknown		1614	360,000 J
14. —	unknown		1621	540,000 J
15. —	unk. branched alcohol		1629	220,000 J
16. —	unk. organic acid		1639	440,000 J
17. —	unknown		1653	480,000 J
18. —	unknown		1660	140,000 J
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87FPD1J61

Sample Number
EJ-106

RECEIVED MAR 30 1987

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ATI
Case No: 6855/SAS 2726E
Lab Sample ID No: EJ-106
QC Report No: —
Sample Matrix: SOIL
Contract No: 6801-7014
Data Release Authorized By: C. Sites
Date Sample Received: 2/19/87

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 2-24-87
Date Analyzed: 2-24-87
Conc/Dil Factor: ~~5g(.956)~~ 5ml = 1.0 pH 7.71
Percent Moisture: (Not Decanted) 4.4

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10U
74-83-9	Bromomethane	
75-01-4	Vinyl Chloride	
75-00-3	Chloroethane	
75-09-2	Methylene Chloride	7 B
67-64-1	Acetone	11 B
75-15-0	Carbon Disulfide	5U
75-35-4	1, 1-Dichloroethene	
75-34-3	1, 1-Dichloroethane	
156-60-5	Trans-1, 2-Dichloroethene	
67-66-3	Chloroform	
107-06-2	1, 2-Dichloroethane	
78-93-3	2-Butanone	10U
71-55-6	1, 1, 1-Trichloroethane	1 J
56-23-5	Carbon Tetrachloride	5U
108-05-4	Vinyl Acetate	10U
75-27-4	Bromodichloromethane	5U

ok R

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5U
10061-02-6	Trans-1, 3-Dichloropropene	
79-01-6	Trichloroethene	
124-48-1	Dibromochloromethane	
79-00-5	1, 1, 2-Trichloroethane	
71-43-2	Benzene	13 J
10061-01-5	cis-1, 3-Dichloropropene	5U
110-75-8	2-Chloroethylvinylether	10U
75-25-2	Bromoform	13 JB
108-10-1	4-Methyl-2-Pentanone	10U
591-78-6	2-Hexanone	10U
127-18-4	Tetrachloroethene	5U
79-34-5	1, 1, 2, 2-Tetrachloroethane	
108-88-3	Toluene	14 JB
108-90-7	Chlorobenzene	5U
100-41-4	Ethylbenzene	13 JB
100-42-5	Styrene	5U
	Total Xylenes	12 B

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample

J Indicates an estimated value This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J) If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action

Other Other specific flags and footnotes may be required to properly define the results If used, they must be fully described and such description attached to the data summary report

Laboratory Name ATI

Case No 6855 / SAS 2726 E

Sample Number EJ 106

Organics Analysis Data Sheet
(Page 2)

RECEIVED MAR 30 1987

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared 2/19/87

Date Analyzed: 2/25/87

Conc./Dil Factor: $\frac{1mL}{30.19(.956)} \times 10^3 \times 4 = X140$

Percent Moisture (Decanted) —

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	14000 U
111-44-4	bis(2-Chloroethyl)Ether	
95-57-8	2-Chlorophenol	
541-73-1	1,3-Dichlorobenzene	
106-46-7	1,4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	J
95-50-1	1,2-Dichlorobenzene	
95-48-7	2-Methylphenol	
39638-32-9	bis(2-chloroisopropyl)Ether	
106-44-5	4-Methylphenol	
621-64-7	N-Nitroso-Di-n-Propylamine	
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	
78-59-1	Isophorone	
88-75-5	2-Nitrophenol	
105-67-9	2,4-Dimethylphenol	14000 U
65-85-0	Benzoic Acid	70000 U J
111-91-1	bis(2-Chloroethoxy)Methane	14000 U
120-83-2	2,4-Dichlorophenol	
120-82-1	1,2,4-Trichlorobenzene	
91-20-3	Naphthalene	
106-47-8	4-Chloroaniline	
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	
91-57-6	2-Methylnaphthalene	
77-47-4	Hexachlorocyclopentadiene	J
88-06-2	2,4,6-Trichlorophenol	14000 U
95-95-4	2,4,5-Trichlorophenol	70000 U
91-58-7	2-Chloronaphthalene	14000 U
88-74-4	2-Nitroaniline	70000 U J
131-11-3	Dimethyl Phthalate	14000 U
208-96-8	Acenaphthylene	
99-09-2	3-Nitroaniline	70000 U R

