SITE INSPECTION REPORT
FOR
CITY OF MONROE SANITARY LANDFILL
MONROE, MICHIGAN
MID980506604
F05-8702-155

JUNE 22, 1987

#00928 NB

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

International Specialists in the Environment

MEMORANDUM

DATE: June 22, 1987

TO: File

FROM: Glenn B. Balanoff GBB

SUBJECT: Michigan/F05-8702-155/FMI0608SI
Monroe/City of Monroe Sanitary Landfill
MID980506604

The City of Monroe Sanitary Landfill operated from 1966 to 1969. This municipal landfill was permitted only to accept household rubbish. An industrial/chemical landfill located across the street was also operating at this time. The Michigan Department of Natural Resources (MDNR) expressed concern that some chemical industrial waste may have been disposed in the municipal landfill. As a result, this site was originally identified by the MDNR in the form of a preliminary assessment submitted to the U.S. EPA.

The site is located at the Port of Monroe City, Michigan. The area is characterized by heavy industries that use three work shifts. In the 1960s, the city owned the property used for the landfill. In 1969, the municipal landfill was closed and capped. During the 1970s, the Port of Monroe authority was formed by the city to govern the Port of Monroe City. In 1983, the Port authority transferred the deed for the landfill property to Detroit Edison in exchange for the construction of a dike at another site governed by the Port authority. A Detroit Edison Coal Fired Power Plant is located adjacent to the east border of the capped landfill. Detroit Edison subsequently used this property to store coal for later use. A small earthen dike and water retention ditch were constructed at the site to reduce the effects of runoff. No past emergency responses have occurred at this site.

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On February 19, 1987, Ecology and Environment FIT members performed a site inspection and soil sampling at the area. The U.S. EPA work plan was followed. Six soil samples were taken in order to characterize any waste present at the site. Analytical results showed elevated levels of heavy metals and organic chemicals present on-site. Soil sample #3 has a pH of 12. The soil samples were split with Detroit Edison chemists for their own analysis.

At the site FIT members observed coal left behind from the storage piles. The landfill cap was not visible. No signs of municipal rubbish could be located on the surface. Marshland grass habitat characterized the lowland ditch circling the site. No vegetation was growing through the coal.

No trespassing signs were posted at the site, but access to the area was not restricted by a fence. The landfill was not provided with a liner before landfilling operations commenced. Coal from past storage operations remains on the landfill cap. The site slope is less than 1%.

The bedrock aquifer is 20 feet below the surface. Area well logs show that the shallow drift and bedrock aquifers are hydraulically connected. The nearest well is 2.5 miles from the site. Groundwater targets are low. The municipal water serving the entire city of Monroe is surface water drawn more than 6 miles northeast of the site. A surface water route to the adjacent Raisin River could occur during wetter seasons.

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MID	980506604

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
CITY OF MONROE SANITARY LANDFILL	FRONT STREET, SE OF PORT AVE.

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
MONROE	MI	48161	MONROE	115	16

09 COORDINATES LATITUDE	LONGITUDE
41° 53' 47.0"	083° 21' 27.0"

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 (MONTH DAY YEAR)	02 SITE STATUS	03 YEARS OF OPERATION (BEGINNING YEAR, ENDING YEAR)
2 18 87	☐ ACTIVE ■ INACTIVE	1966 / 1969 ___ 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.
GLENN B. BALANOFF	Biologist / FIT TEAM LEADER	Ecology & Environment Region V	(312) 663-9415

09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
KELLY WALKER	Zoologist / FIT MEMBER	"	(312) "
GARY HOCHGRAF	Hydrogeologist / FIT MEMBER	"	(312) "
RANDY LIVINGSTON	GEOGRAPHER / FIT MEMBER	"	(312) "
DAVE VRABLIC.	GEOGRAPHER / FIT MEMBER	"	(312) "
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
DON LINK, CITY OF MONROE	DIRECTOR OF ENGINEERING	120 E. FIRST ST. MONROE, MICHIGAN	(313) 243-0700
ROBERT BURT, CITY OF MONROE	CONSTRUCTION INSPECTOR	"	(313) "
ART HEINDRICH, JR., DETROIT EDISON	ENVIRONMENTAL AFFAIRS	2000 2ND AVENUE, DETROIT MICHIGAN, 48226	(313) 237-7021
MICHAEL W. DELANEY, DETROIT EDISON	ENVIRONMENTAL COMPLIANCE SPECIALIST	3500 E. FRONT ST., MONROE, MICHIGAN	(313) 243-4110
KIM ROBERTS, DETROIT EDISON	ENVIRONMENTAL AFFAIRS	2000 2ND AVE, 485 WCB DETROIT, MICHIGAN 48226	(313) 237-8226
DETROIT EDISON WALT MEIERS / DENNIS R. SCHOTT	SENIOR ENGINEERING TECHNICIANS	610 W. WARREN, DETROIT MICHIGAN, 48210	(313) 897-1328
JOHN EMIG, PORT AUTHORITY	PORT OF MONROE ENGINEER	3055 EAST FRONT STREET MONROE, MICHIGAN	(313) 241-6480

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
■ PERMISSION ☐ WARRANT	12:00	WARM, SUNNY, 50°

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
MICHAEL CZUPRENSKI	MDNR, SOUTHEAST MICHIGAN FIELD OFFICE, 15500 SHELDON ROAD, NORTHVILLE, 48167	(313) 344-9440

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
GLENN B. BALANOFF	U.S. EPA REGION V	Ecology & Environment	312-663-9415	6 22 87

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MD	980506604

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

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

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

TONS _____
CUBIC YARDS UNKNOWN
NO. OF DRUMS _____

03 WASTE CHARACTERISTICS (Check all that apply)

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

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS	UNKNOWN		THE SITE WAS ORIGINALLY A
IOC	INORGANIC CHEMICALS			MUNICIPAL HOUSEHOLD LANDFILL.
ACD	ACIDS			AFTER CLOSURE AND CAPPING IN
BAS	BASES			1969 IT WAS USED TO
MES	HEAVY METALS	UNKNOWN		STORE COAL PILES.

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
OOC	TOLUENE	108-88-3	THESE LISTED CONTAMINANTS WERE FOUND DURING A FIT SURFACE SOIL SAMPLING ON 2-18-87	12	PPb
OOC	NAPTHALENE	91-20-3		2300	"
OOC	2-METHYLNAPTHALENE	91-57-6		3800	"
OOC	PHENANTHRENE	85-01-8		1800	"
OOC	BENZO(b&K) FLUORATHENE	205-99-2		1200	"
OOC	BENZO(g,H,i) PERYLENE	191-24-2		1600	"
OOC	4,4' DDD	72-54-8		69	"
OOC	4,4' DDT	50-29-3		52	"
MES	ARSENIC	7440-38-2		12	PPM
MES	BARIUM	7440-39-3		302	"
MES	CADMIUM	7440-43-9		14	"
MES	COPPER	7440-50-8		197	"
MES	LEAD	7439-92-1		438	"
MES	NICKEL	7440-02-0		64	"
MES	VANADIUM	7440-62-2		198	"
MES	ZINC	7440-66-6		983	"

V. FEEDSTOCKS (See Appendix for CAS Numbers)

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

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

E & E INC. FILES.
MDNR FILES
SITE INSPECTION INTERVIEW

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MID	980506604

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ■ A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 100
04 NARRATIVE DESCRIPTION
No GROUND WATER SAMPLES WERE TAKEN. GROUND WATER TARGETS ARE low IN THE THREE mile RADIUS. THE BEDROCK IS LOCATED 20 FEET BELOW THE SURFACE. THE DRIFT AND BEDROCK AQUIFERS ARE HYDRAULICALLY CONNECTED. THE POTENTIAL is High FOR CONTAMINANTS FROM ONSITE TO PERCOLATE DOWN TO GROUNDWATER

01 ■ B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0
04 NARRATIVE DESCRIPTION
No SURFACE WATER SAMPLES WERE TAKEN. No DIRECT SURFACE WATER ROUTE WAS PRESENTLY AVAILABLE. PAST STUDIES ON THE RAISIN RIVER HAVE LOCATED MANY POINT SOURCE POLLUTERS, BUT NONE LINKING THIS SITE TO SURFACE WATER RELEASES. SURFACE RUNOFF COULD OCCURRED DURING WETTER SEASONS.

01 ■ C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 3668
04 NARRATIVE DESCRIPTION
No DOCUMENTATION CONCERNED THE PAST CONTAMINATION OF AIR. ONSITE SURFACE SOILS HAVE SHOWN ELEVATED LEVELS OF HEAVY METALS AND OTHER ORGANIC CHEMICALS. A POTENTIAL EXISTS FOR THESE SOILS TO CARRY OFFSITE DURING BLOWING CONDITIONS.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0
04 NARRATIVE DESCRIPTION
THE SITE WAS NOT CONSIDERED A FIRE HAZARD BY THE MONROE CITY FIRE DEPARTMENT.

01 ■ E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 80
04 NARRATIVE DESCRIPTION
No DIRECT CONTACT INCIDENT HAS BEEN DOCUMENTED IN THE FILE. SURFACE SOIL SAMPLES HAVE SHOWN ELEVATED LEVELS OF HEAVY METALS AND OTHER ORGANIC CHEMICALS. THE AREA IS NOT FENCED THOUGH NO TRESPASSING SIGNS ARE POSTED. A POTENTIAL IS PRESENT FOR A DIRECT CONTACT INCIDENT.

01 ■ F. CONTAMINATION OF SOIL — 02 ■ OBSERVED (DATE: 2-18-87) ☐ POTENTIAL ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: _____ (Acres)
04 NARRATIVE DESCRIPTION
SIX SOIL SAMPLES WERE TAKEN DURING THE SITE INSPECTION. RESULTS SHOWED ELEVATED LEVELS OF HEAVY METALS AND OTHER ORGANIC CHEMICALS. THE ORIGINAL LAND FILL WAS CAPPED. THE SOIL SAMPLES REPRESENT SITE CONDITIONS AT THE PRESENT TIME. THE AREA WAS ALSO USED TO STORE COAL PILES.

01 ■ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 100
04 NARRATIVE DESCRIPTION
THE BEDROCK AQUIFER LIES WITHIN 20 FEET OF THE SURFACE. THE NEAREST WELL IS 2½ miles FROM THE SITE. DRIFT AND BEDROCK AQUIFERS ARE HYDRAULICALLY THE SAME. THE POTENTIAL IS low FOR THIS SITE TO AFFECT THE NEAREST WELL. THE city RELIES ON MUNICIPAL WATER DRAWN FROM OUTSIDE 3 miles.

01 ■ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: 0
04 NARRATIVE DESCRIPTION
THE SITE WAS closed IN 1969. No DOCUMENTATION ADDRESSED WORKER EXPOSURE OR INJURY. A POTENTIAL EXISTED FOR WORKERS THAT MAY HAVE COME IN CONTACT WITH THE DISPOSAL OF UNAUTHORIZED MATERIALS.

01 ■ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 3668
04 NARRATIVE DESCRIPTION
THERE IS NO RECORD OF POPULATION EXPOSURE INJURY. SITE ACCESS IS NOT PHYSICALLY RESTRICTED. ONSITE CONTAMINATED SOILS MAY CARRY OFF SITE DURING BLOWING CONDITIONS. THE 3668 PEOPLE POTENTIALLY AFFECTED REPRESENT THE POPULATION LOCATED WITHIN 4 miles FROM THE SITE CONCERNED IN AN AIR ROUTE.

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

I. IDENTIFICATION
01 STATE: MD
02 SITE NUMBER: 980 506604

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ■ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
No Damage to Flora was noted during the site inspection. Sample # 3 had a reported PH of 12. There was no Flora in this area or surrounding areas. Sample # 3 was taken in a lumber storage area, offsite. See pictures page 5.

01 ■ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)
No Damage to Fauna was noted during the site inspection. The contaminants found in surface soils could potentially affect fauna coming in contact with them. Marshgrass habitat was present in onsite lowlands.

01 ■ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
The potential is high for surface heavy metals to bioaccumulate in the tissues of the primary consumers and producers of the food chain.

01 ■ M. UNSTABLE CONTAINMENT OF WASTES (Spills/Runoff/Standing liquids, Leaking drums) — 02 ■ OBSERVED (DATE: 2-18-87) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 3668
04 NARRATIVE DESCRIPTION No liner was provided before the landfill commenced operations. Upon closure and capping of the fill in 1969 the area was used as a coal storage pile area. The piles are now gone but coal remains on the surface.

01 ■ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
No damage to offsite property has been documented in the file. Onsite soils have revealed surface contaminants at elevated levels. A potential exists for soils to carry onto offsite properties during blowing conditions.

01 ■ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
There is no documentation about this site addressing the contamination of sewers, storm drains or WWTPs. The city's WWTP is located 1/2 mile west of the site. The potential is low for affecting this public system.

01 ■ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
The original landfill had an annual permit to accept only municipal rubbish. MDNR concern for this site stemmed from a chemical/industrial landfill across the street in operation at the same time. A potential exists that the municipal fill area accepted chemical wastes.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
No liner was provided before site operations commenced. A cap was installed in 1969 when the municipal landfill was closed. Remenants of coal storage piles cover the site. There is no vegetation occuring in these coal storage areas. The # 3668 represent the total population potentially affected w/ an air release. Access to the site is not restricted with a fence. No trespassing signs are posted around the site.

III. TOTAL POPULATION POTENTIALLY AFFECTED: 3668

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references, e. g., state files, sample analysis, reports)
E & E Inc. Files
MDNR Files
Site Inspection Interview

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MID	980506604

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) MDNR	ACT #87	1966	1969	THE LANDFILL, UPON CLOSING WAS CAPPED w/ soil.
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

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

04 TREATMENT (Check all that apply)

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

05 OTHER

☐ A. BUILDINGS ON SITE

NO BUILDINGS ARE ON-SITE

06 AREA OF SITE

40 (Acres)

07 COMMENTS

THE LAND FILL WAS ISSUED AN ANNUAL PERMIT FOR ITS THREE OPERATING YEARS. ACHEMICAL/INDUSTRIAL LANDFILL WAS OPERATING ACROSS THE STREET DURING THE SAME TIME. CONCERN FROM THE MDNR WAS EXPRESSED AS TO WHETHER OR NOT CHEMICAL WASTE WAS PLACED IN THE MUNICIPAL FILL AREA.

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.

NO LINER WAS PROVIDED AT THE SITE BEFORE THE MUNICIPAL LANDFILL COMMENCED OPERATIONS. A CAP WAS INSTALLED IN 1969 WHEN THE LANDFILL CLOSED. THE CAP CAN NOT BE SEEN AT PRESENT BECAUSE THE LAND WAS USED AS A COAL PILE STORAGE AREA IN THE 1970'S.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ■ YES ☐ NO

02 COMMENTS SURFACE SOILS AT THE SITE HAVE SHOWN ELEVATED LEVELS OF HEAVY METALS AND OTHER ORGANIC CHEMICALS. THE MUNICIPAL RUBBISH IS NOT ACCESSIBLE. NO FENCE PHYSICALLY RESTRICTS ACCESS TO THE SITE.

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

E & E INC. FILES
MDNR FILES
SITE INSPECTION INTERVIEW

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MID	980 506604

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)

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

02 STATUS N/A

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

03 DISTANCE TO SITE
A. <500 ~~(mi)~~ FT
B. 2 1/2 (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 100

03 DISTANCE TO NEAREST DRINKING WATER WELL 2 1/2 (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
8 (ft)	NORTHEAST	8 (ft)	UNKNOWN (gpd)	■ YES ☐ NO

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

THERE ARE FEW WELLS LEFT IN THREE miles THAT PROVIDE PRIVATE WATER. THE BEDROCK IN THE AREA IS WITHIN 20 FEET FROM THE SURFACE. THIS BEDROCK AQUIFER CONTAINS A HEAVY SULFUR CONCENTRATION. MUNICIPAL WATER IS MAILY USED.

10 RECHARGE AREA
■ YES
☐ NO
COMMENTS THE SANDY SOILS ON THIS RIVER BANK PROVIDE GOOD RECHARGE

11 DISCHARGE AREA
☐ YES
■ NO
COMMENTS THIS IS NOT A DISCHARGE AREA.

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

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

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
RAISIN RIVER	☐	200 FT ~~(mi)~~
PLUM CREEK	☐	3000 FT ~~(mi)~~
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 80 NO. OF PERSONS	B. 925 NO. OF PERSONS	C. 2668 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION
4,300 FT ~~(mi)~~

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE
243

04 DISTANCE TO NEAREST OFF-SITE BUILDING
200 FT ~~(mi)~~

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

THE SITE IS LOCATED IN AN INDUSTRIAL AREA OF THE CITY OF MONROE. THERE ARE NO RESIDENTIAL AREAS WITHIN 1 mile RADIUS OF THE SITE. A POWER PLANT AND OTHER HEAVY INDUSTRY SURROUND THE SITE. POPULATION IS ALWAYS PRESENT FROM THE THREE WORKING SHIFTS.

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MID	980506604

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
20 (ft)	UNKNOWN (ft)	>7

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
1 (in)	2.25 (in)	<1 %	NORTHEAST	<1 %

09 FLOOD POTENTIAL

SITE IS IN UNKNOWN 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. 2 1/2 (mi)

12 DISTANCE TO CRITICAL HABITAT *(of endangered species)*

2 1/2 (mi)

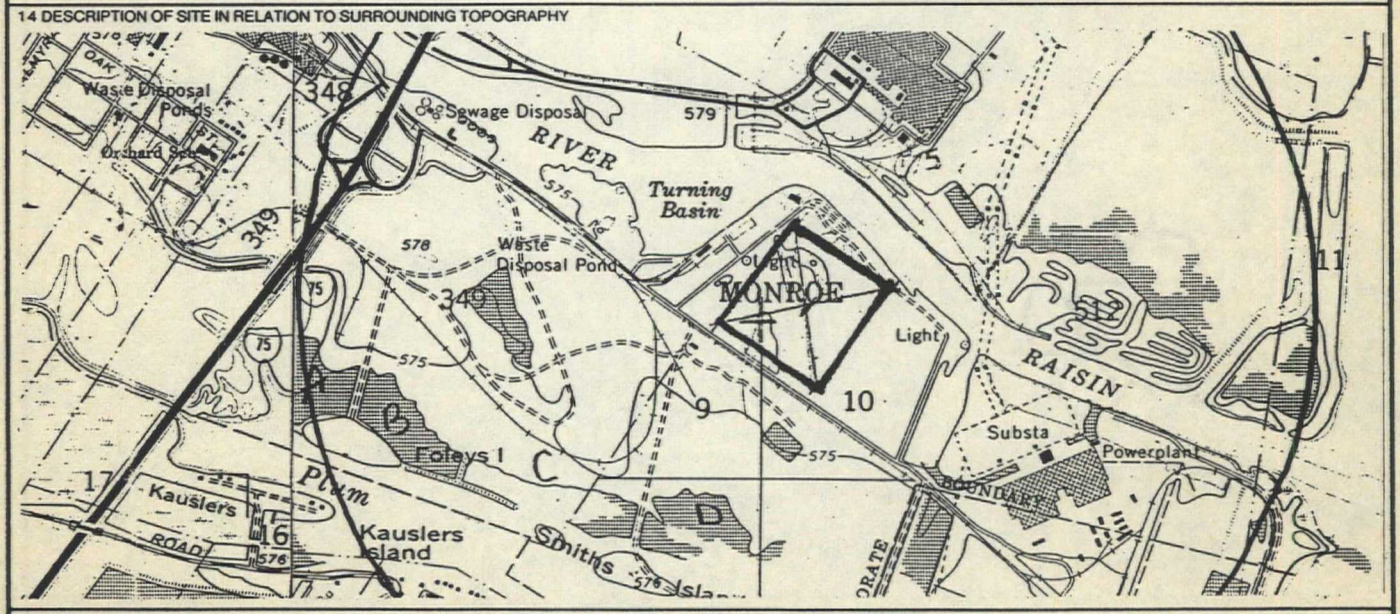
ENDANGERED SPECIES: NO ENDANGERED SPECIES IN COUNTY

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. 1500 FT (mi)	B. 3000 FT (mi)	C. N/A (mi)	D. N/A (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY



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

E&E INC. FILES
MDNR FILES
SITE INSPECTION INTERVIEW

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MID	980506604

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE			
AIR			
RUNOFF		INORGANICS: ROCKY MOUNTAIN ANALYTICAL	
SPILL		LABS., ARVADA, COLORADO	4-17-87
SOIL	6		
VEGETATION		ORGANICS: CLAYTON ENVIRONMENTAL	
OTHER		CONSULTANTS, INC., NOVI, MICHIGAN	5-20-87

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
HNU PHOTOIONIZER	NO READINGS ABOVE BACKGROUND
RAD-MINI	" " " "

IV. PHOTOGRAPHS AND MAPS

01 TYPE ■ GROUND ■ AERIAL

02 IN CUSTODY OF ECOLOGY AND ENVIRONMENT INC.
(Name of organization or individual)

03 MAPS ■ YES ☐ NO

04 LOCATION OF MAPS ECOLOGY & ENVIRONMENT INC., REGION V, CHICAGO.

V. OTHER FIELD DATA COLLECTED *(Provide narrative description)*

PICTURES WERE TAKEN FROM THE SITE'S PERIMETER.
ON-SITE PHOTO'S WERE COLLECTED BY DETROIT EDISON.

