EPA Region 5 Records Ctr.
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PLANNING AND CONTRACTS

SITE INSPECTION REPORT
FOR
MUNICIPAL LANDFILL
ARLINGTON HEIGHTS, ILLINOIS

F05-8708-001
ILD981193428
PAN: FIL0533SA

JANUARY 28, 1988

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ecology and environment, inc.

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

International Specialists in the Environment

MEMORANDUM

DATE: January 28, 1988

TO: File

FROM: Gerard Breen GB

SUBJECT: Illinois/F05-8708-001/FIL0533SA
Arlington Heights/Municipal Landfill
ILD981193428

The Municipal Landfill site contains a closed landfill that is located on a 58-acre parcel of land at the north central border of Cook County, Illinois (T.42N.,R.11E.,sec.6). During operations, the site had accepted general municipal refuse. Barrels containing cutting oils were also disposed of at the landfill. Contaminants detected in a leachate sample collected by the Illinois Environmental Protection Agency (IEPA) indicate that other hazardous wastes had been disposed of at the landfill. The site was identified by IEPA in the form of a preliminary assessment submitted to the United States Environmental Protection Agency (U.S. EPA).

The previous owners of the site property had farmed and operated a small gravel pit at the site. The municipality of Arlington Heights became the owner of the property and began operation of the landfill in 1968. The landfill was operated as an area-fill type landfill. Laseke Disposal Company was the transporter of municipal refuse to the landfill until closure of the facility in 1974. Construction debris, concrete, asphalt, and other wastes have been dumped on the site after closure in 1974. The site has been fenced recently; there had been the potential for unauthorized dumping at the site. There have been no emergency responses at the site.

recycled paper

On October 1, 1987, an Ecology and Environment, Inc., Field Investigation Team (E&E-FIT) conducted a site inspection at the Municipal Landfill site that included an interview with site representatives. In accordance with work plan directives, five soil samples (four on-site and one background) were collected during the inspection. Samples were not split with site representatives.

Dumping at the site has created a large hill with a slope of approximately 50%. There are terraces and berms on the landfill formation. The landfill is densely vegetated, but evidence of surface water runoff was observed. The western slope of the landfill is the steepest slope at the site. At the base of the western slope is an on-site lake that is approximately 1 acre in area. Another lake is located in the northeast corner of the site and is also approximately 1 acre in area. A maintenance building, water tank, pump house, and fire department training tower are located on the southern portion of the site. The municipality of Arlington Heights utilizes the southern portion of the site.

A fencing contractor was observed on-site and was preparing to install fencing at the site. The installation of the fencing on-site has been documented since the site inspection. A lockable gate was observed in the southeast corner of the site. Residential subdivisions are located to the immediate north and east of the site. Industrial facilities are located south and west of the site. Commercial and densely residential areas are located farther south and west of the site.

The landfill is unlined and landfilling has been conducted in direct contact to the water table. The on-site lakes are indicative of the depth of the water table. The site has been covered, but leachate seeps have occurred at the site. An additional clay covering has been added where the leachate seeps had occurred. The final cover consists of clay and silt and is approximately 6 feet thick.

Surface soil samples were collected during the site inspection. Laboratory analysis of the samples revealed the presence of several heavy metals in all of the soil samples. Arsenic was detected in soil sample number one (S1) at 7.8 mg/kg, S2 at 19 mg/kg, S3 at 7.4 mg/kg, and S4 at 6.4 mg/kg. Chromium was detected in S1 at 45 mg/kg, S2 at 12 mg/kg, S3 at 21 mg/kg, and S4 at 30 mg/kg. Lead was detected in S1 at 14 mg/kg, S2 at 37 mg/kg, S3 at 23 mg/kg, and S4 at 20 mg/kg. (Other metals detected in soil samples are listed in the data summary sheets.) Several polyaromatic hydrocarbons (PAHs) were detected in the on-site soil samples. PAHs were detected at higher concentrations in the background sample than in the on-site soil samples.

The background sample was collected from a grassy field just outside of the southern fence line of the site. An industrial plant is located adjacent to the field. The background sample contained concentrations of heavy metals at levels comparable to the levels detected in on-site samples. Concentrations of PAHs were detected in the background sample (S5) and included fluoranthene (4,400 ug/kg), pyrene (3,100 ug/kg), and benzo(b&k)fluoranthene (3,500 ug/kg). Many tentatively identified organic compounds were detected in the on-site samples and the background soil sample. (See data summary sheets for complete sample analysis data.)

The geology in the area of the site consists of a dolomite bedrock of the Silurian System. Below the dolomite is a Maquoketa shale formation. Overlying the dolomite is approximately 180 feet of glacial drift consisting largely of clayey, silty till. The till is interbedded with sand and gravel lenses; the extent and distribution of which are undetermined.

The aquifer of concern in the area of the site is located in the Niagaran Series of the dolomite bedrock. Residents in Long Grove, located approximately 2 1/2 miles northwest of the site, utilize private wells finished in the aquifer. The residential wells are located

approximately 2 1/2 miles from the site. Due to the distance of the wells from the site, the thickness of the clayey tills in the area, and the location of Buffalo Creek between the site and Long Grove, the risk of contaminants from the site reaching wells in the Long Grove area is minimal. An additional well was discovered in the site inspection interview. The well is located in the on-site maintenance building and is utilized by municipal employees for drinking water.

The two on-site lakes had been fished from before fencing was installed at the site. Buffalo Creek has been used by children for fishing and for recreational purposes. Shallow groundwater flow in the area of the site is estimated to be to the north and northwest. The on-site lakes and Buffalo Creek are potential targets of contaminated, shallow groundwater flowing from the landfill.

0153:4

EPA

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

I. IDENTIFICATION
01 STATE: IL
02 SITE NUMBER: ILD981193428

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ■ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE _____) — ■ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
THE AREAS WHERE the EARTH has been disturbed and where traffic passes lacks vegetation. On the fill and other surrounding areas vegetation grows with vigor. LEACHATE SEEPAGE POSES THE GREATEST POTENTIAL THREAT TO FLORA.

01 ■ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE _____) — ■ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
SEVERAL SPECIES OF ANIMALS POTENTIALLY CAN BE AFFECTED BY CONTAMINANTS. WATERFOWL, WADING BIRDS, RABBITS, RODENTS, FISH AND DEER MAY INHABIT OR PASS THROUGH THE SITE AND COME INTO CONTACT WITH CONTAMINATED SOIL AND/OR WATER.

01 ■ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE _____) — ■ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
DEER, WATER FOWL, RODENTS, RABBITS AND FISH ARE POTENTIALLY EFFECTED.

01 ■ M. UNSTABLE CONTAINMENT OF WASTES (Spills, Runoff, Standing liquids, Leaking drums) — 02 ☐ OBSERVED (DATE _____) — ■ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 2500-3000
04 NARRATIVE DESCRIPTION
Landfill was finished below the water table of the saturated zone. No liners were used as the natural deposit below the fill is glacial till. There is a great potential for the migration of contaminants should they reach a sand and gravel lense below site.

01 ■ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE _____) — ■ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
The potential damage to off-site property is minimal. The greatest potential threat would exist if a leachate seep developed that allowed migration of contaminants off-site.

01 ■ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE _____) — ■ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
The slope off the east side of the site is fairly steep. The potential exists for surface water runoff from this side of the landfill to reach the storm drains and sewers immediately to the east of the site perimeter.

01 ■ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE _____) — ■ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
The site was only recently secured with a fence. Prior to fence construction the site was open to illegal/unauthorized dumping.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
No other known or potential hazards have been documented or observed.

III. TOTAL POPULATION POTENTIALLY AFFECTED: 2500-3000

IV. COMMENTS
The municipality and site planners hope to construct a golf course on this site in the future. Should golf course construction occur, the potential exists for direct contact with contaminants via the on-site lakes.

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)
E & E / FIT SITE INSPECTION 10/1/87
FIT FILES

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	ILD981193428

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	2-PROPANOL, 1,1,1-TRICHLORO-2-METHYL (T.I.C)	57-15-8	SOIL SAMPLES	400	ug/kg
OOC	UNDECANE, 4,7-DIMETHYL	17301-32-5		260	
OOC	TRIDECANE 6-METHYL	13287-21-3		320	
OOC	HEPTADECANE 2,6-DIMETHYL	54105-67-8		500	
OOC	IRON TRICARBONYL - BENZENAMINE-N-N'	74764-11-7		250	
OOC	NONADECANE	629-92-5		320	
OOC	1,2-BENZENE DICARBOXYLIC ACID	17851-53-5		400	
OOC	SULFUR	10544-50-0		7500	
OOC	DECANEDIOIC ACID	2432-89-5		430	
OOC	OCTACOSANE	630-02-4		280	
OOC	PENTANE	109-66-0		29	
OOC	HEXANE	110-54-3		7	
OOC	TRIDECANE 3-METHYL	6418-41-3		320	
OOC	PENTADECANE 2,6,10,14-TETRAMETHYL	1921-70-6		520	
OOC	DOCOSANE	629-97-0		770	
OOC	PENTACOSANE	629-99-2		470	
OOC	1,2-DIETHOXYETHANE	629-14-1		8	
OOC	3-PENTANOL 2,2-DIMETHYL	3970-62-5		240	
OOC	5-HEXANE-2-ONE 5-METHYL	3240-09-3		210	
OOC	9-OCTADECENE	7206-25-9		180	
OOC	1-HEPTADECANOL	1454-85-9		580	

* T.I.C = Tentatively Identified Compounds

V. FEEDSTOCKS (See Appendix for CAS Numbers) NONE

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

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

E & E /FIT SITE INSPECTION 10/1/87

FIT FILES

EPA FORM 2070-13 (7-81)

ecology and environment, inc.