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	14000 U
51-28-5	2,4-Dinitrophenol	70000 U
100-02-7	4-Nitrophenol	J
132-64-9	Dibenzofuran	14000 U
121-14-2	2,4-Dinitrotoluene	
606-20-2	2,6-Dinitrotoluene	
84-66-2	Diethylphthalate	
7005-72-3	4-Chlorophenyl-phenylether	
86-73-7	Fluorene	14000 U
100-01-6	4-Nitroaniline	70000 U R
534-52-1	4,6-Dinitro-2-Methylphenol	
86-30-6	N-Nitrosodiphenylamine (1)	14000 U J
101-55-3	4-Bromophenyl-phenylether	
118-74-1	Hexachlorobenzene	
87-86-5	Pentachlorophenol	70000 U
85-01-8	Phenanthrene	14000 U
120-12-7	Anthracene	
84-74-2	Di-n-Butylphthalate	1100 J
206-44-0	Fluoranthene	240 J
129-00-0	Pyrene	250 J
85-68-7	Butylbenzylphthalate	14000 U
91-94-1	3,3'-Dichlorobenzidine	28000 U R
56-55-3	Benzo(a)Anthracene	14000 U
117-81-7	bis(2-Ethylhexyl)Phthalate	14000 U J
218-01-9	Chrysene	14000 U
117-84-0	Di-n-Octyl Phthalate	
205-99-2	Benzo(b)Fluoranthene	J
207-08-9	Benzo(k)Fluoranthene	
50-32-8	Benzo(a)Pyrene	
193-39-5	Indeno(1,2,3-cd)Pyrene	
53-70-3	Dibenzo(a,h)Anthracene	J
191-24-2	Benzo(g,h,i)Perylene	

(1)-Cannot be separated from diphenylamine

Laboratory Name ATI RECEIVED MAR 30 1987

Case No 6855/SAS 2726E

Sample Number 1.5 EJ 106

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 19 FEB 87

Date Analyzed: 4 MARCH 87

Conc/Dil Factor: 0.2

Percent Moisture (decanted) 4.44

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	42u
319-85-7	Beta-BHC	↓
319-86-8	Delta-BHC	↓
58-89-9	Gamma-BHC (Lindane)	↓
76-44-8	Heptachlor	↓
309-00-2	Aldrin	↓
1024-57-3	Heptachlor Epoxide	↓
959-98-8	Endosulfan I	↓
60-57-1	Dieldrin	84u
72-55-9	4, 4'-DDE	↓
72-20-8	Endrin	↓
33213-65-9	Endosulfan II	↓
72-54-8	4, 4'-DDD	↓
1031-07-8	Endosulfan Sulfate	↓
50-29-3	4, 4'-DDT	↓
72-43-5	Methoxychlor	420u
53494-70-5	Endrin Ketone	84u
57-74-9	Chlordane	420u
8001-35-2	Toxaphene	840u
12674-11-2	Aroclor-1016	420u
11104-28-2	Aroclor-1221	↓
11141-16-5	Aroclor-1232	↓
53469-21-9	Aroclor-1242	↓
12672-29-6	Aroclor-1248	↓
11097-69-1	Aroclor-1254	840u
11096-82-5	Aroclor-1260	↓

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 30.1 V_t 20000 V_i 2

Laboratory Name ATI RECEIVED MAR 30 1987

Case No 6855 / SAS 2726E

Sample Number 1:10 EJ 920

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 19 FEB 87

Date Analyzed: 4 MARCH 87

Conc/Dil Factor: 0.1

Percent Moisture (decanted) 16.2

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	94u
319-85-7	Beta-BHC	↓
319-86-8	Delta-BHC	↓
58-89-9	Gamma-BHC (Lindane)	↓
76-44-8	Heptachlor	↓
309-00-2	Aldrin	↓
1024-57-3	Heptachlor Epoxide	↓
959-98-8	Endosulfan I	↓
60-57-1	Dieldrin	190u
72-55-9	4, 4'-DDE	↓
72-20-8	Endrin	↓
33213-65-9	Endosulfan II	↓
72-54-8	4, 4'-DDD	↓
1031-07-8	Endosulfan Sulfate	↓
50-29-3	4, 4'-DDT	↓
72-43-5	Methoxychlor	940u
53494-70-5	Endrin Ketone	190u
57-74-9	Chlordane	940u
8001-35-2	Toxaphene	1900u
12674-11-2	Aroclor-1016	940u
11104-28-2	Aroclor-1221	↓
11141-16-5	Aroclor-1232	↓
53469-21-9	Aroclor-1242	↓
12672-29-6	Aroclor-1248	↓
11097-69-1	Aroclor-1254	1900u
11096-82-5	Aroclor-1260	↓