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

E&E INC. FILES
MDNR FILES
SITE INSPECTION INTERVIEW

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MID	980506604

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
DETROIT EDISON COMPANY		2000 2ND. AVE		DETROIT	MI	48226

PARENT COMPANY (If applicable)

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

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

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
CITY OF MONROE		120 E. FIRST ST.		MONROE	MI	48161

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

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
SAME AS CURRENT OWNER(S)						

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

E&E INC. FILES
MDNR FILES
SITE INSPECTION INTERVIEW

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MD	980506604

II. CURRENT OPERATOR *(Provide if different from owner)*

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

OPERATOR'S PARENT COMPANY *(If applicable)*

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

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

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

PREVIOUS OPERATORS' PARENT COMPANIES *(If applicable)*

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

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

E & E INC. FILES
MDNR FILES
SITE INSPECTION INTERVIEW

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
MD	980506604

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
N/A	

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

05 CITY	06 STATE	07 ZIP CODE

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
UNKNOWN - MUNICIPAL			

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

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

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

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
SAME AS PREVIOUS OWNER(S)			

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

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

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

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

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

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

E&E INC. FILES
MDNR FILES
SITE INSPECTION INTERVIEW

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
MID	980506604

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ C. PERMANENT WATER SUPPLY PROVIDED 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ D. SPILLED MATERIAL REMOVED 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ E. CONTAMINATED SOIL REMOVED 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ F. WASTE REPACKAGED 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ G. WASTE DISPOSED ELSEWHERE 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ H. ON SITE BURIAL 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ I. IN SITU CHEMICAL TREATMENT 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ J. IN SITU BIOLOGICAL TREATMENT 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ K. IN SITU PHYSICAL TREATMENT 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ L. ENCAPSULATION 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ M. EMERGENCY WASTE TREATMENT 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ N. CUTOFF WALLS 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ P. CUTOFF TRENCHES/SUMP 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ Q. SUBSURFACE CUTOFF WALL 04 DESCRIPTION N/A	02 DATE	03 AGENCY

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
MD	980506604

II PAST RESPONSE ACTIVITIES *(Continued)*

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

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

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

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

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

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

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

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

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

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

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

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

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

E&E INC. FILES
MDNR FILES
SITE INSPECTION INTERVIEW.

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
MD	980506604

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ■ NO

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

NO PAST ENFORCEMENT ACTION HAS TAKEN PLACE AT THIS SITE.

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

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SITE INSPECTION INTERVIEW

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	High	Moderate	Low
Fire and Explosion Hazard			
Flammable Materials			✓
Explosives			✓
Incompatable Chemicals			✓
Direct Contact with Acutely Toxic Chemicals			
Site Security			✓
Leaking Drums or Tanks			✓
Open Lagoons or pits			✓
Materials on Surface			✓
Proximity of Population		✓	
Evidence of Casual Site Use		✓	
Contaminated Water Supply			
Exceeds 10 Day Snarl N/A			
Gross Taste or Odors N/A			
Alternate Water Available			✓
Potential Contamination			✓
Is the site abandoned or active? SITE IS CAPPED AND INACTIVE			

Comments

THE SURFACE OF THE FILL AREA IS COVERED WITH COAL. THOUGH THE COAL IS COMBUSTIBLE, THIS SITE DOES NOT WARRANT IMMEDIATE REMOVAL ACTION.

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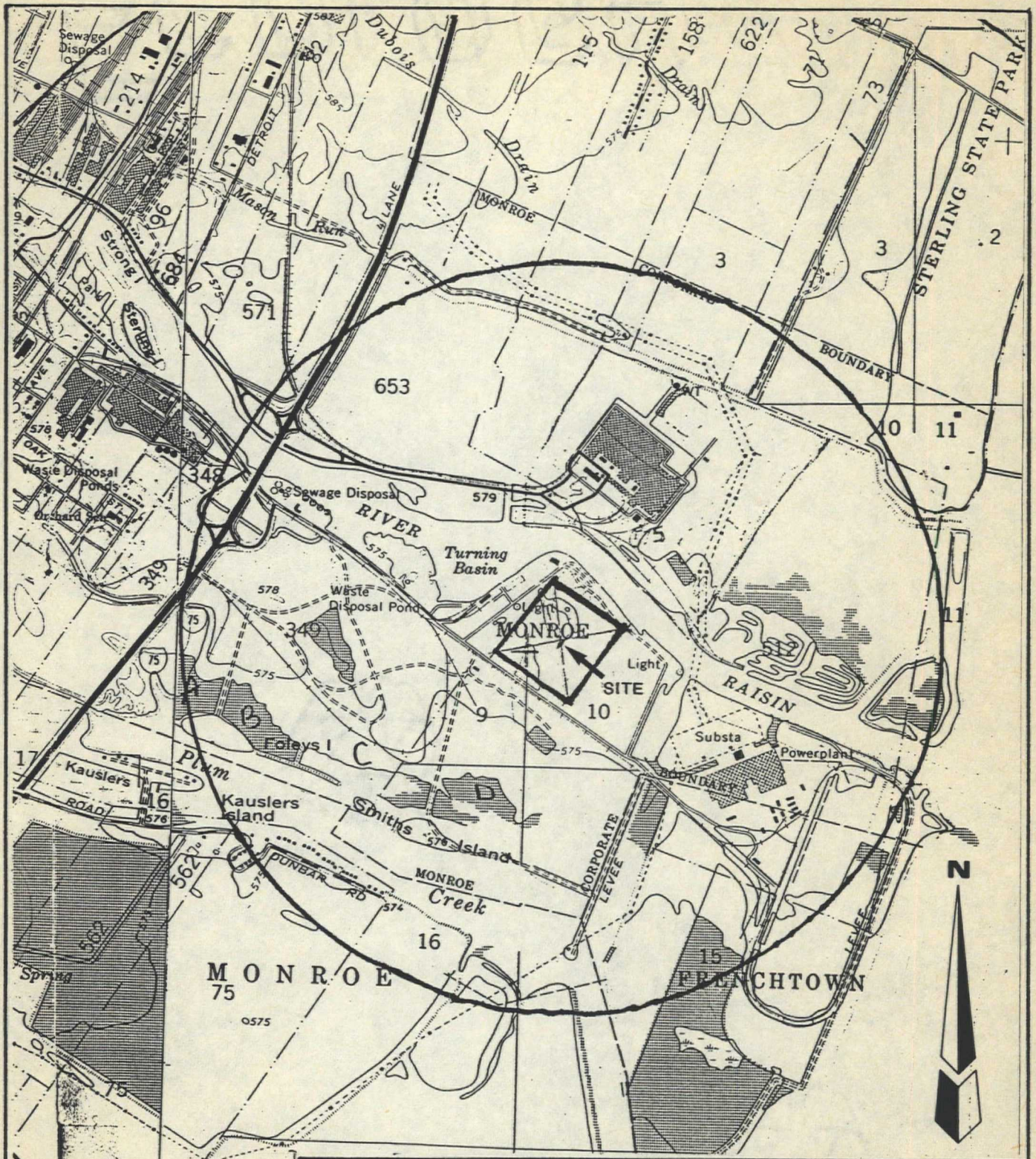

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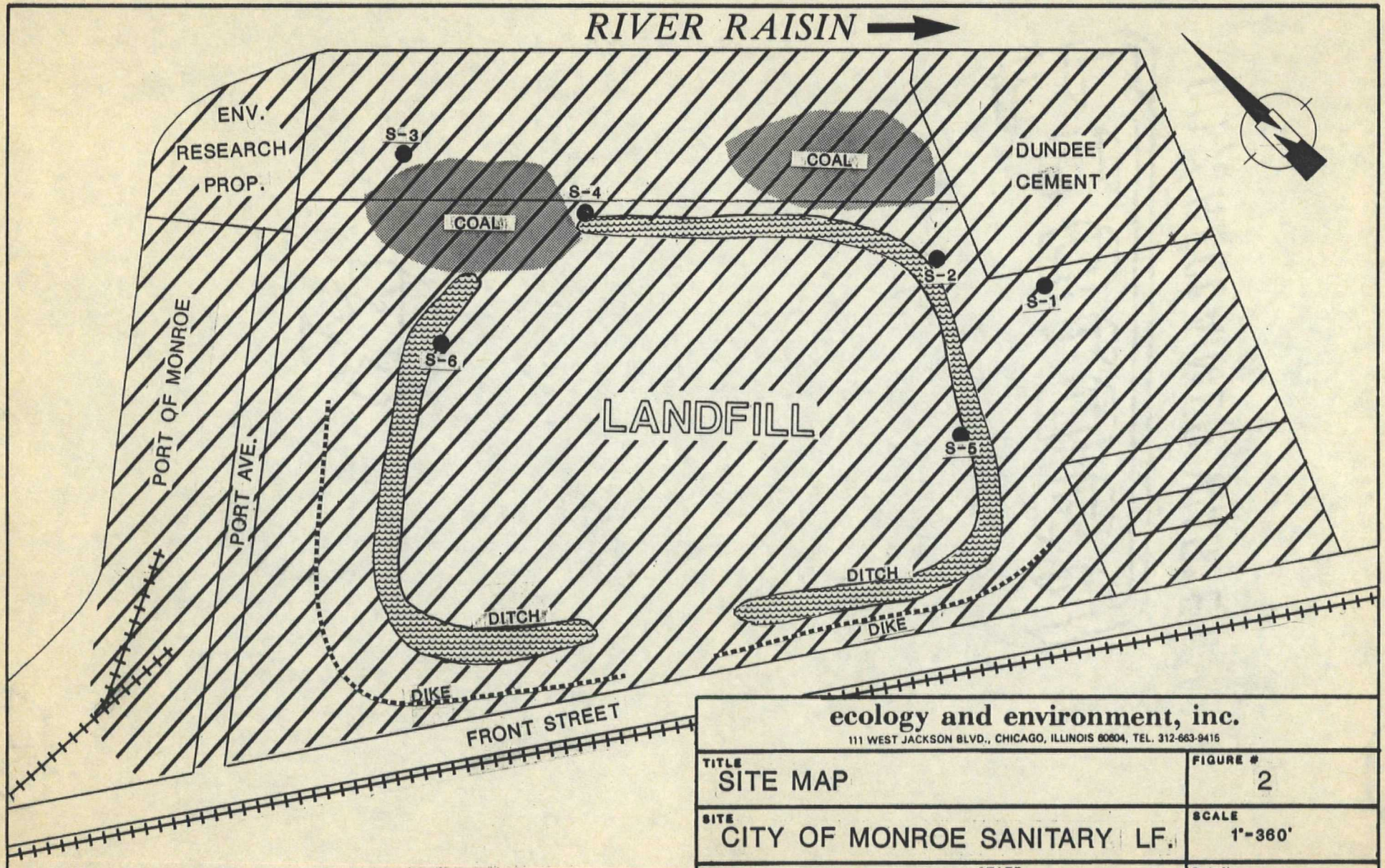
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415

TITLE SITE MAP	FIGURE # 1
SITE CITY OF MONROE SANITARY LF.	SCALE 1:24000
CITY MONROE STATE MI	P.A.N. FMIO608SL
SOURCE USGS 7.5 MINUTE TOPO STONEY POINT QUADRANGLE	DATE 1967 REVISED 1979



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

TITLE SITE MAP	FIGURE # 2
SITE CITY OF MONROE SANITARY LF.	SCALE 1"=360'
CITY MONROE STATE MI	P.A.N. FMIO608SI
SOURCE SITE INSPECTION	DATE 1987
	REVISED N/A

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FIELD PHOTOGRAPHY LOG SHEET

DATE 2-18-87

TIME 12-8 A.M. P.M.

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

WEATHER WARM, SUNNY 50°

SITE CITY OF MONROE L.F.

TDD# FMI06085I

PHOTOGRAPHED BY: RANDY LIVINGSTON

SAMPLE ID# (if applicable) N/A

DESCRIPTION: - Picture of Diking around fill area.
Note: Coal piles.

DATE 2-18-87

TIME 12-5 A.M. P.M.

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

WEATHER WARM, SUNNY 50°

SITE CITY OF MONROE L.F.

TDD# FMI06085I

PHOTOGRAPHED BY: RANDY LIVINGSTON

SAMPLE ID# (if applicable) N/A

DESCRIPTION: - Picture of Diking around fill area.
Note: Coal Piles.

FIELD PHOTOGRAPHY LOG SHEET

DATE 2-18-87

TIME 12-8 A.M. (P.M.)

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

WEATHER Warm, Sunny 50°

SITE City of Monroe L.F.

TDD# FMI06085I

PHOTOGRAPHED BY: Randy Livingston

SAMPLE ID# (if applicable) N/A

DESCRIPTION: - Picture of entrance road off Front St.

DATE 2-18-87

TIME 12-5 A.M. (P.M.)

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

WEATHER Warm, Sunny 50°

SITE City of Monroe L.F.

TDD# FMI0608 II

PHOTOGRAPHED BY: Randy Livingston

SAMPLE ID# (if applicable) N/A

DESCRIPTION: - East side entrance road to Dundee cement property

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FIELD PHOTOGRAPHY LOG SHEET

DATE 3-18-87

TIME 12-8 A.M. P.M.

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

WEATHER Warm, Sunny 50°

SITE City of Monroe LF

TDD# FMI0608SI

PHOTOGRAPHED BY: RANDY LIVINGSTON

SAMPLE ID# (if applicable) S1

DESCRIPTION: SAME, SEE BELOW

DATE 3-18-87

TIME 12-5 A.M. P.M.

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

WEATHER Warm, Sunny 50°

SITE City of Monroe LF

TDD# FMI0608SI

PHOTOGRAPHED BY: RANDY LIVINGSTON

SAMPLE ID# (if applicable) S1

DESCRIPTION: SAMPLE WAS EAST OF THE FILL AREA AND SOUTH OF DUNDEE CEMENT CO. PILES.

FIELD PHOTOGRAPHY LOG SHEET

DATE 3-18-87

TIME 12-8 A.M. P.M.

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

WEATHER Warm, Sunny 50°

SITE City of Monroe LF

TDD# FMI0608SI

PHOTOGRAPHED BY: RANDY LIVINGSTON

SAMPLE ID# (if applicable) S2

DESCRIPTION: SAME, SEE BELOW

DATE 3-18-87

TIME 12-5 A.M. P.M.

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

WEATHER Warm, Sunny 50°

SITE City of Monroe LF

TDD# FMI0608SI

PHOTOGRAPHED BY: RANDY LIVINGSTON

SAMPLE ID# (if applicable) S2

DESCRIPTION: SAMPLE WAS EAST BANK OF DRAINAGE DITCH, EAST SIDE OF THE SITE. NOTE COAL PILE IN BACKGROUND.

FIELD PHOTOGRAPHY LOG SHEET

DATE 2-18-87

TIME 12-8 A.M. P.M.

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

WEATHER WARM, SUNNY 50°

SITE CITY OF MONROE L.F.

TDD# FMI06085I

PHOTOGRAPHED BY: RANDY LIVINGSTON

SAMPLE ID# (if applicable) Soil Sample #3

DESCRIPTION: SAMPLE WAS IN A LUMBER YARD STORAGE AREA NORTHWEST OF THE FILL AREA

DATE 2-18-87

TIME 12-5 A.M. P.M.

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

WEATHER WARM, SUNNY 50°

SITE CITY OF MONROE L.F.

TDD# FMI06085I

PHOTOGRAPHED BY: RANDY LIVINGSTON

SAMPLE ID# (if applicable) Soil Sample #3

DESCRIPTION: SAME, SEE ABOVE.

FIELD PHOTOGRAPHY LOG SHEET

DATE 3-18-87

TIME 12-8 A.M. P.M.

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

WEATHER Warm, Sunny 50°

SITE City of Monroe LF

TDD# FM10608SI

PHOTOGRAPHED BY: RANDY LIVINGSTON

SAMPLE ID# (if applicable) S4

DESCRIPTION: SAMPLE LOCATION AT BASE OF COAL PILE.

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

TDD#

PHOTOGRAPHED BY:

SAMPLE ID# (if applicable)

PHOTO

DESCRIPTION:

FIELD PHOTOGRAPHY LOG SHEET

DATE 3-18-87

TIME 12-8 A.M. P.M.

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

WEATHER Warm, Sunny 50°

SITE City of Monroe LF

TDD# FMI0608SI

PHOTOGRAPHED BY: RANDY LIVINGSTON

SAMPLE ID# (if applicable) S5

DESCRIPTION: SAME, SEE BELOW

DATE 3-18-87

TIME 12-5 A.M. P.M.

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

WEATHER Warm, Sunny 50°

SITE City of Monroe LF

TDD# FMI0608SI

PHOTOGRAPHED BY: RANDY LIVINGSTON

SAMPLE ID# (if applicable) S5

DESCRIPTION: SAMPLE LOCATED SOUTHWEST OF FILL AREA IN DRAINAGE DITCH.

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FIELD PHOTOGRAPHY LOG SHEET

DATE 3-18-87

TIME 12-8 A.M. P.M.