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

International Specialists in the Environment

CRL Receipt Date 11/16/87 FIT Receipt Date 12/10/87 Review Completed 12/16/87

TO: Breen

FROM: Brenda R. Jones

SUBJECT: Municipal Landfill /Arlington Heights

PAN: IL 0533 CASE # 8142

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
#	Low Soil	# 5	Low Soil
	Low Water		Low Water
	Drinking Water		Drinking Water
	Other		Other

Project Data Status _____ Completed!!

✓ Incomplete, awaiting: _____

FIT Data Review Findings:

Check Data Sheets for Transcription Errors

✓✓ Compounds were detected in sample(s); see enclosed sheet.

Book No. 7 Page No. 35 Date Sampled 10/1/87

26U:001

1 hour charged to above PAN week ending 12/19/87

COMPOUND											
ITC	MEP767	768	769	770	772						
OTC	EU545	546	547	548	550						
SAMPLE	S1	S2	S3	S4	S6						
pentachlorophenol											
phenanthrene	56J	63J			2100						
anthracene					420						
di-n-butylphthalate											
fluoranthene	110J	100J		13J	4400						
benzidine											
pyrene	83J	75J	4J	13J	3100						
butylbenzylphthalate											
3,3'-dichlorobenzidine											
benzo(a)anthracene					1600						
bis(2-ethylhexyl)phthalate											
chrysene		50J			1600						
di-n-octylphthalate											
benzo(b&k)fluoranthene	75J	62J			3500						
benzo(a)pyrene					1800						
indeno(1,2,3-cd)pyrene					1400J						
dibenzo(a,h)anthracene											
benzo(g,h,i)perylene					1100						
alpha-BHC											
beta-BHC											
delta-BHC											
gamma-BHC(lindane)											
heptachlor											
aldrin											
heptachlor epoxide											
endosulfan I											
dieldrin											
4,4'-DDE											
endrin											
endosulfan II											
4,4'-DDD											
endrin aldehyde											
endosulfan sulfate											
4,4'-DDT											
methoxychlor											
endrin ketone											
chlordane											
toxaphene											
Aroclor-1221											
Aroclor-1232											
Aroclor-1242											
Aroclor-1248											
Aroclor-1254											
Aroclor-1260											
ELEMENT											
aluminum											
antimony											
arsenic	7.8	19	7.4	6.4	6.9						
barium											
beryllium	0.2	0.3	0.6	0.8	1.0						
cadmium				1.3							
calcium											
chromium	45	12	21	30	12.3						
cobalt	6.2	8.6	8.6	6.7	13						
copper	25	43	38	30	35						
iron											
lead	14	37	23	20	30						
magnesium											
manganese											
mercury											
nickel	38	30	29	25	74						
potassium											
selenium											
silver											
sodium											
thallium											
tin											
vanadium	19	20	33	46	50						
zinc											
cyanide CHECK IF ANALYZED ( )											
TENTATIVELY IDENTIFIED ORGANICS											
Propane, 1,1-Trichloro-2 Methyl	340		400	220							
Undecane, 4,7-Dimethyl	240	260									
Tridecane, 6-Methyl	320										
Heptadecane, 2,6-Dimethyl	500	280									
Iron Tricarbonyl [illegible]	200	250		250							
Nonadecane	290	320			2800						
1,2-Benzenedicarboxylic Acid	310		400	360	200						
Sulfur	4300	7500			610						
Dehydroabietic Acid	430										
Octadecane	280										
Pentane	29	20	11		12						
Hexane	7				6						

STATE Illinois SITE Arlington Heights Municipal Landfill TDD F05-8708-001 PAGE 2 OF 2, SET # 3

	ITC	MEP767	768	769	770	772						
	OTC	EN545	546	547	548	550						
	SAMPLE	S1	S2	S3	S4	S6						
COMPOUND												
chloromethane												
bromomethane												
vinyl chloride												
chloroethane												
methylene chloride												
acetone												
carbon disulfide												
1,1-dichloroethene												
1,1-dichloroethane												
trans-1,2,-dichloroethene												
chloroform		5	3J	4J	4J	3J						
1,2-dichloroethane												
2-butanone												
1,1,1-trichloroethane												
carbon tetrachloride												
vinyl acetate												
bromodichloromethane												
1,1,2,2-tetrachloroethene												
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			2JB	1JB								
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		82J										
bis(2-chloroethoxy)methane												
2,4-dichlorophenol												
1,2,4-trichlorobenzene												
napthalene												
4-chloroaniline												
hexachlorobutadiene												
4-chloro-3-methylphenol												
2-methylnapthalene												
hexachlorocyclopentadiene												
2,4,6-trichlorophenol												
2,4,5-trichlorophenol												
2-chloronaphthalene												
2-nitroaniline												
dimethyl phthalate												
acenapthylene					14J							
3-nitroaniline												
acenaphthene					110J							
2,4-dinitrophenol												
4-nitrophenol												
dibenzofuran					55J							
2,4-dinitrotoluene												
2,6-dinitrotoluene												
diethylphthalate												
4-chlorophenyl-phenylether												
fluorene					140J							
4-nitroaniline												
4,6-dinitro-2-methylphenol												
N-nitrosodiphenylamine												
4-bromophenyl-phenylether												
hexachlorobenzene												

STATE Illinois SITE Arlington Heights Municipal Landfill TDD F05-8708-001 PAGE 1 OF 2, SET # ____

FOLLOWING 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

TENTATIVELY IDENTIFIED ORGANICS	EN545	EN546	EN547	EN548	EN550
HEPTADECANE 3-METHYL		370			
HEPTADECANE 2,6,10,14-TETRAMETHYL		530			
DECOSANE		770			
PENTACOSANE		410		470	350
1,2-DICHLOROETHANE		8			
3-PENTANOL 2,2-DIMETHYL			240		
5-HEXENE-2-ONE 5-METHYL			210		
9-OCTADECENE				180	
TETRAPENTACANE				580	
NAPHTHALENE 1,2-DI-1-PROPYNYL					360
BENZO[B]NAPHTHO[2,3-D] FURAN					200
11H-BENZO[A] FLUORENE					250
11H-BENZO[B] FLUORENE					230
BENZO[GHI] PERYLENE					220
BENZO[C] CHRYSENE					220
BENZO[E] PYRENE					310
BENZ[E] ACEPHENANTHRYLENE					1700
ETHANE 1,2-DIETHOXY					10

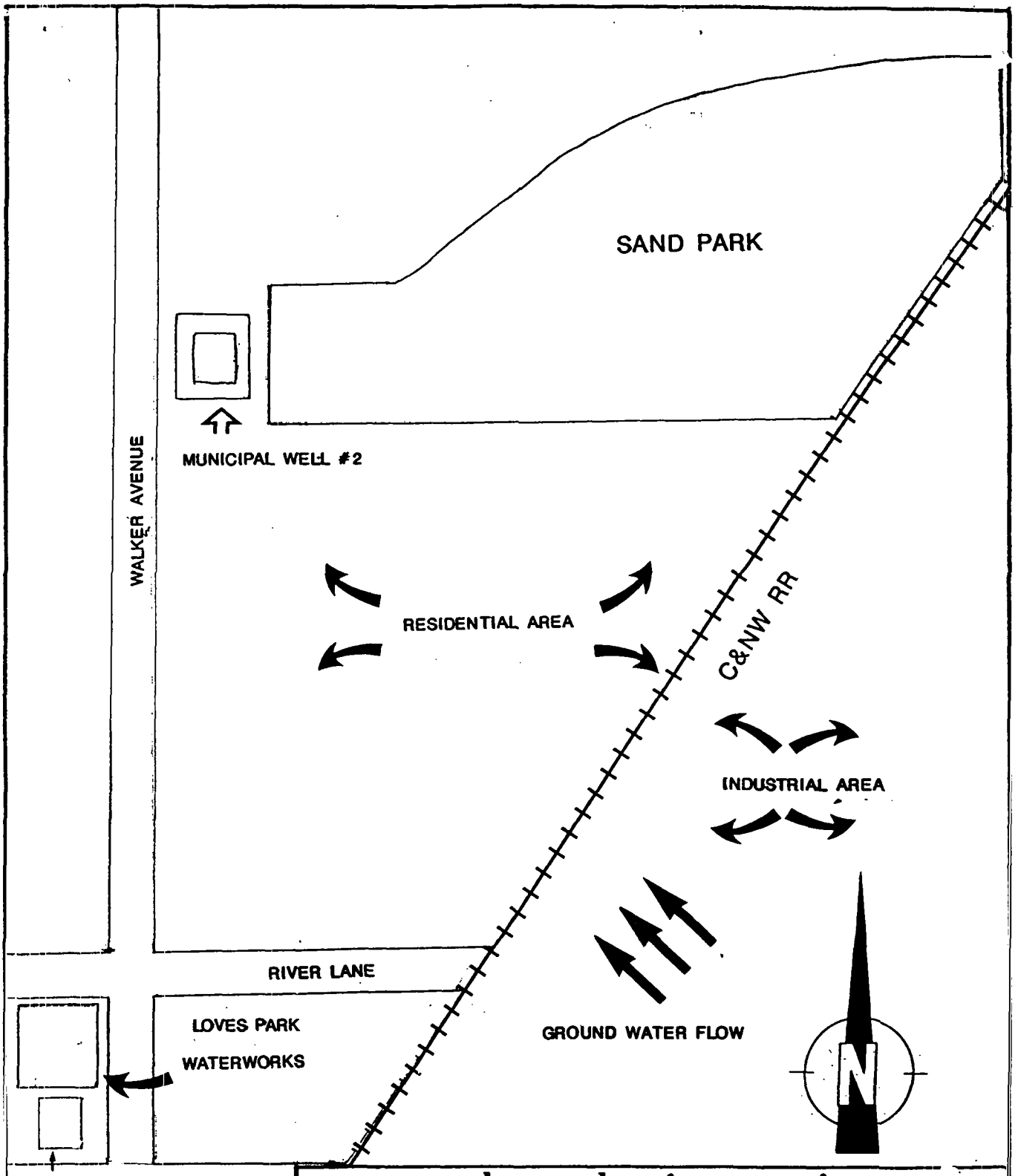
STATE ILLINOIS SITE ARLINGTON HEIGHTS MUNICIPAL LANDFILL TDD F05-8708-001 PAGE ~~2~~ 3 OF ~~2~~ 3, SET # ____