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 30.6 V_t 20000 V_i 2

Laboratory Name: A17

Case No: 6855/SAS 2726 E

RECEIVED MAR 30 1987

Sample Number: EJ920

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 2/19/87

Date Analyzed: 2/23/87

Conc./Dil Factor: $\frac{3.26 ml}{30.6 g (.838)} \times 10^3 = \times 200$

Percent Moisture (Decanted): —

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	2000U
111-44-4	bis(2-Chloroethyl)Ether	
95-57-8	2-Chlorophenol	
541-73-1	1,3-Dichlorobenzene	
106-46-7	1,4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	J 76K
95-50-1	1,2-Dichlorobenzene	
95-48-7	2-Methylphenol	
39638-32-9	bis(2-chloroisopropyl)Ether	
106-44-5	4-Methylphenol	
621-64-7	N-Nitroso-Di-n-Propylamine	
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	
78-59-1	Isophorone	1830J
88-75-5	2-Nitrophenol	2000U
105-67-9	2,4-Dimethylphenol	
65-85-0	Benzoic Acid	10,000U
111-91-1	bis(2-Chloroethoxy)Methane	2,000U
120-83-2	2,4-Dichlorophenol	
120-82-1	1,2,4-Trichlorobenzene	
91-20-3	Naphthalene	
106-47-8	4-Chloroaniline	K 26K
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	
91-57-6	2-Methylnaphthalene	
77-47-4	Hexachlorocyclopentadiene	
88-06-2	2,4,6-Trichlorophenol	
95-95-4	2,4,5-Trichlorophenol	10,000U
91-58-7	2-Chloronaphthalene	2,000U
88-74-4	2-Nitroaniline	10,000U
131-11-3	Dimethyl Phthalate	2,000U
208-96-8	Acenaphthylene	
99-09-2	3-Nitroaniline	10,000U R 26K

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	2000U
51-28-5	2,4-Dinitrophenol	10,000U
100-02-7	4-Nitrophenol	26K
132-64-9	Dibenzofuran	2,000U
121-14-2	2,4-Dinitrotoluene	
606-20-2	2,6-Dinitrotoluene	
84-66-2	Diethylphthalate	
7005-72-3	4-Chlorophenyl-phenylether	
86-73-7	Fluorene	
100-01-6	4-Nitroaniline	10,000U R 26K
534-52-1	4,6-Dinitro-2-Methylphenol	
86-30-6	N-Nitrosodiphenylamine (1)	2,000U J 26K
101-55-3	4-Bromophenyl-phenylether	
118-74-1	Hexachlorobenzene	
87-86-5	Pentachlorophenol	10,000U
85-01-8	Phenanthrene	1800J
120-12-7	Anthracene	2000U
84-74-2	Di-n-Butylphthalate	1300J
206-44-0	Fluoranthene	1770J
129-00-0	Pyrene	1540J
85-68-7	Butylbenzylphthalate	2000U
91-94-1	3,3'-Dichlorobenzidine	4000U
56-55-3	Benzo(a)Anthracene	1450J
117-81-7	bis(2-Ethylhexyl)Phthalate	2200
218-01-9	Chrysene	1540J
117-84-0	Di-n-Octyl Phthalate	2000U
205-99-2	Benzo(b)Fluoranthene	1550J
207-08-9	Benzo(k)Fluoranthene	2000U
50-32-8	Benzo(a)Pyrene	1560J
193-39-5	Indeno(1,2,3-cd)Pyrene	2000U
53-70-3	Dibenz(a,h)Anthracene	
191-24-2	Benzo(g,h,i)Perylene	

(1)-Cannot be separated from diphenylamine

87FY01J62

Sample Number
EJ920

RECEIVED MAR 30 1987

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ATI
Lab Sample ID No: EJ920
Sample Matrix: Soil
Data Release Authorized By: C. Sites

Case No: 6855/SAS 2726 E
QC Report No:
Contract No: 68017014
Date Sample Received: 2/19/87

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 2/24/87
Date Analyzed: 2/24/87
Conc/Dil Factor: ~~5g~~ (.838) = 1.2 pH 7.02
Percent Moisture: (Not Decanted) 16.2

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	12U
74-83-9	Bromomethane	
75-01-4	Vinyl Chloride	
75-00-3	Chloroethane	
75-09-2	Methylene Chloride	110 B
67-64-1	Acetone	123 B
75-15-0	Carbon Disulfide	6U
75-35-4	1, 1-Dichloroethene	
75-34-3	1, 1-Dichloroethane	
156-60-5	Trans-1, 2-Dichloroethene	
67-66-3	Chloroform	
107-06-2	1, 2-Dichloroethane	
78-93-3	2-Butanone	12U
71-55-6	1, 1, 1-Trichloroethane	6U
56-23-5	Carbon Tetrachloride	
108-05-4	Vinyl Acetate	12U
75-27-4	Bromodichloromethane	6U