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

WEATHER Warm, Sunny 50°

SITE City of Monroe LF

TDD# FMI0608SI

PHOTOGRAPHED BY: RANDY LIVINGSTON

SAMPLE ID# (if applicable) S6

DESCRIPTION: SAME SEE BELOW

DATE 3-18-87

TIME 12-5 A.M. P.M.

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

WEATHER Warm, Sunny 50°

SITE City of Monroe LF

TDD# FMI0608SI

PHOTOGRAPHED BY: RANDY LIVINGSTON

SAMPLE ID# (if applicable) S6

DESCRIPTION: SAMPLE LOCATED IN THE NORTHWEST CORNER OF FILL AREA.

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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

MEL	ITC	271	272	273	274	275	276					
EK	OTC	481	482	483	484	485	486					
	SAMPLE	S_1	S_2	S_3	S_4	S_5	S_6					
COMPOUND												
chloromethane												
bromomethane												
vinyl chloride												
chloroethane												
methylene chloride												
acetone												
carbon disulfide												
1,1-dichloroethene												
1,1-dichloroethane												
trans-1,2,-dichloroethene												
chloroform												
1,2-dichloroethane												
2-butanone												
1,1,1-trichloroethane												
carbon tetrachloride												
vinyl acetate												
bromodichloromethane												
1,1,2,2-tetrachloroethane												
1,2-dichloropropane												
trans-1,3-dichloropropene												
trichloroethene												
dibromochloromethane												
1,1,2-trichloroethane												
benzene												
cis-1,3-dichloropropene												
2-chloroethylvinylether												
bromoform												
2-hexanone												
4-methyl-2-pentanone												
tetrachloroethene												
toluene	8	12										
chlorobenzene												
ethylbenzene												
styrene												
total xylenes												
N-nitrosodimethylamine												
phenol												
aniline												
bis(2-chloroethyl)ether												
2-chlorophenol												
1,3-dichlorobenzene												
1,4-dichlorobenzene												
benzyl alcohol												
1,2-dichlorobenzene												
2-methylphenol												
bis(2-chloroisopropyl)ether												
4-methylphenol												
N-nitroso-di-n-propylamine												
hexachloroethane												
nitrobenzene												
isophrone												
2-nitrophenol												
2,4-dimethylphenol												
benzoic acid												
bis(2-chloroethoxy)methane												
2,4-dichlorophenol												
1,2,4-trichlorobenzene												
napthalene			2300									
4-chloroaniline												
hexachlorobutadiene												
4-chloro-3-methylphenol												
2-methylnapthalene			3800									
hexachlorocyclopentadiene												
2,4,6-trichlorophenol												
2,4,5-trichlorophenol												
2-chloronaphthalene												
2-nitroaniline												
dimethyl phthalate												
acenapthylene												
3-nitroaniline												
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												
4-bromophenyl-phenylether												
hexachlorobenzene												

STATE Michigan SITE City of Monroe Sanitary L.F. TDD F05-8702-155 PAGE 1 OF 2, SET # ____

MEL	ITC	271	272	273	274	275	276					
EK	OTC	481	482	483	484	485	486					
	SAMPLE	S_1	S_2	S_3	S_4	S_5	S_6					
COMPOUND												
pentachlorophenol												
phenanthrene				1800								
anthracene												
di-n-butylphthalate												
fluoranthene												
benzidine												
pyrene												
butylbenzylphthalate												
3,3'-dichlorobenzidine												
benzo(a)anthracene												
bis(2-ethylhexyl)phthalate												
chrysene												
di-n-octylphthalate												
benzo(b&k)fluoranthene						1200						
benzo(a)pyrene												
indeno(1,2,3-cd)pyrene												
dibenzo(a,h)anthracene												
benzo(g,h,i)perylene						1600						
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						69						
endrin aldehyde												
endosulfan sulfate												
4,4'-DDT						52						
methoxychlor												
endrin ketone												
chlordane												
toxaphene												
Aroclor-1016												
Aroclor-1221												
Aroclor-1232												
Aroclor-1242												
Aroclor-1248												
Aroclor-1254												
Aroclor-1260												
ELEMENT												
aluminum		3990	11500	1120	424	303	4570					
antimony			24									
arsenic		6.2	12	9.3			11					
barium			302	246								
beryllium												
cadmium			14				6.3					
calcium												
chromium		18	277	1720	9.5		122					
cobalt												
copper		30	197	66			64					
iron												
lead		78	438	21	5.4	11	47					
magnesium												
manganese												
mercury												
nickel			64									
potassium												
selenium			38									
silver												
sodium												
thallium												
tin												
vanadium				198								
zinc		164	983	75	24	12	377					
cyanide CHECK IF ANALYZED (✓)												
TENTATIVELY IDENTIFIED ORGANICS												

STATE Michigan SITE City of Monroe Sanitary L.F. TDD F05-8702-155 PAGE 2 OF 2, SET # ____

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International Specialists in the Environment

RECEIVED MAY 19 1987

Date Received for Review: 5/19 Date Review Completed: 5/20

TO: Glenn Balanoff

FROM: Zena Gold-Kaufman ZGK

SUBJECT: Monroe City Landfill
M10608

Sample Description: Case # 68876

Project Data Status: ~~incomplete~~
complete

FIT Date Review Findings:

several "hits"

Additional Comments:

Book No. 6
Page No. 39

ecology and environment, inc.
CHICAGO, ILLINOIS

CHEMICAL EVALUATION FORM

SITE NAME: Monroe City PAN# M10608 DATE: 5/20

CASE # 6876 UNITS- µg/Kg REVIEWER: ZGK

TOX/ PERS	COMPOUND	CRDL	3-5xCRDL	EK 481	EK 482	EK 483	EK 486			
	Toluene	5	15-25	8	12					
	Napthalene	330	990-1650			2300				
	2-methylnapthal	330				3800				
	Phenanthrene	330				1800				
	Benzo(b)fluora	330					1200			
	Benzo(g,h,i)	330					1600			
	4,4'DDD	16	48-80				69			
	4,4'DDT	10	48-80				52			

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE:

SUBJECT: Review of Region V CLP Data
Received for Review on 4/16/87

RECEIVED MAY 19 1987

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

TO: Date User: FIT

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

SITE NAME Monroe City Landfill SMO Case No. 6876

EPA DATA SET NO. SF3844 No. OF SAMPLES 6 D.U./ACTIVITY NUMBERS Y905/C72100

CRL No.: 87F002596-87FB02502
SMO
Traffic No. EK481-EK486

CLP Laboratory: Clayton Hrs. Required for Review: 6

Following are our findings.

(1) Case Narrative

Case consisted of 6 soil samples to be analyzed for full organics; EK484 was leaking. Results for concentration screening are:

Low Level	Medium Level
EK483	EK481
EK486	EK482
	EK484
	EK485

reviewed by Lena Gold Taufman 5/14/87

Several internal standard areas and surrogate standard recoveries were outside QC criteria in the soil samples of the VOAs of EK483 and EK485. These were re-analyzed with no improvement and is attributed to matrix effects.

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

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

(2) Soil Surrogate Percent Recovery Summary

(a) Low Samples

VOAs - 6 out of 33 outside QC limits - (4 of these 6 are for toluene D8)
BNAs - 0 out of 30 outside QC limits
Pesticides 0 out of 5 outside QC limits

(b) Medium Samples
VOAs - Not Run
BNSs - 1 out of 54
Pesticles 0 out of 6

Soil Surrogates are Acceptable

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(3) Soil Matrix Spike/Matrix Spike Duplicate Recovery Acceptable

Recoveries	-	Number outside QC limits
VOAs		0 out of 10
BNAs		0 out of 10
Pesticides		5 out of 12

Medium Level

VOAs	-	Not Run
BNAs		0 out of 12
Pesticides		0 out of 12

(4) Blanks - Acceptable

Blanks do not contain any HSL compound above CRDL. Some TICs present.

(5) All tunes acceptable
All samples run within 12 hours of tune.

(6) Standards - Acceptable

VOAs and BNAs - some Response Factors, %RSD, and %D were outside QC specifications. Those compound are recorded on the calibration outlier form and denoted on sample sheet.

BK 5/14/87

(7) Times:

The following samples exceeded holding time between date received and date extracted.

BNAs - EK48RE
EK485

No compounds were detected in these samples.

(8) Samples

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Several samples contained VOAs and B/N/As.

EK486 contained 4,4' DDD and DDT. The confirmatory column has several peaks with similiar retention times, however results for EK486 are acceptable.

ZBC
5/14/87

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USER INFORMATION SHEET

EK481	Toluene	8 ug/kg
EK482	Toluene	12 ug/kg
EK483	Naphthalene	2300 ug/kg
	2-methylnaphthalene	3800 ug/kg ZGK
	Phenanthrene	1800 ug/kg
EK486	Benzo(b)fluoranthene	1200 ug/kg
	Benzo(g,h,i)Perylene	1600 ug/kg
	4,4' DDD	69 ug/kg
	4,4' DDT	52 ug/kg

ZGK
5/14/87

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
VOLATILE HSL COMPOUNDS

RECEIVED MAY 19 1987

CASE# 0576 CONTRACTOR

	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	2/27/87			03/20 936											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane					31.7	J									
Bromomethane					32.5	J									
Vinyl Chloride															
Chloroethane					25.2	J									
Methylene Chloride															
Acetone															
Carbon Disulfide															
1,1-Dichloroethane															
1,1-Dichloroethene															
Trans-1,2-Dichloroethene															
Chloroform															
2-Butanone	.14	31.7	J	.04		J									
1,2-Dichloroethane															
1,1,1-Trichloroethane															
Carbon Tetrachloride															
Vinyl Acetate	.23		J	.41	75	J									
Bromodichloromethane															
1,2-Dichloropropane															
Trans-1,3-Dichloropropene															
Trichloroethene															
Dibromochloromethane															
1,1,2-Trichloroethane															
Benzene															
cis-1,3-Dichloropropene															
2-Chloroethylvinylether	.16	32.8	J	.17		J									
Bromoform															
4-Methyl-2-Pentanone															
2-Hexanone	.356		J	.26	1	J									
Tetrachloroethene															
1,1,2,2-Tetrachloroethane					36	J									
Toluene															
Chlorobenzene															
Ethylbenzene															
Styrene															
m-Xylene															
o/p-Xylene															

AFFECTED SAMPLES:

EK 481
482
481 MS
481 MSD
483
486
483 RE
485
485
484
485 RE

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
(Page 1)

RECEIVED MAY 1 0 1987

CASE# 6876 CONTRACTOR Clayton

	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	4/01/87			4/6/87 1008			4/7/87 1421			4/29 1406					
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Phenol															
bis(-2-Chloroethyl)Ether															
2-Chlorophenol															
1,3-Dichlorobenzene															
1,4-Dichlorobenzene															
Benzyl Alcohol															
1,2-Dichlorobenzene															
2-Methylphenol															
bis(2-chloroisopropyl)Ether															
4-Methylphenol															
N-Nitroso-Di-n-Propylamine											27.7	J			
Hexachloroethane															
Nitrobenzene															
Isophorone															
2-Nitrophenol															
2,4-Dimethylphenol															
Benzoic Acid				0.05	62.5	J		45	J						
bis(2-Chloroethoxy)Methane															
2,4-Dichlorophenol															
1,2,4-Trichlorobenzene															
Naphthalene															
4-Chloroaniline															
Hexachlorobutadiene															
4-Chloro-3-Methylphenol															
2-Methylnaphthalene															
Hexachlorocyclopentadiene															
2,4,6-Trichlorophenol															
2,4,5-Trichlorophenol															
2-Chloronaphthalene															
2-Nitroaniline															
Dimethyl Phthalate															
Acenaphthylene															
3-Nitroaniline															
Acenaphthene															
2,4-Dinitrophenol											29.4	J			
4-Nitrophenol															
Dibenzofuran															

AFFECTED SAMPLES:

	EK483	EK486	EK481MS
		486MS	EK481MSD
		486MSD	EK 484
		EK482	

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
Page 2

CASE# 6876 CONTRACTOR Clayton

	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	4/01/87														
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene															
2,6-Dinitrotoluene															
Diethylphthalate															
4-Chlorophenyl-phenylether															
Fluorene															
4-Nitroaniline															
4,6-Dinitro-2-Methylphenol															
N-Nitrosodiphenylamine															
4-Bromophenyl-phenylether															
Hexachlorobenzene															
Pentachlorophenol															
Phenanthrene															
Anthracene															
Di-n-Butylphthalate															
Fluoranthene															
Pyrene															
Butylbenzylphthalate															
Benzo(a)Anthracene															
bis(2-Ethylhexyl)Phthalate															
Chrysene															
Di-n-Octyl Phthalate															
Benzo(b)Fluoranthene															
Benzo(k)Fluoranthene															
Benzo(a)Pyrene															
Indeno(1,2,3-cd)Pyrene															
Dibenz(a,h)Anthracene															
Benzo(g,h,i) Perylene															

SEE PAGE 1 FOR AFFECTED SAMPLES.

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
(Page 1)

RECEIVED MAY 19 1987

CASE# 6876 CONTRACTOR Clayton

	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	4/10 9:54			4/10/87 3:35											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Phenol															
bis(-2-Chloroethyl)Ether															
2-Chlorophenol															
1,3-Dichlorobenzene															
1,4-Dichlorobenzene															
Benzyl Alcohol															
1,2-Dichlorobenzene															
2-Methylphenol															
bis(2-chloroisopropyl)Ether					31	J									
4-Methylphenol															
N-Nitroso-Di-n-Propylamine															
Hexachloroethane															
Nitrobenzene															
Isophorone															
2-Nitrophenol															
2,4-Dimethylphenol															
Benzoic Acid		3[illegible]	J												
bis(2-Chloroethoxy)Methane															
2,4-Dichlorophenol															
1,2,4-Trichlorobenzene															
Naphthalene															
4-Chloroaniline															
Hexachlorobutadiene															
4-Chloro-3-Methylphenol															
2-Methylnaphthalene															
Hexachlorocyclopentadiene															
2,4,6-Trichlorophenol															
2,4,5-Trichlorophenol															
2-Chloronaphthalene															
2-Nitroaniline															
Dimethyl Phthalate															
Acenaphthylene															
3-Nitroaniline															
Acenaphthene															
2,4-Dinitrophenol															
4-Nitrophenol															
Dibenzofuran															

AFFECTED SAMPLES:

EK 48 RE	EK 48SRE			

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
Page 2

CASE# 6876 CONTRACTOR Clayton

RECEIVED MAY 19 1987

	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	4/10														
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene															
2,6-Dinitrotoluene															
Diethylphthalate															
4-Chlorophenyl-phenylether															
Fluorene															
4-Nitroaniline															
4,6-Dinitro-2-Methylphenol															
N-Nitrosodiphenylamine															
4-Bromophenyl-phenylether															
Hexachlorobenzene															
Pentachlorophenol															
Phenanthrene															
Anthracene															
Di-n-Butylphthalate															
Fluoranthene															
Pyrene															
Butylbenzylphthalate															
Benzo(a)Anthracene															
bis(2-Ethylhexyl)Phthalate															
Chrysene															
Di-n-Octyl Phthalate															
Benzo(b)Fluoranthene															
Benzo(k)Fluoranthene															
Benzo(a)Pyrene															
Indeno(1,2,3-cd)Pyrene															
Dibenz(a,h)Anthracene															
Benzo(g,h,i) Perylene															

SEE PAGE 1 FOR AFFECTED SAMPLES.

* These flags should be applied to the analytes on the sample data sheets.

6876 • 5-021-01

Clayton Environmental Consultants, Inc.

22345 Roethel Drive • Novi, Michigan 48050 • (313) 344-1770

RECEIVED MAY 19 1987

CASE NARRATIVE
Case No.: 6876, Region V
SMO No.: EK 481-486
Contract No.: 68-01-7100

Case Summary

Six soil samples were received on March 19, 1987 to be analyzed for full organics.

The screening of these samples before extraction resulted in the BNA and the pesticide samples being analyzed at low-level and medium-level as listed below:

low-level	medium-level
EK 483	EK 481
EK 486	EK 482
	EK 484
	EK 485

During shipping, all three bottles of sample EK 484 leaked from the cap and contaminated the sample tags. Ms. Leslie Braun, from SMO, advised us on March 19, 1987 to dispose of the sample tags.

Several internal standard areas and surrogate standard recoveries were outside the QC criteria in the soil samples of the VOA fraction of EK 483 and EK 485. The affected samples were re-analyzed with no improvement of results. The problem is attributed to matrix effects and the results of both analyses are reported.

Sample EK 483 had a pH of 12.6. Mr. P. Churilla, at Region V, was notified on March 20, 1987; he advised us not to adjust the pH and to continue with the analysis.

The VOA fraction of sample EK 484 was run at a 1.0-gm level which resulted in the compounds being in the low end of the linearity curve. When the sample was run at 4.0 gm, high levels of TIC's overloaded the column, therefore the results of the analysis are reported at the 1.0-gm level.

During GC/MS analysis of BNA soil samples EK 481 and EK 485 on April 9, the extractions contained only four of the six surrogates. The samples were re-extracted on April 10, 1987.

The pesticide fraction of soil sample EK 486 contained 4,4'-DDE and 4,4'-DDT. The soil sample EK 486 matrix spike duplicate contained 4,4'-DDD. These compounds were confirmed by capillary GC/ECD, but were below the GC/MS instrument detection limit, and therefore not confirmed by GC/MS.

In the analysis of the pesticide fraction of sample EK 486 matrix spike 4,4'-DDD could not be reported as it was outside the retention time window at 13.34 minutes. However, the analyst feels that the peak at 13.34 minutes is 4,4'-DDD at 130 ug/Kg.

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A Marsh & McLennan Company

Gel permeation chromatography cleanup (GPC) was performed on the low-level soil samples. This procedure resulted in a dilution factor of two for the BNA and pesticide fractions, since only one-half of the extract was prepared.

The number labeled "dilution factor" on the quantitation reports for the VOA and BNA analyses is a calculation factor which takes into account, based on the sample matrix: percent moisture, sample size, unit conversions, and dilutions, to derive the final concentration.

The Hewlett Packard GC/MS data system used by Clayton has a combined NBS/WILEY library. The data system prints the mass spectra for all tentatively identified compounds (TIC's) and the top three library matches. When no library matches are found, the data system prints "NO DATA BASE ENTRIES RETRIEVED".

Standards

The instrument was tuned to meet the abundance criteria for BFB and DFTPP before any standards, blanks, or samples were analyzed. Initial and continuing calibration data for VOA's and BNA's are within the contract-required QC limits.

Percent-difference and retention time shifts for all pesticide compounds were within contract-required criteria for the primary run which was used for quantitation.

Pesticide Linearity and Degradation

Linearity and degradation criteria are within the contract-required QC limits for the packed column run which was used for quantitation. The capillary column was not used for quantitation.