Immediate Removal Action Check Sheet

	High	Moderate	Low
Fire and Explosion Hazard			
Flammable Materials N/A			X
Explosives N/A			X
Incompatable Chemicals N/A			X
Direct Contact with Acutely Toxic Chemicals			
Site Security N/A			X
Leaking Drums or Tanks N/A			X
Open Lagoons or pits N/A			X
Materials on Surface N/A			X
Proximity of Population N/A			X
Evidence of Casual Site Use N/A			X
Contaminated Water Supply			
Exceeds 10 Day Snarl N/A			X
Gross Taste or Odors NONE			X
Alternate Water Available SEE COMMENTS		X	
Potential Contamination CONTAMINANTS DETECTED		X	
Is the site abandoned or active? ACTIVE.			

Comments

SITE CONSISTS OF A MUNICIPAL WATER WELL WHICH IS USED PREDOMINANTLY DURING PERIOD WHEN WATER DEMAND INCREASES (i.e. SUMMERTIME). THE HAS BEEN FOUND TO BE CONTAMINATED WITH CHLORINATED SOLVENTS



ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9416

TITLE: SITE MAP	FIGURE #: 2
SITE: LOVES PARK MUNICIPAL WELL #2	SCALE: N.T.S.
CITY: LOVES PARK STATE: IL	TDD #: F05-8706-043
SOURCE: SITE INSPECTION	DATE: 1971 REVISED:

#1

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

SEP - 8 1986

SAMPLE NUMBER : D649435
MPLING POINT DESC. : LOVES PARK #1 (OW)

SUBMITTING SOURCE # : SITE # : 2010150
DATE COLLECTED : 860806 TIME COLLECTED : 0910 SAMPLING PROGRAM :

COLLECTED BY : G T WHITE DELIVERED BY : GTW
COMMENTS :
FUNDING CODE : PW34 AGENCY ROUTING : 00 UNIT CODE :
SAM TYPE CODE : SAMPLE PURPOSE CODE : 0

DATE RECEIVED : 860808 TIME RECEIVED : 1000 RECEIVED BY : JTS
LAB OBSERVATIONS : 2 VOCS REPORTING INDICATOR :
SUPERVISORS INITIALS : JTH NOTE : K = LESS THAN VALUE

P32106	CHLOROFORM	UG/L :	1.0K ✓
P32101	DICHLOROBROMOMETHANE	UG/L :	1.0K ✓
P32105	CHLORODIBROMOMETHANE	UG/L :	1.0K ✓
P32104	BROMOFORM	UG/L :	1.0K ✓
P34423	METHYLENE CHLORIDE	UG/L :	1.0K TR ✓
P34501	1,1-DICHLOROETHYLENE	UG/L :	1.0K ✓
P34496	1,1-DICHLOROETHANE	UG/L :	2 ✓
→ P34546	TRANS-1,2-DICHLOROETHYLENE	UG/L :	13 ✓
P77279	1,2-DICHLOROETHANE	UG/L :	1.0K TR ✓
506	1,1,1-TRICHLOROETHANE	UG/L :	1.0K TR ✓
102	CARBON TETRACHLORIDE	UG/L :	1.0K ✓
P39180	TRICHLOROETHYLENE	UG/L :	2 ✓
P34475	TETRACHLOROETHYLENE	UG/L :	1.0K ✓
P34301	CHLOROBENZENE	UG/L :	1.0K ✓
P34716	DICHLOROBENZENE	UG/L :	1.0K ✓
P78124	BENZENE	UG/L :	1.0K IR * ✓
P73131	TOLUENE	UG/L :	1.0K ✓
P73113	ETHYLBENZENE	UG/L :	1.0K ✓
P81551	XYLENE	UG/L :	1.0K ✓

Benzene may be a contaminant in these samples

#2

SEP - 8 1986

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

SAMPLE NUMBER : D649436
SAMPLING POINT DESC. : LOVES PARK #2 (GW)

SUBMITTING SOURCE # : SITE # : 2010150
DATE COLLECTED : 860806 TIME COLLECTED : 1005 SAMPLING PROGRAM :

COLLECTED BY : G T WHITE DELIVERED BY : GTW
COMMENTS :
FUNDING CODE : PW34 AGENCY ROUTING : 00 UNIT CODE :
SAM TYPE CODE : SAMPLE PURPOSE CODE : 0

DATE RECEIVED : 860808 TIME RECEIVED : 1000 RECEIVED BY : JTS
LAB OBSERVATIONS : 2 VOCS REPORTING INDICATOR :
SUPERVISORS INITIALS : JTH NOTE : K = LESS THAN VALUE

P32106	CHLOROFORM	UG/L	: 1.0K	✓
P32101	DICHLOROBROMOMETHANE	UG/L	: 1.0K	✓
P32105	CHLORODIBROMOMETHANE	UG/L	: 1.0K	✓
P32104	BROMOFORM	UG/L	: 1.0K	✓
P34423	METHYLENE CHLORIDE	UG/L	: 1.0K	TR ✓
P34501	1,1-DICHLOROETHYLENE	UG/L	: 1.0K	✓
P34496	1,1-DICHLOROETHANE	UG/L	: 2	✓
P34546	TRANS-1,2-DICHLOROETHYLENE	UG/L	: 38	✓
7279	1,2-DICHLOROETHANE	UG/L	: 1.0K	TR ✓
4506	1,1,1-TRICHLOROETHANE	UG/L	: 1.0K	✓
P32102	CARBON TETRACHLORIDE	UG/L	: 1.0K	✓
P39180	TRICHLOROETHYLENE	UG/L	: 4	✓
P34475	TETRACHLOROETHYLENE	UG/L	: 1.0K	✓
P34301	CHLOROBENZENE	UG/L	: 1.0K	✓
P34716	DICHLOROBENZENE	UG/L	: 1.0K	✓
P78124	BENZENE	UG/L	: 2.0	✓
P78131	TOLUENE	UG/L	: 1.0K	✓
P78113	ETHYLBENZENE	UG/L	: 1.0K	✓
P81551	XYLENE	UG/L	: 1.0K	✓

#2

Biomedical Service Laboratories
University of Illinois College of Medicine at Rockford
1601 Parkview Ave., Rockford, Il 61107-1897 (815)987-7524

Priority Pollutant Volatile Organics Analysis

Loves Park Water Dept.
5440 Walker
Loves Park, Il. 61111
Attn: Steve Urbelis

Sample Name LEWD Well #2
Date Received 3-25-87 I.D.# IX 1364
Date Reported 3-26-87 am ___ pm ___
Phone Rpt. by _____ to _____

Priority Pollutant #	CAS #	Name	Levels Detected parts per million
(4)	71-43-2	benzene	*
(6)	56-23-5	carbon tetrachloride	*
(7)	108-90-7	chlorobenzene	*
(10)	107-06-2	1,2-dichloroethane	*
(11)	71-55-6	1,1,1-trichloroethane	*
(13)	75-34-3	1,1-dichloroethane	*
(14)	79-00-5	1,1,2-trichloroethane	*
(15)	79-34-5	1,1,2,2-tetrachloroethane	*
(16)	75-00-3	chloroethane	*
(19)	110-75-8	2-chloroethylvinyl ether	*
(23)	67-66-3	chloroform	*
(25)	95-50-1	1,2-dichlorobenzene	*
(26)	541-73-1	1,3-dichlorobenzene	*
(27)	106-46-7	1,4-dichlorobenzene	*
(29)	75-35-4	1,1-dichloroethylene	*
(30)	156-60-5	trans-1,2-dichloroethylene	*
	156-59-2	cis-1,2-dichloroethylene	0.015
(32)	78-87-5	1,2-dichloropropane	*
(33)	10061-02-6	trans-1,3-dichloropropylene	*
	10061-01-05	cis-1,3-dichloropropylene	*
(38)	100-41-4	ethylbenzene	*
(44)	75-09-2	methylene chloride	*
(45)	74-87-3	chloromethane	*
(46)	74-83-9	bromomethane	*
(47)	75-25-2	bromoform	*
(48)	75-27-4	bromodichloromethane	*
(49)	75-69-4	fluorotrichloromethane	*
(50)	75-71-8	dichlorodifluoromethane	*
(51)	124-48-1	chlorodibromomethane	*
(85)	127-18-4	tetrachloroethylene	*
(86)	108-88-3	toluene	*
(87)	79-01-6	trichloroethyene	*
(88)	75-01-4	vinyl chloride	*

*Not present at detectable levels.

Analyst Kathe L Munding Date 3-26-87
Director [signature] Date 3-26-87

Loves Park Municipal Well #2
Loves Park, Illinois
TDD F05-8706-043
ILD 981785843

The site inspection for this area has been rejected since it was lacking four specific elements:

1) The removal checklist was not in the report.