ZGK R

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	6U
10061-02-6	Trans-1, 3-Dichloropropene	
79-01-6	Trichloroethene	
124-48-1	Dibromochloromethane	
79-00-5	1, 1, 2-Trichloroethane	
71-43-2	Benzene	14 J 1
10061-01-5	cis-1, 3-Dichloropropene	6U
110-75-8	2-Chloroethylvinylether	12U R
75-25-2	Bromoform	6U
108-10-1	4-Methyl-2-Pentanone	12U
591-78-6	2-Hexanone	12U
127-18-4	Tetrachloroethene	6U
79-34-5	1, 1, 2, 2-Tetrachloroethane	
108-88-3	Toluene	15 JB 1
108-90-7	Chlorobenzene	6U
100-41-4	Ethylbenzene	13 JB 1
100-42-5	Styrene	6U
	Total Xylenes	11 B 1

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

[illegible]	If the result is a value greater than or equal to the detection limit, report the value
	Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample
	Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J
C	This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS
B	This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action
Other	Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report

Laboratory Name: ATI RECEIVED MAR 30 1987

Case No 6855 / SAS 2726 E

Sample Number
EJ106

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. —	Unknown	BNA	623	1100J
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
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25.				
26.				
27.				
28.				
29.				
30.				

Laboratory Name: ATI

Case No 6855 / SAS 2726E RECEIVED MAR 30 1987

Sample Number
EJ-106

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. —	NONE FOUND	VOA	—	—
2.				
3.				
4.				
5.				
6.				
7.				
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30.				

Laboratory Name: ATT RECEIVED MAR 30 1987

Case No 6855/SAS 2726 E

Sample Number EJ920

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. —	Unknown Xylene	BNA	418	1000 J
2. —	Unknown Xylene	"	459	800 J
3. —	Unknown branched phenol		1233	1200 J
4. —	Unknown		1548	2600 J
5. —	Unknown		1660	1400 J
6. —	Unknown		1768	1300 J
7. —	Unknown		2026	400 J
8. —	Unknown		2199	3200 J
9. —	Unknown		2268	3000 J
10. —	Unknown		2387	2600 J
11.				
12.				
13.				
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30.				

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

Date Received for Review: 3/30/87 Date Review Completed: 3/30/87

TO: Julie Kaiser

FROM: Zena Gold-Kaufman

SUBJECT: MOBIL CHEM FINCH TO FOS-8612-012

Sample Description: Case # 6855

4 soil samples-organics

Project Data Status: * complete *

FIT Date Review Findings:

several organic hits - see Tom Clyde's review

Additional Comments:

none

Book No. 6
Page No. 12

recycled paper

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 3/26/87 RECEIVED MAR 30 1987

TO: Data User:_____ FIT_____

FROM: Curtis Ross, Director (5SCRL)
Central Regional Laboratory Patrick J. Chunilla

SUBJECT: Review of Region V CLP Data
Received for Review on 3/6/87

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

SITE NAME Mobil Chem SMO Case No. SAS 6855/2726

EPA DATA SET No. SF3778 No. OF SAMPLES 4 D.U./ACTIVITY NUMBERS Y905/C72100

CRL No.: 87FP01559-87FP0/S62

SMO Traffic No. EJ104-EJ106; EJ920

CLP Laboratory: ATI Hrs. Required for Review: 12

Following are our findings.

A.	Time	Acceptable	
B.	Surrogates	Acceptable	
C.	MS/MSD	EJ105 VOA was run at medium level and has 4/10 outliers	
D.	Lab Blanks		
	-	Pest	Acceptable
	2/19/87	SV	Dibutyl phthalate 780mg/kg and 5 TICs
	2/24/87	VOA	Methylene chloride 6 mg/L 5 other HSL < CRDL
	2/25/87	VOA	Methylene chloride 1000 mg/L
			Chloroform 250
		Ethylbenzene	300
		Total xylenes	380
		3 other HSL	< CRDL
E.	Tuning	Acceptable	
F.	Calibration	Acceptable, see calibration outlier forms	
G.	Pesticides	Acceptable	

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

Reviewed 25 March 87

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

USER's INFORMATION FORM

RECEIVED MAR 3 0 1987

The follow samples have HRS hits that can be used. Some hits were found in the blanks but because they are 10 x the value found in the lab blank, they can be used.

EJ 104	VOA	benzene	41 mg/L, this is a background sample.
EJ 105	VOA	toluene	
		ethyl benzene, total xylenes	
	SV	1,2 dichlorobenzene	
		~~napthalene~~ TC NAPHTHALENE	
		2-methyl-naphthalene	
		3-nitroaniline	
		n-nitrosodiphenylamine	
		pentachlorophenol	
		bis-(2-ethyl hexyl)phthalate	
EJ 106	SV	bis-(2-ethyl hexyl)phthalate	
ET 920		No usable hits	

Team leader, please check EJ 104 and evaluate if this site was a true background. This compound could be in the soil or it could be a lab artifact.

Tom