Surrogate Recoveries

Surrogate recoveries are within QC limits for the blanks and samples except data noted below:

VOA L/S	Compound	% Rec	QC Range
EK 483	toluene	123	81-117
EK 483RE	toluene	127	81-117
EK 485	toluene	181	81-117
EK 485RE	toluene	173	81-117
EK 483RE	1,2 dichloroethane D-4	147	70-121
EK 485	p-bromofluorobenzene	61	74-121
BNA M/S			
EK 484	2,4,6 tribromophenol	10	19-122

6876·5-021-03

RECEIVED MAY 19 1987

Matrix Spike/Matrix Spike Duplicate

Matrix spike and matrix spike duplicate recovery data for all compounds except:

	Compound	% Rec	QC Range
P/PCB			
EK 486MS L/S	dieldrin	150	31-134
	endrin	144	42-139
EK 486MSD L/S	dieldrin	172	31-134
	endrin	194	42-139
	lindane	153	46-127
BNA			
EK 481MSD M/S	pentachlorophenol	10	17-109

	Compound	RPD	QC Limit
BNA			
EK 486 L/S	1,2,4-trichlorobenzene	31	23
	acenaphthene	32	19
	pyrene	53	36
	pentachlorophenol	50	47
EK 481 M/S	pentachlorophenol	65	47

Blanks

Blank results are recorded on the Method Blank Summary form for all compounds. There were no HSL compounds detected above the contract-required detection limit (CRDL).

Additional Flags

The following are laboratory flags which are used in addition to those identified by the EPA:

N= Instrument detection limit exceeded the CRDL, therefore instrument detection limit was used
M= Matrix spike compound.
A= Indicates a pesticide value less than the dilution-corrected limit of detection but greater than the CRDL.

Daryl Strandbergh
Project Manager, CLP

Date: 4/15/87

In Reference to Case No(s):

[illegible]

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MAY 07 1987

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

Contract Laboratory Program
REGIONAL/LABORATORY COMMUNICATION SYSTEM
Telephone Record Log

Date of Call: May 4 1987

Laboratory Name: [illegible]

Lab Contact: [illegible]

Region: [illegible]

Regional Contact: [illegible]

Call Initiated By: ____ Laboratory ____ Region

In reference to data for the following sample number(s):

Summary of Questions/Issues Discussed:

[illegible]

Summary of Resolution:

[illegible] will be sent [illegible]

Signature

5/4/87

Date

Distribution: (1) Lab Copy, (2) Region Copy, (3) SMO Copy

6876 • 5-005-01

RECEIVED MAY 19 1987

In Reference to Case No(s): 6876

Contract Laboratory Program
REGIONAL/LABORATORY COMMUNICATION SYSTEM
Telephone Record Log

Date of Call: 3/12/87

Laboratory Name: Clayton

Lab Contact: Daryl Strandburgh

Region: SMO

Regional Contact: Leslie Brown

Call Initiated By: ___ Laboratory X ~~Region~~ (SMO)

In reference to data for the following sample number(s):

Summary of Questions/Issues Discussed:

Case 6876 will be shipped from region V on 3/18/87. The case consists of 10 4/5 for full organics under contract 68-01-7100.

Summary of Resolution:

Daryl Strandburgh
Signature

3/12/87
Date

Distribution: (1) Lab Copy, (2) Region Copy, (3) SMO Copy

RECEIVED MAY 19 1987

In Reference to Case No(s): 6876

Contract Laboratory Program
REGIONAL/LABORATORY COMMUNICATION SYSTEM
Telephone Record Log

Date of Call: March 19, 1987

Laboratory Name: CLAYTON ENVIRONMENTAL

Lab Contact: Audrey McNary

Region: SMO

Regional Contact: Leslie Braun

Call Initiated By: ✓ Laboratory ___ Region

In reference to data for the following sample number(s):

Summary of Questions/Issues Discussed:

Case 6876 arrived under Airbill No. 101962696. The cooler contained 6 soil samples instead of 10. The 3 bottles of sample EK484 were leaking and contaminated the sample tags. Request permission to dispose of them and not include them with the case package.

Summary of Resolution:

I will call the Region to make sure the case is complete with 6 samples. You may dispose of the sample tags for all bottles of sample EK484. I will call you back in one hour.

Audrey McNary
Signature

03/19/87
Date

Distribution: (1) Lab Copy, (2) Region Copy, (3) SMO Copy

6876 • 5-003-03

In Reference to Case No(s): 6876

RECEIVED MAY 19 1987

Contract Laboratory Program
REGIONAL/LABORATORY COMMUNICATION SYSTEM
Telephone Record Log

Date of Call: 03/19/87

Laboratory Name: CLAYTON ENVIRONMENTAL

Lab Contact: Audrey McNary

Region: SMO

~~Regional~~ SMO Contact: Leslie Braun

Call Initiated By: ___ Laboratory ✓ ~~Region~~ SMO

In reference to data for the following sample number(s):

Summary of Questions/Issues Discussed:

Region V advise that the case 6876 is complete with six samples)

Summary of Resolution:

Audrey McNary
Signature

03/19/87
Date

Distribution: (1) Lab Copy, (2) Region Copy, (3) SMO Copy

6876.5-603-004

CONTRACT LABORATORY PROGRAM

Deputy Project Officer Communication Summary

Date DPO Notified of Issue: 3/20/87 DPO Notified By: Daryl Strandberg

Subject Laboratory: Clayton Case/Sas No: 6876

Contact for Resolution: Pat Chuvilla (Laboratory/DPO)

Date of Contact: 3/20/87 Call or Visit (Circle One)

Summary of Issues & Resolutions:

Document the issue(s), resolution(s), and action deadlines, if any.

Sample ~~EX~~ EK-483 has a pH of 12.6 (soil).
Resolution — Do not adjust pH and continue with the analysis

Daryl Strandberg
Signature

3/20/87
Date

Region

(1) DPO Copy (2) Project Officer Copy (3) SMO Copy (4) Lab Copy

3/84

6876 • 5-003-05

In Reference to Case No(s):
6876, 6911

Contract Laboratory Program
REGIONAL/LABORATORY COMMUNICATION SYSTEM
Telephone Record Log

RECEIVED MAY 19 1987

Date of Call: 3/20/87

Laboratory Name: CLAYTON

Lab Contact: DARYL STRANDBERG

Region: 5

Regional Contact: PATRICK CHURILLA

Call Initiated By: ✓ Laboratory ___ Region

In reference to data for the following sample number(s):

CASE 6876 EK483

CASE 6911 VOA SOILS, BNA WATERS

Summary of Questions/Issues Discussed:

A. CASE 6876 SAMPLE EK483 HAD A pH OF 12.6. SAMPLE WAS NEUTRALIZED BY LAB.

B. CASE 6911 LOW INTERNAL STD RECOVERY IN VOA SOILS

C. CASE 6911 ABN MSD FOR WATERS HAD LOW SURROGATE RECOVERY.

Summary of Resolution:

A. IF POSSIBLE, REANALYZE AS IS.

B. LAB ALREADY REANALYZED WITH SIMILAR RESULTS

C. REANALYSIS WILL BE DONE

Signature: Patrick J. Churilla Date: 3-20-87

Distribution: (1) Lab Copy, (2) Region Copy, (3) SMO Copy

SOIL SURROGATE PERCENT RECOVERY SUMMARY

Case No. 6876 Contract Laboratory Clayton Environmental Contract No. 68-01-7100

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) **	
EK 481	106	89	84	NR	NR	NR			NR	NR	NR	NR	
EK 482	116	86	86	NR	NR	NR			NR	NR	NR	NR	
EK 483	123*	81	79	70	67	28			62	60	51	109	(0.1 dil)
EK 483RE	127*	76	147*	NR	NR	NR			NR	NR	NR	NR	
EK 484	102	99	89	↓	↓	↓			↓	↓	↓	↓	
EK 485	181*	61*	89										
EK 485RE	173*	76	92										
EK 486	101	90	87	59	59	85			58	55	66	96	
MBlk I 4/5	103	101	80	62	61	71			55	57	53	101 †	
EK 481 MS	113	93	79	NR	NR	NR			NR	NR	NR	NR	
EK 486MS	NR	NR	NR	65	69	102			64	63	75	117	(0.15 dil)
EK 481 MSD	106	86	85	NR	NR	NR			NR	NR	NR	NR	
EK 486MSD	NR	NR	NR	48	50	62			47	49	50	114	(0.15 dil)

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

** ADVISORY LIMITS ONLY

Volatiles: 6 out of 33 ; outside of QC limits

Semi-Volatiles: 0 out of 30 ; outside of QC limits

Pesticides: 0 out of 5 ; outside of QC limits

V. MC 4/14/87

7/85

Comments: Eval. Std. Mix C (Run# 16) used to calculate DBC recoveries.
† calculated using Ar/Ht ratio.

FORM II

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6876.5-020-01

SOIL SURROGATE PERCENT RECOVERY SUMMARY

Case No. 6876 Contract Laboratory Clayton Environmental Contract No. 68-01-7100

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)
EK 481	NR	NR	NR	NR	NR	NR			NR	NR	NR	97
EK 481 RE	↓	↓	↓	69	69	63			60	61	44	NR
EK 482				50	63	95			43	38	63	105
EK 484				45	62	74			39	26	10*	87
EK 485				NR	NR	NR			NR	NR	NR	87
EK 485 RE				63	69	69			64	57	47	NR
M BlK I (M/S)				48	52	68			44	45	34	100
M BlK II (M/S)				62	66	70			64	65	44	NR
M BlK III (M/S)				58	59	61			54	59	43	↓
EK 481 MS				64	72	71			65	59	47	86
EK 481 MSD	↓	↓	↓	59	64	66			59	55	40	+

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

** ADVISORY LIMITS ONLY

Volatiles: _____ out of _____ ; outside of QC limits

Semi-Volatiles: 1 out of 54 ; outside of QC limits

Pesticides: 0 out of 6 ; outside of QC limits

7/85

Comments: Eval Std. Mix C (Run #16) used to calculate DBC recovery
+ Unable to calculate DBC recovery due to co-elution with interference peak.

FORM II

RECEIVED MAY 1 0 6876 · 5-022-02

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. 6876 **Contractor** Clayton Environmental **Contract No.** 68-01-7100

Low Level ✓ **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. EK-481	1,1-Dicholorethene	63	0	72	114	73	116	1.4	22	59-172
	Trichloroethene	63	0	61	97	63	100	3.2	24	62-137
	Chlorobenzene	63	0	71	113	71	113	0	21	60-133
	Toluene	63	8	85	122	87	125	2.3	21	59-139
	Benzene	63	0	69	110	69	110	0	21	66-142
B/N SMO SAMPLE NO. EK 486	1,2,4-Trichlorobenzene	4500	0	3400	76	2500	56	31*	23	38-107
	Acenaphthene	4500	0	2900	64	2100	47	32*	19	31-137
	2,4 Dinitrotoluene	4500	0	3700	82	2400	53	43	47	28-89
	Pyrene	4500	690	5700	111	3300	58	53*	36	35-142
	N-Nitrosodi-n-Propylamine	4500	0	3300	73	2300	51	36	38	41-126
	1,4-Dichlorobenzene	4500	0	2800	62	2200	49	24	27	28-104
ACID SMO SAMPLE NO. EK 486	Pentachlorophenol	9000	0	6500	72	3900	43	50*	47	17-109
	Phenol	9000	0	6500	72	4800	53	30	35	26-90
	2-Chlorophenol	9000	0	5200	58	4000	44	26	50	25-102
	4-Chloro-3-Methylphenol	9000	0	7400	82	5400	60	31	33	26-103
	4-Nitrophenol	9000	0	7800	87	4800	53	48	50	11-114
PEST SMO SAMPLE NO. EK-486	Lindane	72	0	91 +	126	110 +	153*	19	50	46-127
	Heptachlor	72	0	73	101	79	110	7.9	31	35-130
	Aldrin	72	0	69	96	89	124	25	43	34-132
	Dieldrin	180	0	270 ++	150*	310 +	172*	14	38	31-134
	Endrin	180	0	260 ++	144*	350 +	194*	30	45	42-139
	4,4'-DDT	180	52	250 ++	110	190 ++	77	27	50	23-134

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

RPD: VOAs 0 out of 5 ; outside QC limits
B/N 3 out of 6 ; outside QC limits
ACID 1 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 5 out of 12 ; outside QC limits

Comments: + Calculated by Ar/Ht ratio
++ Calculated by manual peak height measurement.

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4/14/87

8876-5-023-01

086

FORM III

7/85

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. 6876 **Contractor** Clayton Environmental **Contract No.** 68-01-7100

Low Level _____ **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. NR	1,1-Dicholorethene	NR	NR	NR	NR	NR	NR	NR	22	59-172
	Trichloroethene	↓	↓	↓	↓	↓	↓	↓	24	62-137
	Chlorobenzene	↓	↓	↓	↓	↓	↓	↓	21	60-133
	Toluene	↓	↓	↓	↓	↓	↓	↓	21	59-139
	Benzene	↓	↓	↓	↓	↓	↓	↓	21	66-142
B/N SMO SAMPLE NO. EK-481	1,2,4-Trichlorobenzene	130000	0	93000	72	80000	62	15	23	38-107
	Acenaphthene	130000	0	85000	65	79000	61	7.3	19	31-137
	2,4 Dinitrotoluene	130000	0	79000	61	75000	58	5.2	47	28-89
	Pyrene	130000	0	100000	77	100000	77	0	36	35-142
	N-Nitrosodi-n-Propylamine	130000	0	98000	75	99000	76	1.0	38	41-126
	1,4-Dichlorobenzene	130000	0	84000	65	78000	60	7.4	27	28-104
ACID SMO SAMPLE NO. EK-481	Pentachlorophenol	250000	0	51000	20	26000	10*	65*	47	17-109
	Phenol	250000	0	160000	64	160000	64	0	35	26-90
	2-Chlorophenol	250000	0	150000	60	140000	56	6.9	50	25-102
	4-Chloro-3-Methylphenol	250000	0	160000	64	140000	56	13	33	26-103
	4-Nitrophenol	250000	0	120000	48	78000	31	42	50	11-114
PEST SMO SAMPLE NO. EK 481	Lindane	2500	0	3100+	124	2700	108	14	50	46-127
	Heptachlor	2500	0	2900	116	2300	92	23	31	35-130
	Aldrin	2500	0	2900	116	2300	92	23	43	34-132
	Dieldrin	6200	0	7600	123	6100	98	22	38	31-134
	Endrin	6200	0	8500+	137	7600	123	11	45	42-139
	4,4'-DDT	6200	0	6900	111	5100	82	30	50	23-134

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

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

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

Comments: + Calculated using manual peak height measurement.

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6876-5-023-02

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FORM III

7/85

METHOD BLANK SUMMARY

Case No. 6876 Region IV Contractor Clayton Environmental Contract No. 68-01-7100

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	CONC. LEVEL	INST. ID	CAS NUMBER	COMPOUND (VOL. TIC OR UNKNOWN)	CONC.	UNITS	CRQL
B6972 MBIKI	3/20/87	VOA	SOIL	LOW	2B	75-09-2	METHYLENE CHLORIDE	0.6 J	ug/kg	5
B6972 MBIKI	3/20/87	VOA	SOIL	LOW	2B	67-64-1	ACETONE	8J	ug/kg	10
B6972 MBIKI	3/20/87	VOA	SOIL	LOW	2B	104767	2-ETHYL-1-HEXANOL	7J	ug/kg	—
A7760 MBIKI	4/6/87	BNA	Soil	Low	1A	—	unknown compound	600J	ug/kg	—
A7760 MBIKI	4/6/87	BNA	soil	Low	1A	—	Dimethyl Heptane	700J	ug/kg	—
A7760 MBIKI	4/6/87	BNA	soil	Low	1A	123422	4-Hydroxy-4-methyl-2-pentanone *	10000J	ug/kg	—
A7760 MBIKI	4/6/87	BNA	soil	Low	1A	—	Dimethyl Heptane	1000J	ug/kg	—
A7760 MBIKI	4/6/87	BNA	soil	Low	1A	110430	2-heptanone	4000J	ug/kg	—
A7760 MBIKI	4/6/87	BNA	soil	Low	1A	2216344	4-methyl octane	2000J	ug/kg	—
A7760 MBIKI	4/6/87	BNA	soil	Low	1A	2216333	3-methyl octane	4000J	ug/kg	—
Run #27 MBIKI	5/25/87	Pest	soil	Low	HP5733	—	No pest/PCB's detected	—	ug/kg	—
A7782 MBIKI	4/9/87	BNA	soil	MED	1A	—	No semi-volatile compounds detected	—	ug/kg	—
A7827 MBIKII	4/9/87	BNA	soil	MED	1A	—	No semi-volatile compounds detected	—	ug/kg	—
A7852 MBIKIII	4/10/87	BNA	soil	MED	1A	—	No semi-volatile compounds detected	—	ug/kg	—
Run #59 MBIKI	3/26/87	Pest	soil	MED	HS733	—	No pest PCB's detected	—	ug/kg	—

Comments: * possible aldol condensation product

FORM IV 7/85

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6876-5-024-01

088

87FB02796

Sample Number
EK-481

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Organics Analysis Data Sheet
(Page 1)

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Laboratory Name: Clayton Environmental
Case No: 6876
Lab Sample ID No: B6973 (S33137)
QC Report No: NA
Sample Matrix: Soil
Contract No: 68-01-7100
Data Release Authorized By: [signature]
Date Sample Received: 3-19-87

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 3/20/87
Date Analyzed: 3/20/87
Cond/Dil Factor: 1 pH 7.9
Percent Moisture: (Not Decanted) 20.40 %

CAS Number		ug/l or ug/Kg (Circle One)	
74-87-3	Chloromethane	13 u	
74-83-9	Bromomethane	13 u	
75-01-4	Vinyl Chloride	13 u	
75-00-3	Chloroethane	13 u	
75-09-2	Methylene Chloride	8 B	
67-64-1	Acetone	33 B	
75-15-0	Carbon Disulfide	6 u	
75-35-4	1, 1-Dichloroethene	6 u	
75-34-3	1, 1-Dichloroethane	6 u	
156-60-5	Trans-1, 2-Dichloroethene	6 u	
67-66-3	Chloroform	6 u	
107-06-2	1, 2-Dichloroethane	6 u	
78-93-3	2-Butanone	13 u	
71-55-6	1, 1, 1-Trichloroethane	2 J	
56-23-5	Carbon Tetrachloride	6 u	
108-05-4	Vinyl Acetate	13 u	
75-27-4	Bromodichloromethane	6 u	

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

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

M Matrix spike compound

N Instrument limit of detection was used because it was higher than the CRDL

Indicates a value less than the dilution corrected limit of detection but greater than the CRDL

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Form I

11/85

8876 • 5-028-02

Laboratory Name Clayton Environmental

Case No 6876

Sample Number
EK-481 RE

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Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 4/10/87