2) Ground water flow direction was not indicated on figure #2.

3) No mention was given as to when the contamination was first detected.

4) What information supports the 38ug/l figure mentioned in the 2nd page of the SI report?

Date: 9-23-87
Rejected by: J. Ursic U.S. EPA Region V

SITE INSPECTION MEMO 1

2070-13 FORM 2

SITE MAPS 3

SITE PHOTOGRAPHS 4

ANALYTICAL DATA 5

ecology and environment, inc.

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

International Specialists in the Environment

MEMORANDUM

DATE: January 28, 1988

TO: File

FROM: Gerard Breen GB

SUBJECT: Illinois/F05-8708-001/FIL0533SA
Arlington Heights/Municipal Landfill
ILD981193428

The Municipal Landfill site contains a closed landfill that is located on a 58-acre parcel of land at the north central border of Cook County, Illinois (T.42N.,R.11E.,sec.6). During operations, the site had accepted general municipal refuse. Barrels containing cutting oils were also disposed of at the landfill. Contaminants detected in a leachate sample collected by the Illinois Environmental Protection Agency (IEPA) indicate that other hazardous wastes had been disposed of at the landfill. The site was identified by IEPA in the form of a preliminary assessment submitted to the United States Environmental Protection Agency (U.S. EPA).

The previous owners of the site property had farmed and operated a small gravel pit at the site. The municipality of Arlington Heights became the owner of the property and began operation of the landfill in 1968. The landfill was operated as an area-fill type landfill. Laseke Disposal Company was the transporter of municipal refuse to the landfill until closure of the facility in 1974. Construction debris, concrete, asphalt, and other wastes have been dumped on the site after closure in 1974. The site has been fenced recently; there had been the potential for unauthorized dumping at the site. There have been no emergency responses at the site.

recycled paper

On October 1, 1987, an Ecology and Environment, Inc., Field Investigation Team (E&E-FIT) conducted a site inspection at the Municipal Landfill site that included an interview with site representatives. In accordance with work plan directives, five soil samples (four on-site and one background) were collected during the inspection. Samples were not split with site representatives.

Dumping at the site has created a large hill with a slope of approximately 50%. There are terraces and berms on the landfill formation. The landfill is densely vegetated, but evidence of surface water runoff was observed. The western slope of the landfill is the steepest slope at the site. At the base of the western slope is an on-site lake that is approximately 1 acre in area. Another lake is located in the northeast corner of the site and is also approximately 1 acre in area. A maintenance building, water tank, pump house, and fire department training tower are located on the southern portion of the site. The municipality of Arlington Heights utilizes the southern portion of the site.

A fencing contractor was observed on-site and was preparing to install fencing at the site. The installation of the fencing on-site has been documented since the site inspection. A lockable gate was observed in the southeast corner of the site. Residential subdivisions are located to the immediate north and east of the site. Industrial facilities are located south and west of the site. Commercial and densely residential areas are located farther south and west of the site.

The landfill is unlined and landfilling has been conducted in direct contact to the water table. The on-site lakes are indicative of the depth of the water table. The site has been covered, but leachate seeps have occurred at the site. An additional clay covering has been added where the leachate seeps had occurred. The final cover consists of clay and silt and is approximately 6 feet thick.

Surface soil samples were collected during the site inspection. Laboratory analysis of the samples revealed the presence of several heavy metals in all of the soil samples. Arsenic was detected in soil sample number one (S1) at 7.8 mg/kg, S2 at 19 mg/kg, S3 at 7.4 mg/kg, and S4 at 6.4 mg/kg. Chromium was detected in S1 at 45 mg/kg, S2 at 12 mg/kg, S3 at 21 mg/kg, and S4 at 30 mg/kg. Lead was detected in S1 at 14 mg/kg, S2 at 37 mg/kg, S3 at 23 mg/kg, and S4 at 20 mg/kg. (Other metals detected in soil samples are listed in the data summary sheets.) Several polyaromatic hydrocarbons (PAHs) were detected in the on-site soil samples. PAHs were detected at higher concentrations in the background sample than in the on-site soil samples.

The background sample was collected from a grassy field just outside of the southern fence line of the site. An industrial plant is located adjacent to the field. The background sample contained concentrations of heavy metals at levels comparable to the levels detected in on-site samples. Concentrations of PAHs were detected in the background sample (S5) and included fluoranthene (4,400 ug/kg), pyrene (3,100 ug/kg), and benzo(b&k)fluoranthene (3,500 ug/kg). Many tentatively identified organic compounds were detected in the on-site samples and the background soil sample. (See data summary sheets for complete sample analysis data.)

The geology in the area of the site consists of a dolomite bedrock of the Silurian System. Below the dolomite is a Maquoketa shale formation. Overlying the dolomite is approximately 180 feet of glacial drift consisting largely of clayey, silty till. The till is interbedded with sand and gravel lenses; the extent and distribution of which are undetermined.

The aquifer of concern in the area of the site is located in the Niagaran Series of the dolomite bedrock. Residents in Long Grove, located approximately 2 1/2 miles northwest of the site, utilize private wells finished in the aquifer. The residential wells are located

approximately 2 1/2 miles from the site. Due to the distance of the wells from the site, the thickness of the clayey tills in the area, and the location of Buffalo Creek between the site and Long Grove, the risk of contaminants from the site reaching wells in the Long Grove area is minimal. An additional well was discovered in the site inspection interview. The well is located in the on-site maintenance building and is utilized by municipal employees for drinking water.

The two on-site lakes had been fished from before fencing was installed at the site. Buffalo Creek has been used by children for fishing and for recreational purposes. Shallow groundwater flow in the area of the site is estimated to be to the north and northwest. The on-site lakes and Buffalo Creek are potential targets of contaminated, shallow groundwater flowing from the landfill.

0153:4

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	ILD981193428

II. SITE NAME AND LOCATION

01 SITE NAME	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
MUNICIPAL LANDFILL / ARLINGTON HEIGHTS	3700 N. KENICOTT ST.

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG. DIST
ARLINGTON HEIGHTS	IL	60005	COOK COUNTY	031	12

09 COORDINATES: LATITUDE 42 08 30.0 | LONGITUDE 087 59 30.0

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: 10 / 1 / 87 (MONTH DAY YEAR)

02 SITE STATUS: ☐ ACTIVE ■ INACTIVE

03 YEARS OF OPERATION: 1968 (BEGINNING YEAR) / 1974 (ENDING YEAR) ____ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply): ☐ A. EPA ■ B. EPA CONTRACTOR ECOLOGY AND ENVIRONMENT INC. ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR ____ ☐ E. STATE ☐ F. STATE CONTRACTOR ____ ☐ G. OTHER ____

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO
GERARD BREEN	HYDROLOGIST	E & E / FIT	(312) 663-9415

09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO
REGINA BAYER	WATER CHEMIST	E & E / FIT	(312) 663-9415
KAREN McTIGUE	ENVIRONMENTAL TECHNICIAN	E & E / FIT	(312) 663-9415
JOHN LAZINSKI	GEOLOGIST	E & E / FIT	(913) 432-9961
MITCH LEVIN	OSC	IEPA	(312) 345-9780
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
ALLEN SANDER	SUPERINTENDENT	222 N. RIDGE / ARLINGTON HEIGHTS	(312) 253-2340
BILL REINHART	MAINTENANCE SUPERINTENDENT	222 N. RIDGE / ARLINGTON HEIGHTS	(312) 253-2340
JACK SHEVIK	UNKNOWN	222 N. RIDGE / ARLINGTON HEIGHTS	(312) 253-2340
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
■ PERMISSION ☐ WARRANT	10:00 AM	SUNNY, COOL, WINDY - TEMP ~ 55°F

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO
MONTE M. NIENKERK	STATE SITE MANAGEMENT - IEPA	(217) 782-9276

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
GERARD BREEN	U.S. EPA	E & E / FIT	312/663-9415	/ / (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION
01 STATE: IL
02 SITE NUMBER: ILD981193438

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)
- [x] A SOLID
- [ ] B POWDER FINES
- [ ] C SLUDGE
- [ ] D SLURRY
- [ ] E LIQUID
- [ ] F GAS
- [ ] G OTHER _____

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be consistent)
TONS _____
CUBIC YARDS UNKNOWN
NO. OF DRUMS _____

03 WASTE CHARACTERISTICS (Check all that apply)
- [x] A TOXIC
- [ ] B CORROSIVE
- [ ] C RADIOACTIVE
- [ ] D PERSISTENT
- [ ] E SOLUBLE
- [ ] F INFECTIOUS
- [ ] G FLAMMABLE
- [x] H IGNITABLE
- [x] I HIGHLY VOLATILE
- [ ] J EXPLOSIVE
- [x] K REACTIVE
- [ ] L INCOMPATIBLE
- [ ] M NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			* FACILITY OPERATED PREDOMINANTLY AS
OLW	OILY WASTE			A SANITARY LANDFILL ACCEPTING MUNI-
SOL	SOLVENTS			CIPAL WASTES. OTHER WASTE
PSD	PESTICIDES			REPORTED TO HAVE BEEN ACCEPTED AT
OCC	OTHER ORGANIC CHEMICALS			THE SITE INCLUDE: CATCH BASIN
IOC	INORGANIC CHEMICALS			CLEANINGS; SEWAGE TREATMENT SLUDGE;
ACD	ACIDS			LUBRICATION OILS; AND EMPTY DRUMS.
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See appendix for most frequently cited CAS numbers)

VALUES REPRESENT HIGHEST CONCENTRATIONS FOUND

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
MES	ARSENIC	7440-38-2	SOIL SAMPLES	19	mg/kg
MES	BERYLLIUM	7440-41-7		0.8	
MES	CHROMIUM	7440-47-3		45	
MES	COBALT	7440-48-4		8.6	
MES	COPPER	7440-50-8		43	
MES	LEAD	7439-92-1		37	
MES	NICKEL	7440-02-0		38	
MES	VANADIUM	7440-62-2		46	
OOC	CHLOROFORM	67-66-3		5	ug/kg
ACD	BENZOIC ACID	65-85-0		80J *	
BAS	PHENANTHRENE	85-01-8		63J	
BAS	FLUORANTHENE	206-44-0		110J	
BAS	PYRENE	129-00-0		83J	
BAS	CHRYSENE	218-01-9		50J	
BAS	BENZO(b&k)FLUORANTHENE	205-99-2 (b) 207-08-9 (k)		75J	
			SEE ATTACHED	PAGE →	

V. FEEDSTOCKS (See appendix for CAS numbers): NONE

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

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

E & E/FIT SITE INSPECTION 10/1/87

FIT FILES

*-J INDICATES AN ESTIMATED VALUE.