Date Analyzed 4/10/87

Conc/Dil Factor 1

Percent Moisture (Decanted) 20.40 %

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	25000	U
111-44-4	bis(-2-Chloroethyl)Ether	25000	U
95-57-8	2-Chlorophenol	25000	U
541-73-1	1 3-Dichlorobenzene	25000	U
106-46-7	1 4-Dichlorobenzene	25000	U
100-51-6	Benzyl Alcohol	25000	U
95-50-1	1 2-Dichlorobenzene	25000	U
95-48-7	2-Methylphenol	25000	U
39638-32-9	bis(2-chloroisopropyl)Ether	25000	U
106-44-5	4-Methylphenol	25000	U
621-64-7	N-Nitroso-Di-n-Propylamine	25000	U
67-72-1	Hexachloroethane	25000	U
98-95-3	Nitrobenzene	25000	U
78-59-1	Isophorone	25000	U
88-75-5	2-Nitrophenol	25000	U
105-67-9	2. 4-Dimethylphenol	25000	U
65-85-0	Benzoic Acid	130000	U
111-91-1	bis(-2-Chloroethoxy)Methane	25000	U
120-83-2	2 4-Dichlorophenol	25000	U
120-82-1	1 2. 4-Trichlorobenzene	25000	U
91-20-3	Naphthalene	25000	U
106-47-8	4-Chloroaniline	25000	U
87-68-3	Hexachlorobutadiene	25000	U
59-50-7	4-Chloro-3-Methylphenol	25000	U
91-57-6	2-Methylnaphthalene	25000	U
77-47-4	Hexachlorocyclopentadiene	25000	U
88-06-2	2. 4 6-Trichlorophenol	25000	U
95-95-4	2. 4. 5-Trichlorophenol	130000	U
91-58-7	2-Chloronaphthalene	25000	U
88-74-4	2-Nitroaniline	130000	U
131-11-3	Dimethyl Phthalate	25000	U
208-96-8	Acenaphthylene	25000	U
99-09-2	3-Nitroaniline	130000	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	25000	U
51-28-5	2. 4-Dinitrophenol	130000	U
100-02-7	4-Nitrophenol	130000	U
132-64-9	Dibenzofuran	25000	U
121-14-2	2. 4-Dinitrotoluene	25000	U
606-20-2	2. 6-Dinitrotoluene	25000	U
84-66-2	Diethylphthalate	25000	U
7005-72-3	4-Chlorophenyl-phenylether	25000	U
86-73-7	Fluorene	25000	U
100-01-6	4-Nitroaniline	130000	U
534-52-1	4 6-Dinitro-2-Methylphenol	130000	U
86-30-6	N-Nitrosodiphenylamine (1)	25000	U
101-55-3	4-Bromophenyl-phenylether	25000	U
118-74-1	Hexachlorobenzene	25000	U
87-86-5	Pentachlorophenol	130000	U
85-01-8	Phenanthrene	25000	U
120-12-7	Anthracene	25000	U
84-74-2	Di-n-Butylphthalate	25000	U
206-44-0	Fluoranthene	25000	U
129-00-0	Pyrene	25000	U
85-68-7	Butylbenzylphthalate	25000	U
91-94-1	3. 3 -Dichlorobenzidine	70000	N
56-55-3	Benzo(a)Anthracene	25000	U
117-81-7	bis(2-Ethylhexyl)Phthalate	25000	U
218-01-9	Chrysene	25000	U
117-84-0	Di-n-Octyl Phthalate	25000	U
205-99-2	Benzo(b)Fluoranthene	28000	N
207-08-9	Benzo(k)Fluoranthene	25000	U
50-32-8	Benzo(a)Pyrene	25000	U
193-39-5	Indeno(1 2. 3-cd)Pyrene	33000	N
53-70-3	Dibenz(a h)Anthracene	40000	N
191-24-2	Benzo(g. h. i)Perylene	43000	N

(1)-Cannot be separated from diphenylamine

Laboratory Name Clayton Environmental

Case No 68876

Sample Number
EK-481

Organics Analysis Data Sheet
(Page 3)

68876 • 5-028-03

RECEIVED MAY 1 0 1987

Pesticide/PCBs

Concentration: Low (Medium) (Circle One)

Date Extracted/Prepared: 23 March 1987

Date Analyzed: 26 March 1987

Conc/(Dil) Factor: 1

Percent Moisture (decanted) 20.40

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	150 u
319-85-7	Beta-BHC	150 u
319-86-8	Delta-BHC	150 u
58-89-9	Gamma-BHC (Lindane)	150 u
76-44-8	Heptachlor	150 u
309-00-2	Aldrin	150 u
1024-57-3	Heptachlor Epoxide	150 u
959-98-8	Endosulfan I	150 u
60-57-1	Dieldrin	300 u
72-55-9	4, 4'-DDE	300 u
72-20-8	Endrin	300 u
33213-65-9	Endosulfan II	300 u
72-54-8	4, 4'-DDD	300 u
1031-07-8	Endosulfan Sulfate	300 u
50-29-3	4, 4'-DDT	300 u
72-43-5	Methoxychlor	1500 u
53494-70-5	Endrin Ketone	300 u
57-74-9	Chlordane	1500 u
8001-35-2	Toxaphene	3000 u
12674-11-2	Aroclor-1016	1500 u
11104-28-2	Aroclor-1221	1500 u
11141-16-5	Aroclor-1232	1500 u
53469-21-9	Aroclor-1242	1500 u
12672-29-6	Aroclor-1248	1500 u
11097-69-1	Aroclor-1254	3000 u
11096-82-5	Aroclor-1260	3000 u

V_t = 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 1.0g V_t 10000ul V_t 10ul

T.D. 3-27-87
R.H 4-2-87

Form 1

7/85

Laboratory Name Clayton Environmental

Case No 6876

6876 • 5-029-01

Sample Number

EK-481

EK-481RE

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. —	BACKGROUND ARGON + CO2 (SYSTEM ARTIFACT)	VOA	4.18	20 J
2. —	No BNA compounds detected	BNA	—	—
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01F0000111

Sample Number
EK-482

Organics Analysis Data Sheet
(Page 1)

8876 • 5-028-04

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Laboratory Name: Clayton
Case No: 6876
Lab Sample ID No: B6974 (533139)
QC Report No: NA
Sample Matrix: SOIL
Contract No: 68-01-7100
Data Release Authorized By: [signature]
Date Sample Received: 3-19-87

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 3/20/87
Date Analyzed: 3/20/87
Conc/Dil Factor: 1 pH 7.4
Percent Moisture: (Not Decanted) 44.13 %

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	18 U
74-83-9	Bromomethane	18 U
75-01-4	Vinyl Chloride	18 U
75-00-3	Chloroethane	18 U
75-09-2	Methylene Chloride	5 J B
67-64-1	Acetone	62 B
75-15-0	Carbon Disulfide	9 U
75-35-4	1, 1-Dichloroethene	9 U
75-34-3	1, 1-Dichloroethane	9 U
156-60-5	Trans-1, 2-Dichloroethene	9 U
67-66-3	Chloroform	9 U
107-06-2	1, 2-Dichloroethane	9 U
78-93-3	2-Butanone	18 U
71-55-6	1, 1, 1-Trichloroethane	2 J
56-23-5	Carbon Tetrachloride	9 U
108-05-4	Vinyl Acetate	18 U
75-27-4	Bromodichloromethane	9 U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	9 U
10061-02-6	Trans-1, 3-Dichloropropene	9 U
79-01-6	Trichloroethene	9 U
124-48-1	Dibromochloromethane	9 U
79-00-5	1, 1, 2-Trichloroethane	9 U
71-43-2	Benzene	9 U
10061-01-5	cis-1, 3-Dichloropropene	9 U
110-75-8	2-Chloroethylvinylether	18 U
75-25-2	Bromoform	9 U
108-10-1	4-Methyl-2-Pentanone	18 U
591-78-6	2-Hexanone	18 U
127-18-4	Tetrachloroethene	9 U
79-34-5	1, 1, 2, 2-Tetrachloroethane	9 U
108-88-3	Toluene	12
108-90-7	Chlorobenzene	9 U
100-41-4	Ethylbenzene	9 U
100-42-5	Styrene	9 U
	Total Xylenes	9 U

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

M Matrix spike compound

N Instrument limit of detection was used because it was higher than the CRDL

A Indicates a value less than the dilution corrected limit of detection but greater than the CRDL

Laboratory Name CLAYTON ENVIRONMENTAL

Case No 6876

6876 : 5-028-05

Sample Number EK-482

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Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 3/19/87

Date Analyzed 4/7/87

Conc/Dil Factor 1

Percent Moisture (Decanted) 44.13%

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	36000 U
111-44-4	bis(-2-Chloroethyl)Ether	36000 U
95-57-8	2-Chlorophenol	36000 U
541-73-1	1 3-Dichlorobenzene	36000 U
106-46-7	1 4-Dichlorobenzene	36000 U
100-51-6	Benzyl Alcohol	36000 U
95-50-1	1 2-Dichlorobenzene	36000 U
95-48-7	2-Methylphenol	36000 U
39638-32-9	bis(2-chloroisopropyl)Ether	36000 U
106-44-5	4-Methylpheno	36000 U
621-64-7	N-Nitroso-Di-n-Propylamine	36000 U
67-72-1	Hexachloroethane	36000 U
98-95-3	Nitrobenzene	36000 U
78-59-1	Isophorone	36000 U
88-75-5	2-Nitrophenol	36000 U
105-67-9	2. 4-Dimethylphenol	36000 U
65-85-0	Benzoic Acid	180000 U
111-91-1	bis(-2-Chloroethoxy)Methane	36000 U
120-83-2	2 4-Dichlorophenol	36000 U
120-82-1	1 2. 4-Trichlorobenzene	36000 U
91-20-3	Naphthalene	36000 U
106-47-8	4-Chloroaniline	36000 U
87-68-3	Hexachlorobutadiene	36000 U
59-50-7	4-Chloro-3-Methylphenol	36000 U
91-57-6	2-Methylnaphthalene	36000 U
77-47-4	Hexachlorocyclopentadiene	36000 U
88-06-2	2. 4 6-Trichlorophenol	36000 U
95-95-4	2. 4. 5-Trichlorophenol	180000 U
91-58-7	2-Chloronaphthalene	36000 U
88-74-4	2-Nitroaniline	180000 U
131-11-3	Dimethyl Phthalate	36000 U
208-96-8	Acenaphthylene	36000 U
99-09-2	3-Nitroaniline	180000 U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	36000 U
51-28-5	2. 4-Dinitrophenol	180000 U
100-02-7	4-Nitrophenol	180000 U
132-64-9	Dibenzofuran	36000 U
121-14-2	2 4-Dinitrotoluene	36000 U
606-20-2	2. 6-Dinitrotoluene	36000 U
84-66-2	Diethylphthalate	36000 U
7005-72-3	4-Chlorophenyl-phenylether	36000 U
86-73-7	Fluorene	36000 U
100-01-6	4-Nitroaniline	180000 U
534-52-1	4 6-Dinitro-2-Methylphenol	180000 U
86-30-6	N-Nitrosodiphenylamine (1)	36000 U
101-55-3	4-Bromophenyl-phenylether	36000 U
118-74-1	Hexachlorobenzene	36000 U
87-86-5	Pentachlorophenol	180000 U
85-01-8	Phenanthrene	36000 U
120-12-7	Anthracene	36000 U
84-74-2	Di-n-Butylphthalate	36000 U
206-44-0	Fluoranthene	36000 U
129-00-0	Pyrene	4100 J
85-68-7	Butylbenzylphthalate	36000 U
91-94-1	3. 3 -Dichlorobenzidine	100000 N
56-55-3	Benzo(a)Anthracene	3600 J
117-81-7	bis(2-Ethylhexyl)Phthalate	36000 U
218-01-9	Chrysene	4800 J
117-84-0	Di-n-Octyl Phthalate	36000 U
205-99-2	Benzo(b)Fluoranthene	7800 J
207-08-9	Benzo(k)Fluoranthene	36000 U
50-32-8	Benzo(a)Pyrene	8400 J
193-39-5	Indeno(1 2. 3-cd)Pyrene	9100 J
53-70-3	Dibenz(a h)Anthracene	57000 N
191-24-2	Benzo(g. h. i)Perylene	23000 J

(1)-Cannot be separated from diphenylamine

Laboratory Name: Clayton Environmental

Case No: 6876

Sample Number
EK-482

Organics Analysis Data Sheet
(Page 3)

6876 • 5-028-06

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Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 23 March 1987

Date Analyzed: 26 March 1987

Conc/Dil Factor: 1

Percent Moisture (decanted) 44.13

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	210 u
319-85-7	Beta-BHC	210 u
319-86-8	Delta-BHC	210 u
58-89-9	Gamma-BHC (Lindane)	210 u
76-44-8	Heptachlor	210 u
309-00-2	Aldrin	210 u
1024-57-3	Heptachlor Epoxide	210 u
959-98-8	Endosulfan I	210 u
60-57-1	Dieldrin	430 u
72-55-9	4, 4'-DDE	430 u
72-20-8	Endrin	430 u
33213-65-9	Endosulfan II	430 u
72-54-8	4, 4'-DDD	430 u
1031-07-8	Endosulfan Sulfate	430 u
50-29-3	4, 4'-DDT	430 u
72-43-5	Methoxychlor	2100 u
53494-70-5	Endrin Ketone	430 u
57-74-9	Chlordane	2100 u
8001-35-2	Toxaphene	4300 u
12674-11-2	Aroclor-1016	2100 u
11104-28-2	Aroclor-1221	2100 u
11141-16-5	Aroclor-1232	2100 u
53469-21-9	Aroclor-1242	2100 u
12672-29-6	Aroclor-1248	2100 u
11097-69-1	Aroclor-1254	4300 u
11096-82-5	Aroclor-1260	4300 u

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 1.0 g V_t 10000 ul V_i 1.0 ul

T.O. 3-27-87
R.H 4-2-87

6876 • 5-029-02

Laboratory Name Clayton Environmental

Case No 6876

Sample Number
EK-482

Organics Analysis Data Sheet
(Page 4)

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Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. 565753	2,3,4-TRIMETHYLPENTANE	VOA	22.00	10 J
2. —	Unknown compound	BNA	37.82	20000 J
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87FB02598

Sample Number
EK-483

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Organics Analysis Data Sheet
(Page 1)

19 6876 • 5-028-07

Laboratory Name: Clayton Environmental

Case No: 6876

Lab Sample ID No: B6977 (533141)

QC Report No: NA

Sample Matrix: SOIL

Contract No: 68-01-7100

Data Release Authorized By: [signature]

Date Sample Received: 3-19-87

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 3/20/87

Date Analyzed: 3/20/87

Conc/(Dil Factor) 1 pH 12.6

Percent Moisture: (Not Decanted) 20.95

CAS Number		ug/l or (ug/Kg) (Circle One)	
74-87-3	Chloromethane	13 U	
74-83-9	Bromomethane	13 U	
75-01-4	Vinyl Chloride	13 U	
75-00-3	Chloroethane	13 U	
75-09-2	Methylene Chloride	2 J B	
67-64-1	Acetone	170 B	
75-15-0	Carbon Disulfide	1 J	
75-35-4	1, 1-Dichloroethene	6 U	
75-34-3	1, 1-Dichloroethane	6 U	
156-60-5	Trans-1, 2-Dichloroethene	6 U	
67-66-3	Chloroform	6 U	
107-06-2	1, 2-Dichloroethane	6 U	
78-93-3	2-Butanone	40	
71-55-6	1, 1, 1-Trichloroethane	6 U	
56-23-5	Carbon Tetrachloride	6 U	
108-05-4	Vinyl Acetate	13 U	
75-27-4	Bromodichloromethane	6 U	

CAS Number		ug/l or (ug/Kg) (Circle One)	
78-87-5	1, 2-Dichloropropane	6 U	
10061-02-6	Trans-1, 3-Dichloropropene	6 U	
79-01-6	Trichloroethene	6 U	
124-48-1	Dibromochloromethane	6 U	
79-00-5	1, 1, 2-Trichloroethane	6 U	
71-43-2	Benzene	0.8 J	
10061-01-5	cis-1, 3-Dichloropropene	6 U	
110-75-8	2-Chloroethylvinylether	13 U	
75-25-2	Bromoform	6 U	
108-10-1	4-Methyl-2-Pentanone	13 U	
591-78-6	2-Hexanone	13 U	
127-18-4	Tetrachloroethene	6 U	
79-34-5	1, 1, 2, 2-Tetrachloroethane	6 U	
108-88-3	Toluene	4 J	
108-90-7	Chlorobenzene	6 U	
100-41-4	Ethylbenzene	6 U	
100-42-5	Styrene	6 U	
	Total Xylenes	4 J	

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

M Matrix spike compound

N Instrument limit of detection was used because it was higher than the CRDL

A Indicates a value less than the dilution corrected limit of detection but greater than the CRDL

Laboratory Name CLAYTON ENVIRONMENTAL

Case No 6876

6876-5-028-08

Sample Number EK-483

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Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 3/23/87

Date Analyzed 4/6/87 (A 7766)

Conc/Dil Factor 0.5 (FOR GPC CLEANUP)

Percent Moisture (Decanted) 20.95 %

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	840 U
111-44-4	bis(-2-Chloroethyl)Ether	840 U
95-57-8	2-Chlorophenol	840 U
541-73-1	1 3-Dichlorobenzene	840 U
106-46-7	1 4-Dichlorobenzene	840 U
100-51-6	Benzyl Alcohol	840 U
95-50-1	1 2-Dichlorobenzene	840 U
95-48-7	2-Methylphenol	840 U
39638-32-9	bis(2-chloroisopropyl)Ether	840 U
106-44-5	4-Methylpheno	840 U
621-64-7	N-Nitroso-Di-n-Propylamine	840 U
67-72-1	Hexachloroethane	840 U
98-95-3	Nitrobenzene	840 U
78-59-1	Isophorone	840 U
88-75-5	2-Nitrophenol	840 U
105-67-9	2, 4-Dimethylphenol	96 J
65-85-0	Benzoic Acid	1400 J
111-91-1	bis(-2-Chloroethoxy)Methane	840 U
120-83-2	2 4-Dichlorophenol	840 U
120-82-1	1 2, 4-Trichlorobenzene	840 U
91-20-3	Naphthalene	2300
106-47-8	4-Chloroaniline	840 U
87-68-3	Hexachlorobutadiene	840 U
59-50-7	4-Chloro-3-Methylphenol	840 U
91-57-6	2-Methylnaphthalene	3800
77-47-4	Hexachlorocyclopentadiene	840 U
88-06-2	2, 4 6-Trichlorophenol	840 U
95-95-4	2, 4, 5-Trichlorophenol	4200 U
91-58-7	2-Chloronaphthalene	840 U
88-74-4	2-Nitroaniline	4200 U
131-11-3	Dimethyl Phthalate	840 U
208-96-8	Acenaphthylene	840 U
99-09-2	3-Nitroaniline	4200 U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	840 U
51-28-5	2, 4-Dinitrophenol	4200 U
100-02-7	4-Nitrophenol	4200 U
132-64-9	Dibenzofuran	830 J
121-14-2	2 4-Dinitrotoluene	840 U
606-20-2	2, 6-Dinitrotoluene	840 U
84-66-2	Diethylphthalate	840 U
7005-72-3	4-Chlorophenyl-phenylether	840 U
86-73-7	Fluorene	110 J
100-01-6	4-Nitroaniline	4200 U
534-52-1	4 6-Dinitro-2-Methylphenol	4200 U
86-30-6	N-Nitrosodiphenylamine (1)	840 U
101-55-3	4-Bromophenyl-phenylether	840 U
118-74-1	Hexachlorobenzene	840 U
87-86-5	Pentachlorophenol	4200 U
85-01-8	Phenanthrene	1800
120-12-7	Anthracene	840 U
84-74-2	Di-n-Butylphthalate	840 U
206-44-0	Fluoranthene	190 J
129-00-0	Pyrene	110 J
85-68-7	Butylbenzylphthalate	840 U
91-94-1	3, 3 -Dichlorobenzidine	2400 N
56-55-3	Benzo(a)Anthracene	840 U
117-81-7	bis(2-Ethylhexyl)Phthalate	840 U
218-01-9	Chrysene	87 J
117-84-0	Di-n-Octyl Phthalate	840 U
205-99-2	Benzo(b)Fluoranthene	930 N
207-08-9	Benzo(k)Fluoranthene	840 U
50-32-8	Benzo(a)Pyrene	840 U
193-39-5	Indeno(1 2, 3-cd)Pyrene	1100 N
53-70-3	Dibenzo(a h)Anthracene	1300 N
191-24-2	Benzo(g, h, i)Perylene	1400 N

(1)-Cannot be separated from diphenylamine

Form I

7 85

Laboratory Name Clayton Environmental

Case No 6876

Sample Number
EK-483

Organics Analysis Data Sheet
(Page 3)

6876 • 5-028-09

RECEIVED MAY 19 1987

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 25 March 1987

Date Analyzed: 25 March 1987

Conc/(Dil) Factor: 0.5 (GPC Effect) x 0.1

Percent Moisture (decanted) 20.95

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	200 u
319-85-7	Beta-BHC	200 u
319-86-8	Delta-BHC	200 u
58-89-9	Gamma-BHC (Lindane)	200 u
76-44-8	Heptachlor	200 u
309-00-2	Aldrin	200 u
1024-57-3	Heptachlor Epoxide	200 u
959-98-8	Endosulfan I	200 u
60-57-1	Dieldrin	400 u
72-55-9	4, 4'-DDE	400 u
72-20-8	Endrin	400 u
33213-65-9	Endosulfan II	400 u
72-54-8	4, 4'-DDD	400 u
1031-07-8	Endosulfan Sulfate	400 u
50-29-3	4, 4'-DDT	400 u
72-43-5	Methoxychlor	2000 u
53494-70-5	Endrin Ketone	400 u
57-74-9	Chlordane	2000 u
8001-35-2	Toxaphene	4000 u
12674-11-2	Aroclor-1016	2000 u
11104-28-2	Aroclor-1221	2000 u
11141-16-5	Aroclor-1232	2000 u
53469-21-9	Aroclor-1242	2000 u
12672-29-6	Aroclor-1248	2000 u
11097-69-1	Aroclor-1254	4000 u
11096-82-5	Aroclor-1260	4000 u

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 30g V_t 2000ml V_i 1.0ml

4000ml - half GPC and 0.1 dil.

R.O. 3-27-87
R.H 3-31-87

Form 1 7/85

6876 • 5-029-03

Laboratory Name Clayton Environmental

Case No 6876

Sample Number EK-483

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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. 71238	1-PROPANOL	VOA	10.79	7 J
2. —	UNKNOWN COMPOUND	BNA	5.33	4000 J
3. 2216300	2,5-DIMETHYL HEPTANE	BNA	5.61	1000 BJ
4. 123422	4-HYDROXY-4-METHYL-2-PENTANONE*	BNA	6.04	20000 BJ
5. —	UNKNOWN	BNA	6.10	2000 J
6. 110430	2-HEPTANONE	BNA	6.20	6000 BJ
7. 2216344	4-METHYL OCTANE	BNA	6.30	3000 BJ
8. 1330207	XYLENE	BNA	6.42	2000 J
9. 2216333	3-METHYL OCTANE	BNA	6.47	4000 BJ
10. 1330207	XYLENE	BNA	6.92	1000 J
11. —	UNKNOWN COMPOUND OF MW 128	BNA	7.81	1000 J
12. —	C9H12 ALKYL BENZENE PLUS AN UNKNOWN	BNA	9.22	2000 J
13. —	C9H12 ALKYL BENZENE	BNA	9.84	1000 J
14. 90120	1-METHYL NAPHTHALENE	BNA	15.66	2000 J
15. —	DIMETHYL NAPHTHALENE	BNA	17.29	1000 J
16. —	~~POSSIBLE ETHYL NAPHTHALENE HYDROCARBON~~ Dimethyl naphthalene AS 4/6/87	BNA	17.55	2000 J
17. —	DIMETHYL NAPHTHALENE	BNA	17.88	1000 J
18. —	POSSIBLE ETHYL NAPHTHALENE PLUS AN UNKNOWN (POSSIBLE HYDROCARBON)	BNA	18.15	1000 J
19. —	TRIMETHYL NAPHTHALENE	BNA	20.29	2000 J
20. —	UNKNOWN (POSSIBLE HYDROCARBON)	BNA	21.79	1000 J
21. 1921706	2,6,10,14-~~TETRA~~ TETRAMETHYL PENTADECANE AS 4/6/87	BNA	21.87	4000 J
22. —	~~UNKNOWN COMPOUND~~ AS 4/6/87 tetramethyl naphthalene	BNA	22.47	1000 J
23. —	UNKNOWN COMPOUND	BNA	22.73	1000 J
24. 10544510	MOL. SULFUR	BNA	26.63	2000 J
25.				
26.				
27.				
28.				
29.				
30.				

* Possible aldol condensation product.

7/85

87FB02599

Sample Number
CEK-484

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Organics Analysis Data Sheet
(Page 1)

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Laboratory Name: Clayton Environmental
Case No: 6876
Lab Sample ID No: B6981 (533143)
QC Report No: NA
Sample Matrix: SOIL
Contract No: 68-01-7100
Data Release Authorized By: [signature]
Date Sample Received: 3-19-87

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 3/20/87
Date Analyzed: 3/20/87
Conc/Dil Factor: 0.2 pH 8.5
Percent Moisture: (Not Decanted) 50.15

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	100 U
74-83-9	Bromomethane	100 U
75-01-4	Vinyl Chloride	100 U
75-00-3	Chloroethane	100 U
75-09-2	Methylene Chloride	14 JB
67-64-1	Acetone	440 B
75-15-0	Carbon Disulfide	50 U
75-35-4	1, 1-Dichloroethene	50 U
75-34-3	1, 1-Dichloroethane	50 U
156-60-5	Trans-1, 2-Dichloroethene	50 U
67-66-3	Chloroform	50 U
107-06-2	1, 2-Dichloroethane	50 U
78-93-3	2-Butanone	110
71-55-6	1, 1, 1-Trichloroethane	50 U
56-23-5	Carbon Tetrachloride	50 U
108-05-4	Vinyl Acetate	100 U
75-27-4	Bromodichloromethane	50 U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	50 U
10061-02-6	Trans-1, 3-Dichloropropene	50 U
79-01-6	Trichloroethene	50 U
124-48-1	Dibromochloromethane	50 U
79-00-5	1, 1, 2-Trichloroethane	50 U
71-43-2	Benzene	50 U
10061-01-5	cis-1, 3-Dichloropropene	50 U
110-75-8	2-Chloroethylvinylether	100 U
75-25-2	Bromoform	50 U
108-10-1	4-Methyl-2-Pentanone	100 U
591-78-6	2-Hexanone	100 U
127-18-4	Tetrachloroethene	50 U
79-34-5	1, 1, 2, 2-Tetrachloroethane	50 U
108-88-3	Toluene	50 U
108-90-7	Chlorobenzene	50 U
100-41-4	Ethylbenzene	50 U
100-42-5	Styrene	50 U
	Total Xylenes	50 U

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

M Matrix spike compound

N Instrument limit of detection was used because it was higher than the CRDL

A Indicates a value less than the dilution corrected limit of detection but greater than the CRDL

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6876 · 5-028-12

Laboratory Name Clayton Environmental

Case No 6876

Sample Number EK-484

Organics Analysis Data Sheet
(Page 2)

RECEIVED MAY 19 198

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 3/23/87 (19) JG 4-13-87

Date Analyzed: 4/9/87 (A7831)

Conc/Dil Factor: 1

Percent Moisture (Decanted) 50.15 %

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	40000 U
111-44-4	bis(-2-Chloroethyl)Ether	40000 U
95-57-8	2-Chlorophenol	40000 U
541-73-1	1 3-Dichlorobenzene	40000 U
106-46-7	1 4-Dichlorobenzene	40000 U
100-51-6	Benzyl Alcohol	40000 U
95-50-1	1 2-Dichlorobenzene	40000 U
95-48-7	2-Methylphenol	40000 U
39638-32-9	bis(2-chloroisopropyl)Ether	40000 U
106-44-5	4-Methylphenol	40000 U
621-64-7	N-Nitroso-Di-n-Propylamine	40000 U
67-72-1	Hexachloroethane	40000 U
98-95-3	Nitrobenzene	40000 U
78-59-1	Isophorone	40000 U
88-75-5	2-Nitrophenol	40000 U
105-67-9	2. 4-Dimethylphenol	40000 U
65-85-0	Benzoic Acid	200000 U
111-91-1	bis(-2-Chloroethoxy)Methane	40000 U
120-83-2	2 4-Dichlorophenol	40000 U
120-82-1	1 2. 4-Trichlorobenzene	40000 U
91-20-3	Naphthalene	10000 J
106-47-8	4-Chloroaniline	40000 U
87-68-3	Hexachlorobutadiene	40000 U
59-50-7	4-Chloro-3-Methylphenol	40000 U
91-57-6	2-Methylnaphthalene	26000 J
77-47-4	Hexachlorocyclopentadiene	40000 U
88-06-2	2. 4 6-Trichlorophenol	40000 U
95-95-4	2. 4. 5-Trichlorophenol	200000 U
91-58-7	2-Chloronaphthalene	40000 U
88-74-4	2-Nitroaniline	200000 U
131-11-3	Dimethyl Phthalate	40000 U
208-96-8	Acenaphthylene	40000 U
99-09-2	3-Nitroaniline	200000 U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	40000 U
51-28-5	2. 4-Dinitrophenol	200000 U
100-02-7	4-Nitrophenol	200000 U
132-64-9	Dibenzofuran	40000 U
121-14-2	2 4-Dinitrotoluene	40000 U
606-20-2	2. 6-Dinitrotoluene	40000 U
84-66-2	Diethylphthalate	40000 U
7005-72-3	4-Chlorophenyl-phenylether	40000 U
86-73-7	Fluorene	40000 U
100-01-6	4-Nitroaniline	200000 U
534-52-1	4 6-Dinitro-2-Methylphenol	200000 U
86-30-6	N-Nitrosodiphenylamine (1)	40000 U
101-55-3	4-Bromophenyl-phenylether	40000 U
118-74-1	Hexachlorobenzene	40000 U
87-86-5	Pentachlorophenol	200000 U
85-01-8	Phenanthrene	9700 J
120-12-7	Anthracene	5300 J
84-74-2	Di-n-Butylphthalate	40000 U
206-44-0	Fluoranthene	4300 J
129-00-0	Pyrene	22000 J
85-68-7	Butylbenzylphthalate	40000 U
91-94-1	3. 3 -Dichlorobenzidine	110000 N
56-55-3	Benzo(a)Anthracene	29000 J
117-81-7	bis(2-Ethylhexyl)Phthalate	40000 U
218-01-9	Chrysene	28000 J
117-84-0	Di-n-Octyl Phthalate	40000 U
205-99-2	Benzo(b)Fluoranthene	20000 J
207-08-9	Benzo(k)Fluoranthene	40000 U
50-32-8	Benzo(a)Pyrene	35000 J
193-39-5	Indeno(1 2. 3-cd)Pyrene	5500 J
53-70-3	Dibenzo(a h)Anthracene	10000 J
191-24-2	Benzo(g. h. i)Perylene	18000 J

(1)-Cannot be separated from diphenylamine

Form I 7 85

Laboratory Name Clayton Environmental

Case No 68766

Sample Number
EK-484

Organics Analysis Data Sheet
(Page 3)

6 8 8 6 • 5-028-13

RECEIVED MAY 19 1987

Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 23 March 1987

Date Analyzed: 26 March 1987

Conc/Dil Factor: 1

Percent Moisture (decanted) 50.15

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	240 u
319-85-7	Beta-BHC	240 u
319-86-8	Delta-BHC	240 u
58-89-9	Gamma-BHC (Lindane)	240 u
76-44-8	Heptachlor	240 u
309-00-2	Aldrin	240 u
1024-57-3	Heptachlor Epoxide	240 u
959-98-8	Endosulfan I	240 u
60-57-1	Dieldrin	480 u
72-55-9	4, 4'-DDE	480 u
72-20-8	Endrin	480 u
33213-65-9	Endosulfan II	480 u
72-54-8	4, 4'-DDD	480 u
1031-07-8	Endosulfan Sulfate	480 u
50-29-3	4, 4'-DDT	480 u
72-43-5	Methoxychlor	2400 u
53494-70-5	Endrin Ketone	480 u
57-74-9	Chlordane	2400 u
8001-35-2	Toxaphene	4800 u
12674-11-2	Aroclor-1016	2400 u
11104-28-2	Aroclor-1221	2400 u
11141-16-5	Aroclor-1232	2400 u
53469-21-9	Aroclor-1242	2400 u
12672-29-6	Aroclor-1248	2400 u
11097-69-1	Aroclor-1254	4800 u
11096-82-5	Aroclor-1260	4800 u

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 1.0g V_t 10000ul V_i 1.0ul

T.O. 3-27-87
R.H 4-2-87

8876 • 5-029-05

Laboratory Name Clayton Environmental

Case No 6876

Sample Number EK-484

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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.	—	BACKGROUND ARGON + CO_2 (SYSTEM ARTIFACT)	VOA	4.52	60 J
2.	—	BACKGROUND ARGON + CO_2 (SYSTEM ARTIFACT)	VOA	4.83	60 J
3.	—	UNKNOWN COMPOUND	VOA	29.97	60 J
4.	—	UNKNOWN COMPOUND	VOA	31.70	60 J
5.	—	UNKNOWN COMPOUND AS 4/13/87	VOA	32.26	90 J
6	90120 ~~24 71832~~	~~1-ETHYLIDENE-1H-INDENE~~ 1-methyl Naphthalene	BNA	15.56	20000 J
7	629594	TETRADECANE	BNA	17.02	30000 J
8	—	DIMETHYL NAPHTHALENE	BNA	17.22	20000 J
9	—	DIMETHYL NAPHTHALENE	BNA	17.46	20000 J
10	629629	PENTADECANE	BNA	18.66	30000 J
11	—	POSSIBLE HEXADECANE	BNA	20.21	30000 J
12	629787	HEPTADECANE	BNA	21.69	30000 J
13	593453	OCTADECANE	BNA	23.09	20000 J
14	55045084	2-METHYL-6-PROPYL-DODECANE	BNA	24.44	20000 J
15	6912078	5-BUTHYL HEXADECANE	BNA	25.72	30000 J
16	—	DIMETHYL PHENANTHRENE	BNA	26.16	20000 J
17	239350	BENZO[b]NAPHTHO[2,1-d]THIOPHENE	BNA	30.48	20000 J
18	205436	BENZO[b]NAPHTHO[1,2-d]THIOPHENE	BNA	30.97	20000 J
19	—	METHYL BENZO[b]NAPHTHO[2,3-d]THIOPHENE	BNA	31.60	20000 J
20	—	METHYL BENZO[b]NAPHTHO[2,3-d]THIOPHENE	BNA	31.82	20000 J
21	—	UNKNOWN ~~COMPOUND~~ SG 4-13-87 Hydrocarbon	BNA	32.39	20000 J
22	3697243	5-METHYL CHRYSENE	BNA	32.55	30000 J
23	—	UNKNOWN HYDROCARBON	BNA	33.35	20000 J
24	—	UNKNOWN HYDROCARBON	BNA	34.30	40000 J
25	—	POSSIBLE PENTACOSANE	BNA	35.19	40000 J
26	—	POSSIBLE C26H54 HYDROCARBON	BNA	36.08	20000 J
27	—	POSSIBLE DINAPHTHO[1,2-b:1',2'-d]THIOPHENE	BNA	37.41	30000 J
28	—	UNKNOWN HYDROCARBON	BNA	~~38.7~~ 38.17 4/14/87	20000 J
29.					
30.					

7 85

87FB03501

Sample Number
EK-48S

Organics Analysis Data Sheet
(Page 1)

8876 • 5-028-14

Laboratory Name: Clayton Environmental
Case No: 6876
Lab Sample ID No: B6780 (533145)
QC Report No: NA
Sample Matrix: SOIL
Contract No: 68-01-7100
Data Release Authorized By: [signature]
Date Sample Received: 3-19-87

REC'D MAY 19 1987

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 3/20/87
Date Analyzed: 3/20/87
Conc/(Dil Factor): 1 pH 7.4
Percent Moisture: (Not Decanted) 35.23

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	15 U
74-83-9	Bromomethane	15 U
75-01-4	Vinyl Chloride	15 U
75-00-3	Chloroethane	15 U
75-09-2	Methylene Chloride	6 J B
67-64-1	Acetone	140 B
75-15-0	Carbon Disulfide	8 U
75-35-4	1, 1-Dichloroethene	8 U
75-34-3	1, 1-Dichloroethane	8 U
156-60-5	Trans-1, 2-Dichloroethene	8 U
67-66-3	Chloroform	8 U
107-06-2	1, 2-Dichloroethane	8 U
78-93-3	2-Butanone	15 U
71-55-6	1, 1, 1-Trichloroethane	8 U
56-23-5	Carbon Tetrachloride	8 U
108-05-4	Vinyl Acetate	15 U
75-27-4	Bromodichloromethane	8 U

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

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

M Matrix spike compound

N Instrument limit of detection was used because it was higher than the CRDL

A Indicates a value less than the dilution corrected limit of detection but greater than the CRDL

8876 • 5-028-15

Laboratory Name Clayton Environmental

Case No 6876

Sample Number EK-485 LE

Organics Analysis Data Sheet
(Page 2)

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Semivolatile Compounds

Concentration: Low (Medium) (Circle One)

Date Extracted/Prepared 4/10/87

Date Analyzed 4/13/87 (A7886)