EPA

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

I. IDENTIFICATION
01 STATE: IL
02 SITE NUMBER: ILD981193473

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ■ A GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE _____) — ■ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 2500-3000
04 NARRATIVE DESCRIPTION
WELL LOGS REPORT SEVERAL SAND AND GRAVEL LENSES WITHIN THE GLACIAL TILLS WHICH PREDOMINATE THE UNCONSOLIDATED DEPOSITS OVERLYING THE BEDROCK. SHOULD THERE BE SAND AND GRAVEL LENSES UNDER THE SITE AND SHOULD THEY BE CONTINUOUS ENOUGH TO SERVE AS TRANSPORT CONDUITS, THE POSSIBILITY EXISTS THAT CONTAMINANTS COULD REACH THE AQUIFER OF CONCERN AT ~180'.

01 ■ B SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE _____) — ■ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 17670
04 NARRATIVE DESCRIPTION
The potential for Buffalo Creek to be contaminated is low due to the presence of the on-site lakes between the Fill and the creek. Runoff most likely would enter the lakes. The potential does exist for the lake on the west side of the fill to serve as a low flow source to the creek via saturated groundwater flow.

01 ☐ C CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0
04 NARRATIVE DESCRIPTION
There is little or no potential for contaminants to migrate via air.

01 ☐ D FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0
04 NARRATIVE DESCRIPTION
No fire or explosive conditions exist at this facility, and none have been reported in the past.

01 ☐ E DIRECT CONTACT — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0
04 NARRATIVE DESCRIPTION
A fence has been constructed that secures the site perimeter.

01 ■ F CONTAMINATION OF SOIL — 02 ■ OBSERVED (DATE 10-1-87) — ☐ POTENTIAL — ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: 58 acres
04 NARRATIVE DESCRIPTION
The following are some of the highest concentrations detected on-site: ARSENIC - 19 mg/kg; CHROMIUM - 45 mg/kg; LEAD - 37 mg/kg; VANADIUM - 46 mg/kg.
A background sample taken on the other side of the fence, to the southeast of the site, showed high concentrations of many semi-volatile organics. E.g.: Fluoranthene - 4400 ug/kg; PYRENE - 3100 ug/kg

01 ■ G DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE _____) — ■ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 2500-3000
04 NARRATIVE DESCRIPTION
* SEE LETTER 'A' ABOVE

01 ☐ H WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE _____) — ■ POTENTIAL — ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: 0
04 NARRATIVE DESCRIPTION
NONE OBSERVED OR REPORTED.

01 ☐ I POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0
04 NARRATIVE DESCRIPTION
A fence has been constructed that secures the perimeter of the site which limits the potential for population exposure/injury.

EPA

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

I. IDENTIFICATION
01 STATE: IL
02 SITE NUMBER: ILD981193478

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ■ J DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE _____) — ■ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
THE AREAS WHERE the EARTH has been disturbed and where TRAFFIC PASSES LACKS vegetation. ON the fill and other surrounding AREAS vegetation grows with VIGOR. LEACHATE SEEPAGE POSES THE GREATEST POTENTIAL THREAT TO FLORA.

01 ■ K DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE _____) — ■ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
SEVERAL SPECIES OF ANIMALS POTENTIALLY CAN BE AFFECTED BY CONTAMINANTS. WATERFOWL, WADING BIRDS, RABBITS, RODENTS, FISH AND DEER MAY INHABIT OR PASS THROUGH THE SITE AND COME INTO CONTACT WITH CONTAMINATED SOIL AND/OR WATER.

01 ■ L CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE _____) — ■ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
DEER, WATER FOWL, RODENTS, RABBITS AND FISH ARE POTENTIALLY EFFECTED.

01 ■ M UNSTABLE CONTAINMENT OF WASTES — 02 ☐ OBSERVED (DATE _____) — ■ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 2500-3000
04 NARRATIVE DESCRIPTION
Landfill was finished below the water table of the saturated zone. No liners were used as the natural deposit below the fill is glacial till. There is a great potential for the migration of contaminants should they reach a sand and gravel lense below site.

01 ■ N DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE _____) — ■ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
THE POTENTIAL DAMAGE TO OFF-SITE PROPERTY IS MINIMAL. THE GREATEST POTENTIAL THREAT WOULD EXIST IF A LEACHATE SEEP DEVELOPED THAT ALLOWED MIGRATION OF CONTAMINANTS OFFSITE.

01 ■ O CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE _____) — ■ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
The slope off the east side of the site is fairly steep. The potential exists for surface water runoff from this side of the landfill to reach the storm drains and sewers immediately to the east of the site perimeter.

01 ■ P ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE _____) — ■ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
The site was only recently secured with a fence. Prior to fence construction the site was open to illegal/unauthorized dumping.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
No other known or potential hazards have been documented or observed.

III. TOTAL POPULATION POTENTIALLY AFFECTED: 2500-3000

IV. COMMENTS
The municipality and site planners hope to construct a golf course on this site in the future. Should golf course construction occur, the potential exists for direct contact with contaminants via the on-site lakes.

V. SOURCES OF INFORMATION
E & E / FIT SITE INSPECTION 10/1/87
FIT FILES

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	ILD981193438

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				* Paper work had been
☐ B UIC				initiated by the state
☐ C AIR				to license as a land fill.
☐ D RCRA				Operations ceased before
☐ E RCRA INTERIM STATUS				permitting was finalized
☐ F SPCC PLAN				and no permit was ever
☐ G STATE (Specify)				issued.
☐ 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
1 MAINTENANCE HOUSE
1 PUMP HOUSE
1 FIRE TRAINING TOWER

06 AREA OF SITE

~58 (ACRES)

07 COMMENTS

Site representatives claim that only municipal garbage was disposed of at the site. FIT files indicate the presence of approximately 110 drums on site which contained cutting oils from the Honeywell plant. Information indicates that these drums were disposed of off-site, except for some empty ones which were crushed a... landfilled. Illegal dumping was a potential until recent perimeter fence construction.

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

During site operation waste was disposed below the water table of the saturated zone. No liners were constructed for the fill operation. It was assumed the glacial tills would serve as the confining deposit. The presence of sand and gravel lenses in the area increases the potential for leachate to migrate off-site.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE ☐ YES ■ NO

02 COMMENTS

All wastes have been landfilled and covered with clay and dirt.

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

E & E / FIT SITE INSPECTION 10/1/87

FIT FILES

EPA

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

I. IDENTIFICATION
01 STATE: IL
02 SITE NUMBER: ILD981193438

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check one or more):

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

02 STATUS

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

03 DISTANCE TO SITE
A ____ (mi)
B ~2.0 (mi) WELLS

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one):
■ A. ONLY SOURCE FOR DRINKING
□ B. DRINKING (Other source available); COMMERCIAL, INDUSTRIAL, IRRIGATION (No other usable source available)
□ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other source available)
□ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER 2500-3000
03 DISTANCE TO NEAREST DRINKING WATER WELL ON-SITE (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
~10 (ft)	NORTH	180 (ft)	>55,000 (gpd)	□ YES ■ NO

09 DESCRIPTION OF WELLS (including usage, depth, and location relative to population and buildings):
Long Grove residents and others in that area have private wells finished in the Niagran Series. These wells are approximately 170-250 feet deep. There is one well servicing the maintenance building on-site. Municipal employees use this well as a drinking water supply. The on-site well is 60-180' feet deep.

10 RECHARGE AREA
■ YES □ NO
COMMENTS: Recharge is by vertical leakage through glacial deposits.

11 DISCHARGE AREA
□ YES ■ NO
COMMENTS

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
BUFFALO CREEK	□	1/4 (mi)
NO NAMES - TWO LAKES (IN THIS REPORT → LAKE A & LAKE B)	□	ON-SITE (mi)
	□	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN
ONE (1) MILE OF SITE: A. 2470 NO OF PERSONS
TWO (2) MILES OF SITE: B. 9310 NO OF PERSONS
THREE (3) MILES OF SITE: C. 17670 NO OF PERSONS

02 DISTANCE TO NEAREST POPULATION: <1/10 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE: 2370

04 DISTANCE TO NEAREST OFF-SITE BUILDING: <1/10 (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 AREA SURROUNDING THE SITE IS A COMBINED HEAVY CONCENTRATION OF RESIDENTIAL, INDUSTRIAL AND COMMERCIAL LAND USE. TO THE IMMEDIATE NORTH AND EAST ARE DENSE SUB-DIVISION DEVELOPMENTS. TO THE SOUTH AND WEST EXIST DISCRETE INDUSTRIAL PROPERTIES. TO THE SOUTH ALONG DUNDEE ROAD ARE MANY COMMERCIAL ESTABLISHMENTS.