Conc/Dil Factor 1

Percent Moisture (Decanted) 35.23 %

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	31000 U
111-44-4	bis(2-Chloroethyl)Ether	31000 U
95-57-8	2-Chlorophenol	31000 U
541-73-1	1 3-Dichlorobenzene	31000 U
106-46-7	1 4-Dichlorobenzene	31000 U
100-51-6	Benzyl Alcohol	31000 U
95-50-1	1 2-Dichlorobenzene	31000 U
95-48-7	2-Methylphenol	31000 U
39638-32-9	bis(2-chloroisopropyl)Ether	31000 U
106-44-5	4-Methylphenol	31000 U
621-64-7	N-Nitroso-Di-n-Propylamine	31000 U
67-72-1	Hexachloroethane	31000 U
98-95-3	Nitrobenzene	31000 U
78-59-1	Isophorone	31000 U
88-75-5	2-Nitrophenol	31000 U
105-67-9	2. 4-Dimethylphenol	31000 U
65-85-0	Benzoic Acid	150000 U
111-91-1	bis(2-Chloroethoxy)Methane	31000 U
120-83-2	2 4-Dichlorophenol	31000 U
120-82-1	1 2. 4-Trichlorobenzene	31000 U
91-20-3	Naphthalene	31000 U
106-47-8	4-Chloroaniline	31000 U
87-68-3	Hexachlorobutadiene	31000 U
59-50-7	4-Chloro-3-Methylphenol	31000 U
91-57-6	2-Methylnaphthalene	31000 U
77-47-4	Hexachlorocyclopentadiene	31000 U
88-06-2	2. 4 6-Trichlorophenol	31000 U
95-95-4	2. 4. 5-Trichlorophenol	150000 U
91-58-7	2-Chloronaphthalene	31000 U
88-74-4	2-Nitroaniline	150000 U
131-11-3	Dimethyl Phthalate	31000 U
208-96-8	Acenaphthylene	31000 U
99-09-2	3-Nitroaniline	150000 U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	31000 U
51-28-5	2. 4-Dinitrophenol	150000 U
100-02-7	4-Nitrophenol	150000 U
132-64-9	Dibenzofuran	31000 U
121-14-2	2 4-Dinitrotoluene	31000 U
606-20-2	2. 6-Dinitrotoluene	31000 U
84-66-2	Diethylphthalate	31000 U
7005-72-3	4-Chlorophenyl-phenylether	31000 U
86-73-7	Fluorene	31000 U
100-01-6	4-Nitroaniline	150000 U
534-52-1	4 6-Dinitro-2-Methylphenol	150000 U
86-30-6	N-Nitrosodiphenylamine (1)	31000 U
101-55-3	4-Bromophenyl-phenylether	31000 U
118-74-1	Hexachlorobenzene	31000 U
87-86-5	Pentachlorophenol	150000 U
85-01-8	Phenanthrene	31000 U
120-12-7	Anthracene	31000 U
84-74-2	Di-n-Butylphthalate	31000 U
206-44-0	Fluoranthene	31000 U
129-00-0	Pyrene	31000 U
85-68-7	Butylbenzylphthalate	31000 U
91-94-1	3. 3 -Dichlorobenzidine	86000 N
56-55-3	Benzo(a)Anthracene	31000 U
117-81-7	bis(2-Ethylhexyl)Phthalate	31000 U
218-01-9	Chrysene	31000 U
117-84-0	Di-n-Octyl Phthalate	31000 U
205-99-2	Benzo(b)Fluoranthene	34000 N
207-08-9	Benzo(k)Fluoranthene	31000 U
50-32-8	Benzo(a)Pyrene	31000 U
193-39-5	Indeno(1 2. 3-cd)Pyrene	40000 N
53-70-3	Dibenz(a h)Anthracene	49000 N
191-24-2	Benzo(g. h i)Perylene	50000 N

(1)-Cannot be separated from diphenylamine

Laboratory Name: Clayton Environmental

Case No: 6876

Sample Number
EK-485

Organics Analysis Data Sheet
(Page 3)

6876-5-028-16

RECEIVED MAY 19 1987

Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 23 March 1987

Date Analyzed: 26 March 1987

Conc/Dil Factor: 1

Percent Moisture (decanted) 35.25

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	180 u
319-85-7	Beta-BHC	180 u
319-86-8	Delta-BHC	180 u
58-89-9	Gamma-BHC (Lindane)	180 u
76-44-8	Heptachlor	180 u
309-00-2	Aldrin	180 u
1024-57-3	Heptachlor Epoxide	180 u
959-98-8	Endosulfan I	180 u
60-57-1	Dieldrin	370 u
72-55-9	4, 4'-DDE	370 u
72-20-8	Endrin	370 u
33213-65-9	Endosulfan II	370 u
72-54-8	4, 4'-DDD	370 u
1031-07-8	Endosulfan Sulfate	370 u
50-29-3	4, 4'-DDT	370 u
72-43-5	Methoxychlor	1800 u
53494-70-5	Endrin Ketone	370 u
57-74-9	Chlordane	1800 u
8001-35-2	Toxaphene	3700 u
12674-11-2	Aroclor-1016	1800 u
11104-28-2	Aroclor-1221	1800 u
11141-16-5	Aroclor-1232	1800 u
53469-21-9	Aroclor-1242	1800 u
12672-29-6	Aroclor-1248	1800 u
11097-69-1	Aroclor-1254	3700 u
11096-82-5	Aroclor-1260	3700 u

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 1.0g V_t 10000ml V_i 1.0ml

T.O. 3-27-87
R.H 4-2-87

Form 1

7/85

6876 • 5-029-06

Laboratory Name Clayton Environmental

Case No 6876

Sample Number
EK-485
EK-485RE

MAY 19 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. —	BACKGROUND ARGON + CO_2 (SYSTEM ARTIFACT)	VOA	3.41	10 J
2. —	BACKGROUND ARGON + CO_2 (SYSTEM ARTIFACT)	VOA	3.85	20 J
3. —	BACKGROUND ARGON + CO_2 (SYSTEM ARTIFACT)	VOA	4.40	10 J
4. —	BACKGROUND ARGON + CO_2 (SYSTEM ARTIFACT)	VOA	4.90	10 J
5. —	BACKGROUND ARGON + CO_2 (SYSTEM ARTIFACT)	VOA	7.07	30 J
6. —	UNKNOWN COMPOUND	VOA	7.56	50 J
7. —	BACKGROUND ARGON + CO_2 (SYSTEM ARTIFACT)	VOA	8.18	10 J
8. —	No BNA compounds detected	BNA	—	—
9.				
10.				
11.				
12.				
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30.				

7 85

87FB03587

Sample Number
EK-486

Organics Analysis Data Sheet
(Page 1)

6876 • 5-028 -18

Laboratory Name: Clayton Environmental
Case No: 6876
Lab Sample ID No: B6978 (533147)
QC Report No: NA
Sample Matrix: SOIL
Contract No: 68-01-7100
Data Release Authorized By: [signature]
Date Sample Received: 3-19-87

RECEIVED MAY 11 1987

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 3/20/87
Date Analyzed: 3/20/87
Conc/(Dil Factor): 1 pH 7.8
Percent Moisture: (Not Decanted) 26.02

CAS Number		ug/l or ug/Kg (Circle One)	
74-87-3	Chloromethane	14	U
74-83-9	Bromomethane	14	U
75-01-4	Vinyl Chloride	14	U
75-00-3	Chloroethane	14	U
75-09-2	Methylene Chloride	5	JB
67-64-1	Acetone	55	B
75-15-0	Carbon Disulfide	7	U
75-35-4	1, 1-Dichloroethene	7	U
75-34-3	1, 1-Dichloroethane	7	U
156-60-5	Trans-1, 2-Dichloroethene	7	U
67-66-3	Chloroform	7	U
107-06-2	1, 2-Dichloroethane	7	U
78-93-3	2-Butanone	14	U
71-55-6	1, 1, 1-Trichloroethane	2	J
56-23-5	Carbon Tetrachloride	7	U
108-05-4	Vinyl Acetate	14	U
75-27-4	Bromodichloromethane	7	U

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

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

M Matrix spike compound

N Instrument limit of detection was used because it was higher than the CRDL

A Indicates a value less than the dilution corrected limit of detection but greater than the CRDL

6876 • 5-028-19

Laboratory Name CLAYTON ENVIRONMENTAL

Case No 6876

Sample Number EK-486

RECEIVED MAY 19 1987

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared 3/23/87

Date Analyzed 4/7/87 (A7777)

Conc/Dil Factor 0.5 (FOR GPC CLEANUP)

Percent Moisture (Decanted) 26.02 %

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	900 U
111-44-4	bis(-2-Chloroethyl)Ether	900 U
95-57-8	2-Chlorophenol	900 U
541-73-1	1 3-Dichlorobenzene	900 U
106-46-7	1 4-Dichlorobenzene	900 U
100-51-6	Benzyl Alcohol	900 U
95-50-1	1 2-Dichlorobenzene	900 U
95-48-7	2-Methylphenol	900 U
39638-32-9	bis(2-chloroisopropyl)Ether	900 U
106-44-5	4-Methylpheno	900 U
621-64-7	N-Nitroso-Di-n-Propylamine	900 U
67-72-1	Hexachloroethane	900 U
98-95-3	Nitrobenzene	900 U
78-59-1	Isophorone	900 U
88-75-5	2-Nitrophenol	900 U
105-67-9	2. 4-Dimethylphenol	900 U
65-85-0	Benzoic Acid	500 J
111-91-1	bis(-2-Chloroethoxy)Methane	900 U
120-83-2	2 4-Dichlorophenol	900 U
120-82-1	1 2. 4-Trichlorobenzene	900 U
91-20-3	Naphthalene	94 J
106-47-8	4-Chloroaniline	900 U
87-68-3	Hexachlorobutadiene	900 U
59-50-7	4-Chloro-3-Methylphenol	900 U
91-57-6	2-Methylnaphthalene	130 J
77-47-4	Hexachlorocyclopentadiene	900 U
88-06-2	2. 4 6-Trichlorophenol	900 U
95-95-4	2. 4. 5-Trichlorophenol	4500 U
91-58-7	2-Chloronaphthalene	900 U
88-74-4	2-Nitroaniline	4500 U
131-11-3	Dimethyl Phthalate	900 U
208-96-8	Acenaphthylene	900 U
99-09-2	3-Nitroaniline	4500 U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	900 U
51-28-5	2. 4-Dinitrophenol	4500 U
100-02-7	4-Nitrophenol	4500 U
132-64-9	Dibenzofuran	900 U
121-14-2	2 4-Dinitrotoluene	900 U
606-20-2	2. 6-Dinitrotoluene	900 U
84-66-2	Diethylphthalate	900 U
7005-72-3	4-Chlorophenyl-phenylether	900 U
86-73-7	Fluorene	900 U
100-01-6	4-Nitroaniline	4500 U
534-52-1	4 6-Dinitro-2-Methylphenol	4500 U
86-30-6	N-Nitrosodiphenylamine (1)	900 U
101-55-3	4-Bromophenyl-phenylether	900 U
118-74-1	Hexachlorobenzene	900 U
87-86-5	Pentachlorophenol	4500 U
85-01-8	Phenanthrene	200 J
120-12-7	Anthracene	900 U
84-74-2	Di-n-Butylphthalate	900 U
206-44-0	Fluoranthene	310 J
129-00-0	Pyrene	690 J
85-68-7	Butylbenzylphthalate	900 U
91-94-1	3. 3 -Dichlorobenzidine	2500 N
56-55-3	Benzo(a)Anthracene	440 J
117-81-7	bis(2-Ethylhexyl)Phthalate	120 J
218-01-9	Chrysene	590 J
117-84-0	Di-n-Octyl Phthalate	900 U
205-99-2	Benzo(b)Fluoranthene	1200
207-08-9	Benzo(k)Fluoranthene	150 J
50-32-8	Benzo(a)Pyrene	1200
193-39-5	Indeno(1. 2. 3-cd)Pyrene	550 J
53-70-3	Dibenz(a h)Anthracene	260 J
191-24-2	Benzo(g. h. i)Perylene	1600

(1)-Cannot be separated from diphenylamine

JAN 4/13/

Laboratory Name Clayton Environmental

Case No 6876

Sample Number EK-486

RECEIVED MAY 19 1987

Organics Analysis Data Sheet
(Page 3)

6876 • 5 028-20

Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 23 March 1987

Date Analyzed: 25 March 1987

Conc/Dil Factor: 0.5 (GPC Effect)

Percent Moisture (decanted) 26.02

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	22 u
319-85-7	Beta-BHC	22 u
319-86-8	Delta-BHC	22 u
58-89-9	Gamma-BHC (Lindane)	22 u
76-44-8	Heptachlor	22 u
309-00-2	Aldrin	22 u
1024-57-3	Heptachlor Epoxide	22 u
959-98-8	Endosulfan I	22 u
60-57-1	Dieldrin	43 u
72-55-9	4, 4'-DDE	43 u
72-20-8	Endrin	43 u
33213-65-9	Endosulfan II	43 u
72-54-8	4, 4'-DDD	69
1031-07-8	Endosulfan Sulfate	43 u
50-29-3	4, 4'-DDT	52
72-43-5	Methoxychlor	220 u
53494-70-5	Endrin Ketone	43 u
57-74-9	Chlordane	220 u
8001-35-2	Toxaphene	430 u
12674-11-2	Aroclor-1016	220 u
11104-28-2	Aroclor-1221	220 u
11141-16-5	Aroclor-1232	220 u
53469-21-9	Aroclor-1242	220 u
12672-29-6	Aroclor-1248	220 u
11097-69-1	Aroclor-1254	430 u
11096-82-5	Aroclor-1260	430 u

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 30g V_t 20000ul 40000ul - due to GPC V_i 1.0ul

T.O. 3-27-87
R.H 4-1-87

Form 1 7/85

6876 • 5-029-08

Laboratory Name Clayton Environmental

Case No 6876

Sample Number EK-486

RECEIVED MAY 19 1988

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. —	BACKGROUND ARGON + CO_2 (SYSTEM ARTIFACT)	VOA	3.90	50 J
2. —	BACKGROUND ARGON + CO_2 (SYSTEM ARTIFACT)	VOA	4.96	10 J
3. —	UNKNOWN COMPOUND (possible freon)	VOA	8.05	20 J
4. 71238	1-PROPANOL	VOA	10.59	8 J
5. —	UNKNOWN COMPOUND	BNA	5.20	600 BJ
6. —	DIMETHYL HEPTANE	BNA	5.62	700 BJ
7. 123422	4-HYDROXY-4-METHYL-2-PENTANONE *	BNA	5.77	10000 BJ
8. 110430	2-HEPTANONE	BNA	6.13	6000 BJ
9. 2216344	4-METHYL OCTANE	BNA	6.28	2000 BJ
10. 2216333	3-METHYL OCTANE	BNA	6.44	4000 BJ
11 —	UNKNOWN COMPOUND	BNA	7.79	500 J
12. 1713333	1-METHYL-7-OXABICYCLO [4.1.0] HEPTANE	BNA	8.19 ~~8.20~~	800 J
13. —	UNKNOWN COMPOUND	BNA	9.19	600 J
14 57103	HEXADECANOIC ACID	BNA	25.30	500 J
15 —	POSSIBLE 11-H-BENZO[a] FLUORENE	BNA	29.21	400 J
16 —	POSSIBLE METHYL-BENZ[a]ANTHRACENE	BNA	32.63	500 J
17 —	POSSIBLE DIMETHYL HEXADECANE	BNA	33.43	500 J
18. —	DIMETHYL BENZO[c]PHENANTHRENE	BNA	33.79	500 J
19. —	UNKNOWN COMPOUND	BNA	34.81	400 J
20. —	POSSIBLE BENZO[e]PYRENE	BNA	35.25	3000 J
21. —	UNKNOWN COMPOUND	BNA	36.34	600 J
22. —	UNKNOWN COMPOUND	BNA	36.39	700 J
23. —	UNKNOWN COMPOUND	BNA	36.57	500 J
24. —	UNKNOWN (POSSIBLE HYDROCARBON)	BNA	37.14	500 J
25 —	UNKNOWN COMPOUND	BNA	37.84	2000 J
26. —	UNKNOWN COMPOUND	BNA	38.21	1000 J
27 —	UNKNOWN COMPOUND	BNA	41.40	500 J
28.				
29.				
30.				

* Possible aldol condensation product.

7 85

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

Date Received for Review: 4/15 Date Review Completed: 4/17

TO: Glenn Balanoff

FROM: Zena Gold-Kaufman ZK

SUBJECT: Monroe City Landfill
FMI0608 SI
~~FOS~~

Sample Description: Case # 6876

6 Low Soils - Inorganics

Project Data Status: incomplete

FIT Date Review Findings:

Cyanide ✓ Hg not usable
Zinc estimated

Lab Blank is acceptable
several inorganics found in sample

Additional Comments:

none

Book No. 6
Page No. 34

recycled paper

CHEMICAL EVALUATION SHEET

Soil ~~ug/L~~ mg/kg

COMPOUND	CRDL	3-5x CRDL	smpl	smpl	Smpl	smpl	smpl	smpl	smpl	smpl	smpl	smpl	HM
Aluminum			3490	15000	1200	424	303	4570					
Arsenic			6.2	12	9.3			11					
Barium			[73]	302	246			154					
Chromium			18	277	1770	95		122					
Cobalt			[5.8]	[16]									
Cu			30	197	46			64					
Pb			78	438	21	54	11	97					
Cyanide			~~1.0~~	~~0.4~~									
Hg			~~0.4~~										
Ni			[14]	64									
Sn			[16]	38									
V			[11]	[12]	198								
Zn			164	983	75	21	12	377					
Antim				24	[15]								
Beryllium				[1.5]	[1.5]								
Cd				14	~~3.4~~			6.3					
Ag				[4.2]									
Calcium													
Iron													
Mg													
Mn													
K													
Na													

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 4·10·87

SUBJECT: Review of Region V CLP Data
Received for Review on 4/9/87

RECEIVED APR 15 1987

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

TO: Data User: Fit

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

SITE NAME: Monroe City Landfill SMO Case No. 6876

EPA Data Set No. SF 3844 No. of Samples: 6 D.U./Activity Numbers Y051 C7200

CRL No. 87FB02596 - 87FB02502

SMO Traffic No. MEL271 - MEL276

CLP Laboratory: RMML Hrs. Required for Review: 2

Following are our findings.

This review covers analysis of six low soils for total metals and CN^-. Spike recovery is high for Mn (157%), flagging data as estimated, while low for Hg (46%) and CN^- (71%), flagging that data as estimated, also. Duplicate of Hg exceeds CLP limits (29 RPD), but is below soil RPD, satisfying Hg duplication. Serial dilution for Zn is 10% estimating data. No other problems were observed.

4-10-87
DM

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

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

FORM 1320-4 REV 5/86

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

ESD/Central Regional Laboratory
DATA TRACKING FORM FOR CONTRACT SAMPLES

RECEIVED 1 5 1987

CRL Data Set No. 5F3844 CERCLIS No. MID980506604

SMO Case No. 6876 Site Name and Location: Muskegon City Landfill

Name of Contractor or EPA Laboratory: RMAL Data User: FT

No. of Samples: 6 Date Samples or Data Received: 4/8/87

1. Have chain-of-custody records been received? YES ✓ NO ___
2. Have Traffic Reports or packing lists been received? YES ✓ NO ___
3. If no, are Traffic Report or packing list numbers written on the chain-of-custody record? YES ✓ NO ___
4. If no, which traffic report or packing list numbers are missing?

Are basic data forms in? YES ✓ NO ___

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

Checked by: Midie Feliciano Date: 4/9/87

Received by Contract Project Management Section: DMM Date: 4-9-87

Review Started: April 9, 1987 Reviewer Signature: Dorothy M. May

Total time spent on review: 2 Date review completed: April 10, 1987

Copied (xeroxed) by: Yvette Date: ___

Mailed to Data User by: Midie Feliciano Date: 4/10/87

DATA USERS:

Please fill in the blanks below and return this form to: Sylvia Griffin, Data Management Coordinator, Region V, 5SCRL

Data received by: Zina Hold-Kaufman Date: 4/15/87

Q.A. review received by: Zina Hold-Kaufman Date: 4/15/87

Inorganic Data Complete [ ], Suitable for Intended Purposes [ ] ✓ [ ] if acceptable.
Organic Data Complete [ ], Suitable for Intended Purposes [ ] List problems below.
Dioxin Data Complete [ ], Suitable for Intended Purposes [ ]
PAS Data Complete [ ], Suitable for Intended Purposes [ ]

See Attached "Missing Data Request Form" [ ]
PROBLEMS: Please indicate reasons (if any) why data are not suitable for your uses. Other problems.

Received by Data Management Coordinator, CRL for File: Date: ___

Signature: ___

QC EXCEPTION SUMMARY REPORT

CASE # 6876
DATA SET # SF 3844
LAB Q.C. # 56753
DATE: April 10, 1987

SITE Monroe City Landfill
LAB RMA
REVIEWED BY Dorothy M. May

MATRIX: soil
CONC. : low

WATER SAMPLE SPK.
WATER SAMPLE DUP.
SOIL SAMPLE SPK. MEL271
SOIL SAMPLE DUP. MEL271

	OVERALL CASE QC									MATRIX SPECIFIC QC						SAMPLE SPECIFIC QC		FIELD QC			REGIONAL QC			OTHER/ COMMENTS
	Holding Time	Cal Blanks	Init Calver	Contin Calver	Prep Blk AQ	Prep Blk SOL	ICS %R	LCS % AQ	LCS % SOL	Sol Dup RPD	Sol Spk. %R	AQ Dup RPD	AQ Spk %R	Ser Dilu AQ	Ser Dilu SOL	GFAA Dup	GFAA Spike	Blank	Dup RPD	Spike %R	Blind Blank	Blind Spike %R	Split Sample RPD	
Aluminum																								
Antimony																								
Arsenic																								
Barium																								
Beryllium																								
Cadmium																								
Calcium																								
Chromium																								
Cobalt																								
Copper																								
Iron																								
Lead																								
Magnesium																								
Manganese											157%													
Mercury										29	46%													
Nickel																								
Potassium																								
Selenium																								
Silver																								
Sodium																								
Thallium																								
Tin																								
Vanadium																								
Zinc														10%										
Cyanide											71%													

RECEIVED APR 15 1987

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

SF 3844

00001

Date 4-4-87

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COVER PAGE
INORGANIC ANALYSIS DATA PACKAGE

Lab Name ROCKY MOUNTAIN ANALYTICAL
SOW No. 784

Case No. 6876
QC Report No. 56753

Sample Numbers

EPA No.	Lab ID No.	EPA No.	Lab ID No.
MEL271D			
MEL271			
MEL271S			
MEL272			
MEL273			
MEL274			
MEL275			
MEL276			
[MEL999]			

RECEIVED
APR 8 1987
U.S. EPA, CENTRAL REGIONAL LAB.
536 S. CLARK STREET
CHICAGO, ILLINOIS 60605

Comments: 6 LOW SOILS FOR TOTAL METALS & CYANIDE
SERIAL DILUTION OF SAMPLE MEL276 IS IDENTIFIED AS [MEL999]

Interference for Zinc noted for the serial dilution

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

Footnotes:

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

Form I

00002

87FBC2576

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.
MEL271

RECEIVED APR 15 1987

Date 4-4-87

INORGANIC ANALYSIS DATA SHEET

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

CASE NO. 6876
QC REPORT NO. 56753

Elements Identified and Measured

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

mg/kg dry weight

1.	ALUMINUM	3990	P	13.	MAGNESIUM	15300	P
2.	ANTIMONY	15U	P	14.	MANGANESE	326	P R J
3.	ARSENIC	6.2 ~~[6.2]~~	F	15.	MERCURY	0.54	CVXR J
4.	BARIUM	[73]	P	16.	NICKEL	[14]	P
5.	BERYLLIUM	0.63U	P	17.	POTASSIUM	[834]	P
6.	CADMIUM	3.1U	P	18.	SELENIUM	3.1U	F
7.	CALCIUM	87100	P	19.	SILVER	2.5U	P
8.	CHROMIUM	18	P	20.	SODIUM	[1450]	P
9.	COBALT	[5.8]	P	21.	THALLIUM	6.3U	F
10.	COPPER	30	P	22.	TIN	[16]	P
11.	IRON	18100	P	23.	VANADIUM	[11]	P
12.	LEAD	78	F	24.	ZINC	164	P E

Cyanide 1.0 AS R J Percent Solids (%) 80

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: Lead value reported at an additional 5X dilution.

Lab Manager [signature]

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

87FB02597
EPA Sample No.
MEL272

RECEIVED MAR 15 1987

Date 4-4-87

INORGANIC ANALYSIS DATA SHEET

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

CASE NO. 6876
QC REPORT NO. 56753

Elements Identified and Measured

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

mg/kg dry weight

1.	ALUMINUM	11500	P	13.	MAGNESIUM	[3160]	P
2.	ANTIMONY	[24]	P	14.	MANGANESE	245	P R J
3.	ARSENIC	12	F	15.	MERCURY	1.7	CVXR J
4.	BARIUM	302	P	16.	NICKEL	64	P
5.	BERYLLIUM	[1.5]	P	17.	POTASSIUM	[483]	P
6.	CADMIUM	14	P	18.	SELENIUM	4.5U	F
7.	CALCIUM	7280	P	19.	SILVER	[4.2]	P
8.	CHROMIUM	277	P	20.	SODIUM	964U	P
9.	COBALT	[10]	P	21.	THALLIUM	8.9U	F
10.	COPPER	197	P	22.	TIN	38	P
11.	IRON	42400	P	23.	VANADIUM	[17]	P
12.	LEAD	438	F	24.	ZINC	983	P E

Cyanide 0.95 AS R J Percent Solids (%) 56

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: Lead value reported at an additional 10x dilution.

Lab Manager [illegible]

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

87FB02398

RECEIVED APR 15 1987

EPA Sample No. MEL273

Date 4-4-87

INORGANIC ANALYSIS DATA SHEET

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

CASE NO. 6876
QC REPORT NO. 56753

Elements Identified and Measured

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

mg/kg dry weight

1.	ALUMINUM	11200	P	13.	MAGNESIUM	47500	P
2.	ANTIMONY	[15]	P	14.	MANGANESE	10300	P R J
3.	ARSENIC	9.3	F	15.	MERCURY	0.12U	CVXR J
4.	BARIUM	246	P	16.	NICKEL	[12]	P
5.	BERYLLIUM	[1.8]	P	17.	POTASSIUM	[354]	P
6.	CADMIUM	3.1U	P	18.	SELENIUM	3.1U	F
7.	CALCIUM	102000	P	19.	SILVER	2.5U	P
8.	CHROMIUM	1720	P	20.	SODIUM	[1990]	P
9.	COBALT	3.1U	P	21.	THALLIUM	6.2U	F
10.	COPPER	66	P	22.	TIN	[13]	P
11.	IRON	50800	P	23.	VANADIUM	198	P
12.	LEAD	21	F	24.	ZINC	75	P E

Cyanide 0.62U AS R J Percent Solids (%) 81

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

Comments:

Lab Manager CCC

Form I

00005

87F862579

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.
MEL274

RECEIVED APR 15 1987

Date 4-4-87

INORGANIC ANALYSIS DATA SHEET

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

CASE NO. 6876
QC REPORT NO. 56753

Elements Identified and Measured

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

mg/kg dry weight

1.	ALUMINUM	424	P	13.	MAGNESIUM	[1770]	P
2.	ANTIMONY	18U	P	14.	MANGANESE	63	P R J
3.	ARSENIC	7.7U	F	15.	MERCURY	0.15U	CVXR J
4.	BARIUM	[11]	P	16.	NICKEL	3.8U	P
5.	BERYLLIUM	0.77U	P	17.	POTASSIUM	[124]	P
6.	CADMIUM	3.8U	P	18.	SELENIUM	3.8U	F
7.	CALCIUM	4980	P	19.	SILVER	3.1U	P
8.	CHROMIUM	9.5	P	20.	SODIUM	831U	P
9.	COBALT	3.8U	P	21.	THALLIUM	7.7U	F
10.	COPPER	[10]	P	22.	TIN	15U	P
11.	IRON	1420	P	23.	VANADIUM	[21]	P
12.	LEAD	5.4	F	24.	ZINC	24	P E

Cyanide 0.77U AS R J Percent Solids (%) 65

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

Comments:

Lab Manager

Form I

00006

87FB03501

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.
MEL275

RECEIVED APR 15 1987

Date 4-4-87

INORGANIC ANALYSIS DATA SHEET

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

CASE NO. 6876
QC REPORT NO. 56753

Elements Identified and Measured

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

mg/kg dry weight

1.	ALUMINUM	303	P	13.	MAGNESIUM	[185]	P
2.	ANTIMONY	14U	P	14.	MANGANESE	19	P R J
3.	ARSENIC	5.8U	F	15.	MERCURY	0.12U	CVXR J
4.	BARIUM	[31]	P	16.	NICKEL	2.9U	P
5.	BERYLLIUM	0.58U	P	17.	POTASSIUM	[151]	P
6.	CADMIUM	2.9U	P	18.	SELENIUM	2.9U	F
7.	CALCIUM	[1140]	P	19.	SILVER	2.3U	P
8.	CHROMIUM	[4.2]	P	20.	SODIUM	628U	P
9.	COBALT	2.9U	P	21.	THALLIUM	5.8U	F
10.	COPPER	[12]	P	22.	TIN	12U	P
11.	IRON	6260	P	23.	VANADIUM	[7.1]	P
12.	LEAD	11	F	24.	ZINC	12	P E

Cyanide 0.58U AS R J Percent Solids (%) 86

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

Comments:

Lab Manager

Form I

87FB0338 00007

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.
MEL276

RECEIVED APR 15 1987

Date 4-4-87

INORGANIC ANALYSIS DATA SHEET

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

CASE NO. 6876
QC REPORT NO. 56753

Elements Identified and Measured

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

mg/kg dry weight

1.	ALUMINUM	4570	P	13.	MAGNESIUM	14200	P
2.	ANTIMONY	16U	P	14.	MANGANESE	365	P R J
3.	ARSENIC	11	F	15.	MERCURY	0.64	CVXR J
4.	BARIUM	134	P	16.	NICKEL	[18]	P
5.	BERYLLIUM	0.65U	P	17.	POTASSIUM	[443]	P
6.	CADMIUM	6.3	P	18.	SELENIUM	3.2U	F
7.	CALCIUM	93800	P	19.	SILVER	2.6U	P
8.	CHROMIUM	122	P	20.	SODIUM	[1650]	P
9.	COBALT	[5.3]	P	21.	THALLIUM	6.5U	F
10.	COPPER	64	P	22.	TIN	13U	P
11.	IRON	11500	P	23.	VANADIUM	[12]	P
12.	LEAD	97	F	24.	ZINC	377	P E

Cyanide 0.65U AS R J Percent Solids (%) 77

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: Lead value reported at an additional 10x dilution

Lab Manager [illegible]

Form III

Q.C. Report No. 56753

RECEIVED APR 15 1987

BLANKS

LAB NAME ROCKY MOUNTAIN ANALYTICAL

CASE NO. 6876

DATE 4-4-87

UNITS ug/L

Matrix SOIL

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. ALUMINUM		20u					
2. ANTIMONY		24u					
3. ARSENIC							
4. BARIUM		3u					
5. BERYLLIUM		1u					
6. CADMIUM		5u					
7. CALCIUM		63u					
8. CHROMIUM		5u					
9. COBALT		5u					
10. COPPER		4u					
11. IRON		26u					
12. LEAD							
13. MAGNESIUM		47u					
14. MANGANESE		4u					
15. MERCURY							
16. NICKEL		5u					
17. POTASSIUM		95u					
18. SELENIUM							
19. SILVER		4u					
20. SODIUM		1080u					
21. THALLIUM							
22. TIN		20u					
23. VANADIUM		3u					
24. ZINC		2u					
Other:							
Cyanide							

Form III

Q.C. Report No. 56753

BLANKS

RECEIVED APR 15 1987

LAB NAME ROCKY MOUNTAIN ANALYTICAL CASE NO. 6876

DATE 4-4-87 UNITS ug/L

Matrix SOIL

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. ALUMINUM	20U	20U	20U			20U	
2. ANTIMONY	24U	24U	24U			24U	
3. ARSENIC	10u	10u	10u			10u	
4. BARIUM	3U	3U	3U			3U	
5. BERYLLIUM	1U	1U	1U			1U	
6. CADMIUM	5U	5U	5U			5U	
7. CALCIUM	63U	63U	[74]			63U	
8. CHROMIUM	5U	5U	5U			5U	
9. COBALT	5U	5U	5U			5U	
10. COPPER	4U	4U	4U			4U	
11. IRON	26U	26U	26U			26U	
12. LEAD	5u	5u	5u	5u		5u	
13. MAGNESIUM	[54]	47U	[65]			47U	
14. MANGANESE	4U	4U	4U			4U	
15. MERCURY	0.2u	0.2u				0.2u	
16. NICKEL	5U	5U	5U			5U	
17. POTASSIUM	95U	95U	[116]			95U	
18. SELENIUM	5u	5u	5u	5u		5u	
19. SILVER	4U	4U	4U			4U	
20. SODIUM	1080U	1080U	[1280]			1080U	
21. THALLIUM	10u	10u	10u	10u		10u	
22. TIN	20U	20U	20U			20U	
23. VANADIUM	3U	3U	3U			3U	
24. ZINC	2U	2U	2U			[4.4]	
Other:							
Cyanide	10u	10u	10u	10u		10u	

Form V

Q.C. Report No. 56753

RECEIVED APR 5 1987 00014

SPIKE SAMPLE RECOVERY

LAB NAME ROCKY MOUNTAIN ANALYTICAL

DATE 4-4-87

CASE NO. 6876
EPA Sample No. MEL271
Lab Sample ID No. -
Units mg/kg

MATRIX SOIL

Compound	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spike Added (SA)	%R[1]	
Metals:						
1. ALUMINUM	75-125	2390	3190	NR		
2. ANTIMONY	75-125	204	12U	250	82	
3. ARSENIC	75-125	26	~~[5]~~ 5.0	20	105	
4. BARIUM	75-125	1020	[58]	1000	96	
5. BERYLLIUM	75-125	23	0.5U	25	92	
6. CADMIUM	75-125	26	2.5U	25	104	
7. CALCIUM	75-125	62900	69700	NR		
8. CHROMIUM	75-125	108	14	100	94	
9. COBALT	75-125	239	[4.6]	250	94	
10. COPPER	75-125	138	24	125	91	
11. IRON	75-125	11300	14400	NR		
12. LEAD	75-125	78	62	10	160	
13. MAGNESIUM	75-125	7430	12200	NR		
14. MANGANESE	75-125	654	261	250	157	R
15. MERCURY	75-125	0.66	0.43	0.5	46	R
16. NICKEL	75-125	247	[11]	250	94	
17. POTASSIUM	75-125	[593]	[667]	NR		
18. SELENIUM	75-125	4.1 S	2.5U	5	82	
19. SILVER	75-125	25	2U	25	100	
20. SODIUM	75-125	[932]	[1160]	NR		
21. THALLIUM	75-125	23 S	5U	25	92	
22. TIN	75-125	258	[13]	250	98	
23. VANADIUM	75-125	261	[8.8]	250	101	
24. ZINC	75-125	338	131	250	83	
Other:						
Cyanide	75-125	4.4	0.83	5	71	R

[1] %R = [(SSR - SR)/SA] x 100
"R"- out of control

Comments: Selenium + Thallium spiked sample results determined by MSA. Lead values reported at additional 5X dilutions.

The following elements reported unflagged due to sample concentration greater than 4 times the Spike Added value:
LEAD

Form VI

00015

Q.C. Report No. 56753

DUPLICATES

LAB NAME ROCKY MOUNTAIN ANALYTICAL

CASE NO. 6876

EPA Sample No. MEL271D

Lab Sample ID No. -

Units mg/kg

DATE 4-4-87

RECEIVED APR 1 1987

Matrix SOIL

Compound	Control Limit[1]	Sample(S)	Duplicate(D)	RPD[2]	
Metals:					
1. ALUMINUM		3190	3040	4.8	
2. ANTIMONY		12U	12U	NC	
3. ARSENIC		~~[5]~~ 5.0	~~[5]~~ 5.0	~~NC~~ 0	
4. BARIUM		[58]	[57]	NC	
5. BERYLLIUM		0.5U	0.5U	NC	
6. CADMIUM		2.5U	2.5U	NC	
7. CALCIUM		69700	70600	1.3	
8. CHROMIUM		14	9.7	36	
9. COBALT		[4.6]	[4.5]	NC	
10. COPPER		24	24	0	
11. IRON		14400	13100	9.5	
12. LEAD		62	68	9.2	
13. MAGNESIUM		12200	9980	20	
14. MANGANESE		261	267	2.3	
15. MERCURY		0.43	0.32	29	X
16. NICKEL		[11]	[11]	NC	
17. POTASSIUM		[667]	[596]	NC	
18. SELENIUM		2.5U	2.5U	NC	
19. SILVER		2U	2U	NC	
20. SODIUM		[1160]	[1420]	NC	
21. THALLIUM		5U	5U	NC	
22. TIN		[13]	[14]	NC	
23. VANADIUM		[8.8]	[8.6]	NC	
24. ZINC		131	134	2.3	
Other:					
% Solids		80	80	0	
Cyanide		0.83	0.5U	NC	

X 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

The following elements reported unflagged due to sample and/or duplicate concentration less than 5 times the CRDL and +/- CRDL:
CHROMIUM

CENTRAL REGIONAL LABORATORY SAMPLE DATA REPORT
ORGANICS/INORGANICS

SAMPLE DATE: 3/18/87
LOG-IN DATE: 3/31/87
DUE DATE: 5/27/87

SUPERFUND 3844

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

CASE NUMBER/SAS No. 6876 SITE NAME Monroe City Landfill LABORATORY Clayton/BMAL DATE SHIPPED 3/18/87

SUPERFUND DU NUMBER 1905 EPA RPM or OSC (S.M.S.)/(CES) CERCLIS NUMBER MOD980506604 PAGE 1 OF 1

ACTIVITY NUMBER C7210D

CRL LOG NUMBER	ORGANIC TRAFFIC REPORT NUMBER	INORGANIC TRAFFIC REPORT NUMBER or SAS Packing List No.	WATER OR LIQUIDS: ACID-BASE NEUTRAL CPDS ORGANIC SCAN UG/L TOX17874	VOLATILE ORGANIC ANALYSIS ORGANIC SCAN UG/L TOX17884	WATER POLYCHLORINATED BIPHENYLS UG/L PES 17144	WATER CHLORINATED PESTICIDES UG/L PES17134	TOTAL METALS IN WATER UG/L MET1111	WATER CYANIDE UG/L MIN74919	NITRATE/NITRITE MG/L MIN7284	AMMONIA MG/L MIN7284	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				
87FB02596	EK481	MEL271													✓	✓	✓	✓	✓	✓						
87FB02597	EK482	MEL272													✓	✓	✓	✓	✓	✓						
87FB02598	EK483	MEL273													✓	✓	✓	✓	✓	✓						
87FB02599	EK484	MEL274													✓	✓	✓	✓	✓	✓						
87FB03501	EK485	MEL275													✓	✓	✓	✓	✓	✓						
87FB03502	EK486	MEL276													✓	✓	✓	✓	✓	✓						

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