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	ILD981193438

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
~180 (ft)	UNKNOWN (ft)	7.9 – 8.3

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
2 (in)	2.5 (in)	50 %	RADIAL	8 %

09 FLOOD POTENTIAL

SITE IS IN N/A YEAR FLOODPLAIN

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

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE: A N/A (mi) OTHER: B ~1.0 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

N/A (mi)

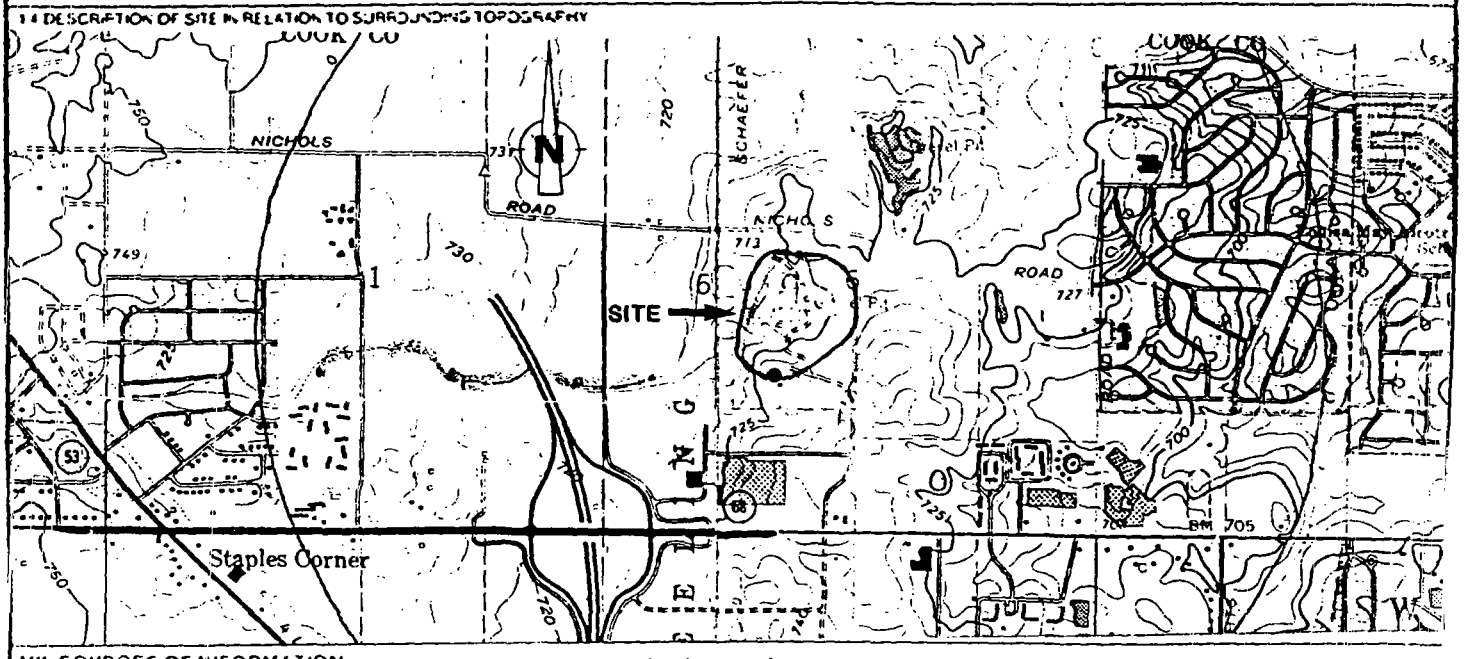
ENDANGERED SPECIES

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 ~1/8 (mi)		B <1/10 (mi)	C N/A (mi)	D ~1.0 (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/FIT SITE INSPECTION 10/1/87

FIT FILES

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	ILD981193428

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			
SPILL			
SOIL	5	HAZELTON LABORATORIES/CSMRI-ANALYTICA, INC.	AVAILABLE
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
OVA	NO READINGS ABOVE BACKGROUND IN BREATHING ZONE
EXPLOSIMETER	
O_2 METER	
DRAGER PUMP-HCN	
RAD-MINI	

IV. PHOTOGRAPHS AND MAPS

01 TYPE ■ GROUND ☐ AERIAL

02 IN CUSTODY OF E&E/FIT FILES
(Name of organization or individual)

03 MAPS ■ YES ☐ NO

04 LOCATION OF MAPS E&E FIT FILES

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

- NO OTHER PERTINENT FIELD DATA WERE COLLECTED.

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

E&E/FIT SITE INSPECTION 10/1/87
FIT FILES

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	ILD981193428

II. CURRENT OWNER(S)

01 NAME	02 DATES	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
Village of Arlington Heights	1968-PRESENT	222 N. Ridge Ave		Arlington Heights	IL	60005

PARENT COMPANY (If applicable) N/A

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

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

01 NAME	02 DATES	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
Stavros Gravel Pit	Pre 1968					

IV. REALTY OWNER(S) (If applicable, list most recent first) N/A

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

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

E&E FIT SITE INSPECTION 10/1/87
FIT FILES

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	ILD981193428

II. CURRENT OPERATOR SAME AS OWNER

01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	14 CITY	15 STATE / 16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER		

OPERATOR'S PARENT COMPANY N/A

III. PREVIOUS OPERATOR(S) N/A

PREVIOUS OPERATORS' PARENT COMPANIES N/A

01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	14 CITY	15 STATE / 16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD		
01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	14 CITY	15 STATE / 16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD		
01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	14 CITY	15 STATE / 16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD		

IV. SOURCES OF INFORMATION

E&E/FIT SITE INSPECTION 10/1/87

FIT FILES

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	ILD981193438

II. ON-SITE GENERATOR NONE

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

III. OFF-SITE GENERATOR(S) NONE

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
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
LASEKE DISPOSAL Co.			
03 STREET ADDRESS (P.O. Box, RFD #, etc.) (CEASED OPERATIONS)	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 / FIT SITE INSPECTION 10/1/87

FIT FILES

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	ILD981193428

II. PAST RESPONSE ACTIVITIES

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

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

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

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☒ E. CONTAMINATED SOIL REMOVED — 02 DATE 1976 — 03 AGENCY _____
04 DESCRIPTION STAINED GROUND, NEAR THE WATER TANK, FROM LEAKING BARRELS THAT CONTAINED CUTTING OILS WAS REMOVED AND PRESUMED TO BE DISPOSED OF IN THE FILL.

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

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

01 ☒ H. ON SITE BURIAL — 02 DATE 2-17-76 — 03 AGENCY _____
04 DESCRIPTION ALLEGED EMPTY BARRELS WERE DISPOSED OF IN THE LANDFILL ON THIS DATE. STATE INSPECTORS REPORT THAT THE BARRELS MAY HAVE CONTAINED RESIDUES OF CUTTING OILS.

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

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

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

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

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

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

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

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

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

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	ILD981193428

II. PAST RESPONSE ACTIVITIES (Continue)

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

01 ■ S CAPPING/COVERING — 02 DATE 1986 — 03 AGENCY Municipality
04 DESCRIPTION File information states that final cover was still being applied in 1986. Site representatives state that the cover is clay and dirt and is 5'-30' thick.

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 / FIT SITE INSPECTION 10/1/87

FIT FILES

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	ILD981193428

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☒ YES ☐ NO

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

In 1976 IEPA personnel sent notification to site representatives concerning approximately 100 barrels that were noted during a site inspection. Ensuing actions included the removal of the full barrels (which contained cutting oils from the neighboring Honeywell Plant) to Lake Landfill. The empty barrels were crushed and disposed of on-site in the landfill. Stained ground from the area where the barrels had been stored was presumedly scraped and disposed of in the fill.

In 1984, the IEPA received a complaint by the Terramere Home Owners Assn. concerning a leachate seep on the north slope of the landfill. Six days later, on 7-18-84, a site inspection by EPA personnel noted that the leachate problem had been corrected by the public works department. A sample of the leachate had been taken and showed the following high concentrations: Benzene - 22.2 ug/L; Carbon Tetrachloride - 600 ug/L; 1,1,1 - Trichloroethane - 600 ug/L; 1,1 - Dichloroethane - 700 ug/L; Toluene - 270 ug/L; Trichloroethylene - 124 ug/L; 1,2 - cis - Dichloroethylene - 1700 ug/L.

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

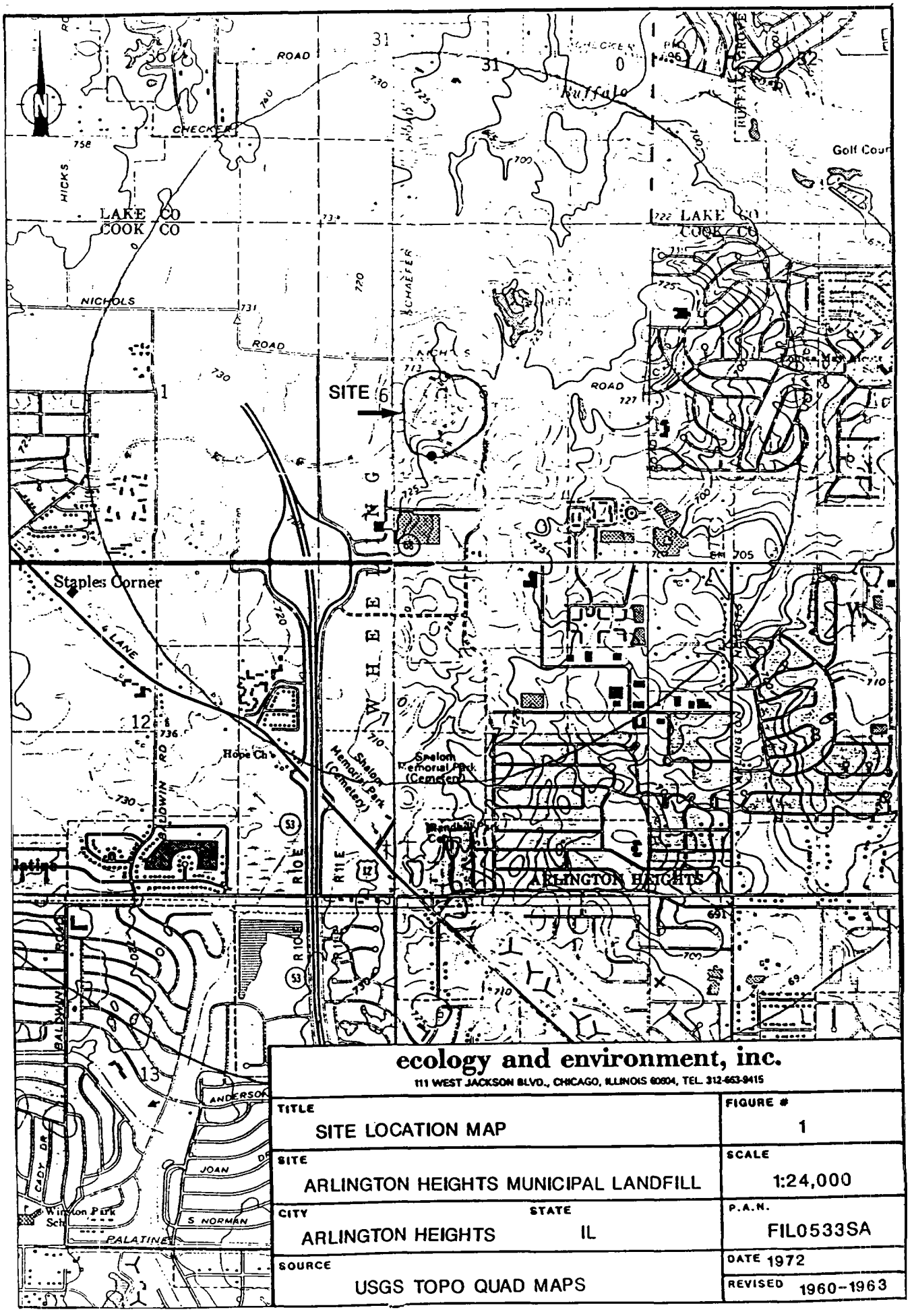
E&E/FIT SITE INSPECTION 10/1/87
FIT FILES

EPA FORM 2070-13 (7-81)

Immediate Removal Action Check Sheet

	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	Lagoon-site		
Materials on Surface			✓
Proximity of Population	✓		
Evidence of Casual Site Use			✓
Contaminated Water Supply			
Exceeds 10 Day Snarl	Not Sampled		
Gross Taste or Odors			
Alternate Water Available	No		
Potential Contamination			✓
Is the site abandoned or active?			

Comments



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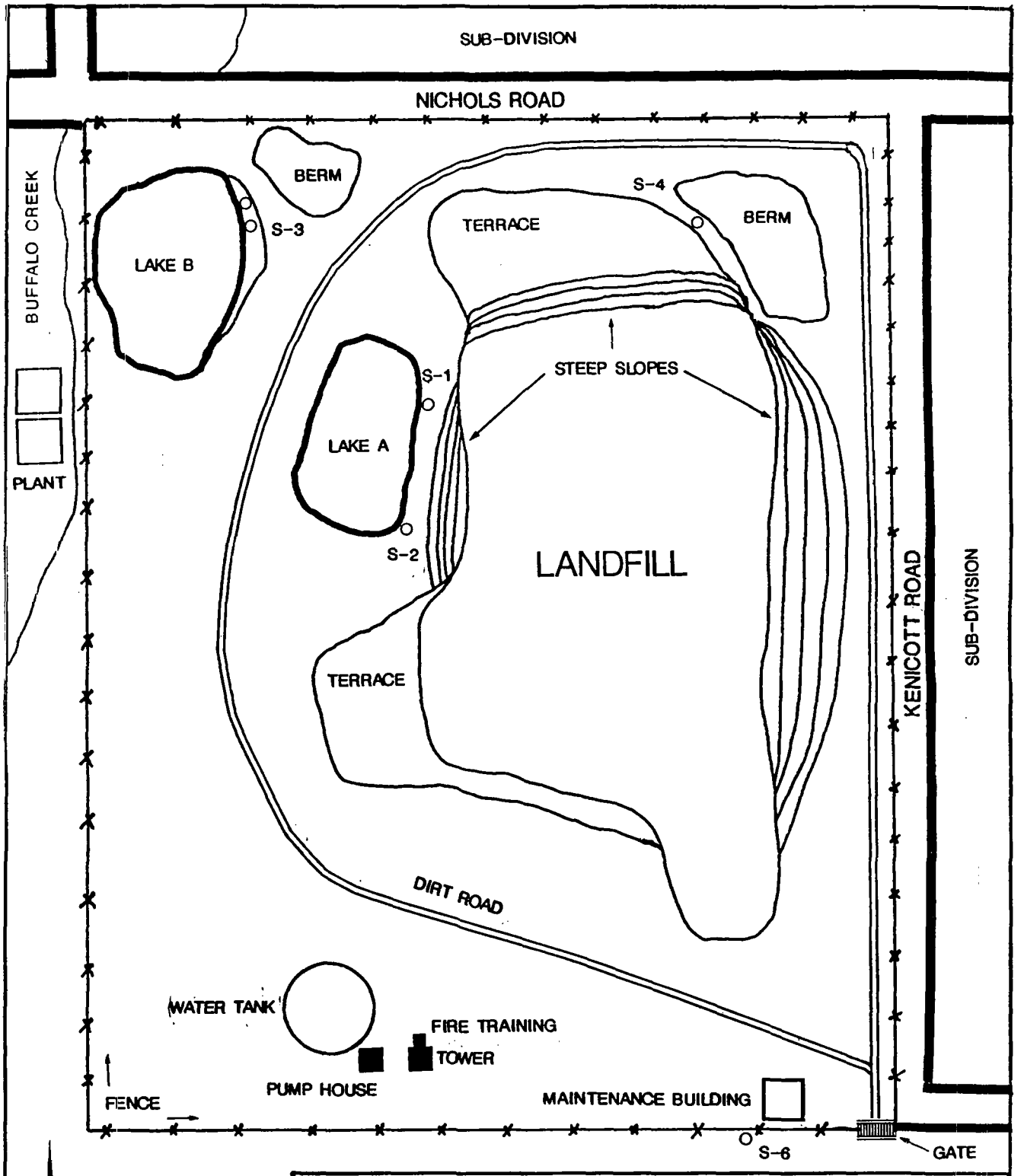
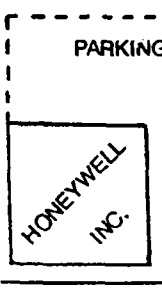
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415

TITLE: SITE LOCATION MAP	FIGURE #: 1
SITE: ARLINGTON HEIGHTS MUNICIPAL LANDFILL	SCALE: 1:24,000
CITY: ARLINGTON HEIGHTS STATE: IL	P.A.N.: FIL0533SA
SOURCE: USGS TOPO QUAD MAPS	DATE: 1972 REVISED: 1960-1963





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

TITLE: SITE SKETCH MAP	FIGURE #: 2
SITE: ARLINGTON HEIGHTS MUNICIPAL LANDFILL	SCALE: N/A
CITY: ARLINGTON HEIGHTS STATE: IL	P.A.N.: FIL0533SA
SOURCE: FIT SITE INSPECTION	DATE: 10-1-87 REVISED:

	ITC	MEP767	768	769	770	772						
	OTC	EN545	546	547	548	550						
	SAMPLE	S1	S2	S3	S4	S6						
COMPOUND												
chloromethane												
bromomethane												
vinyl chloride												
chloroethane												
methylene chloride												
acetone												
carbon disulfide												
1,1-dichloroethene												
1,1-dichloroethane												
trans-1,2,-dichloroethene												
chloroform		5	3J	4J	4J	3J						
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			2JB	1JB								
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		80J										
bis(2-chloroethoxy)methane												
2,4-dichlorophenol												
1,2,4-trichlorobenzene												
napthalene												
4-chloroaniline												
hexachlorobutadiene												
4-chloro-3-methylphenol												
2-methylnapthalene												
hexachlorocyclopentadiene												
2,4,6-trichlorophenol												
2,4,5-trichlorophenol												
2-chloronaphthalene												
2-nitroaniline												
dimethyl phthalate												
acenapthylene					14J							
3-nitroaniline												
acenaphthene					110J							
2,4-dinitrophenol												
4-nitrophenol												
dibenzofuran					55J							
2,4-dinitrotoluene												
2,6-dinitrotoluene												
diethylphthalate												
4-chlorophenyl-phenylether												
fluorene					140J							
4-nitroaniline												
4,6-dinitro-2-methylphenol												
N-nitrosodiphenylamine												
4-bromophenyl-phenylether												
hexachlorobenzene												

STATE Illinois SITE Arlington Heights Municipal Landfill TDD F05-8708-001 PAGE 1 OF 7, SET # ____

	ITC	MEP767	768	769	770	772						
	OTC	EN545	546	547	548	550						
	SAMPLE	S1	S2	S3	S4	S6						
COMPOUND												
pentachlorophenol												
phenanthrene		56J	63J			2100						
anthracene						420						
di-n-butylphthalate												
fluoranthene		110J	100J		13J	4400						
benzidine												
pyrene		83J	75J	4J	13J	3100						
butylbenzylphthalate												
3,3'-dichlorobenzidine												
benzo(a)anthracene						1600						
bis(2-ethylhexyl)phthalate												
chrysene			50J			1600						
di-n-octylphthalate												
benzo(b&k)fluoranthene		75J	62J			3500						
benzo(a)pyrene						1800						
indeno(1,2,3-cd)pyrene						1400J						
dibenzo(a,h)anthracene												
benzo(g,h,i)perylene						1100						
alpha-BHC												
beta-BHC												
delta-BHC												
gamma-BHC(lindane)												
heptachlor												
aldrin												
heptachlor epoxide												
endosulfan I												
dieldrin												
4,4'-DDE												
endrin												
endosulfan II												
4,4'-DDD												
endrin aldehyde												
endosulfan sulfate												
4,4'-DDT												
methoxychlor												
endrin ketone												
chlordane												
toxaphene												
Aroclor-1016												
Aroclor-1221												
Aroclor-1232												
Aroclor-1242												
Aroclor-1248												
Aroclor-1254												
Aroclor-1260												
ELEMENT												
aluminum												
antimony												
arsenic		7.8	19	7.4	6.4	6.9						
barium												
beryllium		0.2	0.3	0.6	0.8	1.0						
cadmium					1.3							
calcium												
chromium		45	12	21	30	12.3						
cobalt		6.2	8.6	8.6	6.7	13						
copper		25	43	38	30	35						
iron												
lead		14	37	23	20	30						
magnesium												
manganese												
mercury												
nickel		38	30	29	25	74						
potassium												
selenium												
silver												
sodium												
thallium												
tin												
vanadium		19	20	33	46	50						
zinc												
cyanide CHECK IF ANALYZED ( )												
TENTATIVELY IDENTIFIED ORGANICS												
2-Propanol, 1,1,1-Trichloro-2-methyl		340		400	220							
Undecane, 4,7-Dimethyl		240	260									
Tridecane, 6-Methyl		320										
Heptadecane, 2,6-Dimethyl		500	280									
Iron tricarbonyl benzenamine-N		200	250		250							
Nonadecane		290	320			2800						
1,2-Benzenedicarboxylic Acid		310		400	360	200						
Sulfur		4300	7500			610						
Ethanedioic Acid		430										
Octadecane		280										
Pentane		29	20	11		12						
Hexane		7				6						

STATE ILLINOIS SITE Arlington Heights Municipal Landfill TDD F05-8708-001 PAGE 2 OF 2, SET # 3

TENTATIVELY IDENTIFIED ORGANICS	EN 545	EN546	EN547	EN548	EN550
TRIDECANE 3-METHYL		320			
PENTADECANE 2,6,10,19-Tetramethyl		520			
DECOSANE		770			
PENTACOSANE		410		470	350
1,2-DIETHOXYETHANE		8			
3-PENTANOL 2,2-DIMETHYL			240		
5-HEXENE-2-OXA 5-METHYL			210		
9-OCTADECENE				180	
1-METHYLDECANOL				580	
NEPHMALENE 1,8-DI-1-PROPYNYL					360
BENZO[B][NAPHTHA[2,3-D] FURAN					200
11H-BENZO[A] FLUORENE					250
11H-BENZO[B] FLUORENE					230
BENZO[GHI] FLUORANTHENE					220
BENZO[C] PHENANTHRENE					220
BENZO[I] PHENANTHRENE					310
BENZ[E] ACEPHENANTHRYLENE					1700
ETHANE 1-2-DIETHOXY					10

STATE ILLINOIS SITE ARLINGTON HEIGHTS MUNICIPAL LANDFILL TDD F05-8708-001 PAGE 3 OF 3, SET # ____

FIELD PHOTOGRAPHY LOG SHEET

DATE 10-1-87

TIME 11:56 (A.M.) P.M.

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

WEATHER Sunny, windy and cool

SITE Municipal Landfill - Arlington Heights

TDD# F05-8708-001

PHOTOGRAPHED BY: Gerard Breen

SAMPLE ID# (if applicable) Soil 1 (S1)

DESCRIPTION: Far view of the location of soil sample 1 at the shore of the lake among the reeds. (Lake A)

DATE 10-1-87

TIME 11:57 (A.M.) P.M.

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

WEATHER Sunny, windy, and cool

SITE Municipal Landfill - Arlington Heights

TDD# F05-8708-001

PHOTOGRAPHED BY: Gerard Breen

SAMPLE ID# (if applicable) N/A

DESCRIPTION: Crushed barrel and tank at south end of reeds from where soil sample 1 was taken. (Lake A)

FIELD PHOTOGRAPHY LOG SHEET

DATE 10-1-87

TIME 11:55 (A.M.) P.M.

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

WEATHER Sunny windy and cool

SITE Municipal Landfill - Arlington Heights

TDD# F05-8708-001

PHOTOGRAPHED BY: Gerard Breen

SAMPLE ID# (if applicable) N/A

DESCRIPTION: Lake at the base of the large hill. Looking to the NW - A rusted drum in the lake. (Lake A)

DATE 10-1-87

TIME 11:56 (A.M.) P.M.

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

WEATHER Sunny, windy, and cool

SITE Municipal Landfill - Arlington Heights

TDD# F05-8708-001

PHOTOGRAPHED BY: Gerard Breen

SAMPLE ID# (if applicable) S1

DESCRIPTION: Soil sample 1 in the reeds at the shore of the lake of Photo #1 (close-up)

FIELD PHOTOGRAPHY LOG SHEET

DATE 10-1-87

TIME 12:10 A.M. P.M.

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

WEATHER Sunny, windy and cool

SITE Municipal Landfill - Arlington Heights

TDD# F05-8708-001

PHOTOGRAPHED BY: Gerard Breen

SAMPLE ID# (if applicable) N/A

DESCRIPTION: 'CONTAMINATED WATER' SIGN AT THE NORTHEAST APPROACH TO LAKE B

DATE 10-1-87

TIME 12:20 A.M. P.M.

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

WEATHER Sunny, windy, and cool.

SITE Municipal Landfill - Arlington Heights

TDD# F05-8708-001

PHOTOGRAPHED BY: Gerard Breen

SAMPLE ID# (if applicable) Soil 3 (S3) (COMPOSITE)

DESCRIPTION: LOCATION OF SOIL SAMPLE 3 (S3) ON A MUD FLAT OF LAKE B; IN THE NORTHEAST CORNER OF THE LAKE.

FIELD PHOTOGRAPHY LOG SHEET

DATE 10-1-87

TIME 12:04 A.M. P.M.

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

WEATHER Sunny, windy and cool

SITE Municipal Landfill - Arlington Heights

TDD# F05-8708-001

PHOTOGRAPHED BY: Gerard Breen

SAMPLE ID# (if applicable) Soil 2 (S2)

DESCRIPTION: Close-up of soil sample 2 (S2) at southeast corner of Lake A

DATE 10-1-87

TIME 12:05 A.M. P.M.

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

WEATHER Sunny, windy, and cool.

SITE Municipal Landfill - Arlington Heights

TDD# F05-8708-001

PHOTOGRAPHED BY: Gerard Breen

SAMPLE ID# (if applicable) Soil 2 (S2)

DESCRIPTION: Far view of soil sample 2 (S2) among the reeds at the southeast corner of Lake A.

FIELD PHOTOGRAPHY LOG SHEET

DATE 10-1-87

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

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

WEATHER Sunny windy and cool

SITE Municipal Landfill - Arlington Heights

TDD# F05-8708-001

PHOTOGRAPHED BY: Gerard Breen

SAMPLE ID# (if applicable) Soil 3 (S3)

DESCRIPTION: FAR VIEW OF SOIL SAMPLE 3 ON A MUD FLAT OF LAKE B. THIS SAMPLE IS A COMPOSITE SAMPLE.

DATE 10-1-87

TIME 12:26 A.M. P.M.

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

WEATHER Sunny, windy, and cool.

SITE Municipal Landfill - Arlington Heights

TDD# F05-8708-001

PHOTOGRAPHED BY: Gerard Breen

SAMPLE ID# (if applicable) Soil 3 (COMPOSITE)

DESCRIPTION: The soil sample was taken in the reeds immediately south of the mud flat from which the other sample of the composite was taken.

FIELD PHOTOGRAPHY LOG SHEET

DATE 10-1-87

TIME 12:48 A.M. P.M.

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

WEATHER Sunny windy and cool

SITE Municipal Landfill - Arlington Heights

TDD# F05-8708-001

PHOTOGRAPHED BY: Gerard Breen

SAMPLE ID# (if applicable) Soil 4 (S4)

DESCRIPTION: Close-up of location of soil sample 4 taken in the ravine at the north and east corner of the large fill hill.

DATE 10-1-87

TIME 12:50 A.M. P.M.

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

WEATHER Sunny, windy, and cool.

SITE Municipal Landfill - Arlington Heights

TDD# F05-8708-001

PHOTOGRAPHED BY: Gerard Breen

SAMPLE ID# (if applicable) Soil 4 (S4)

DESCRIPTION: Far view of soil sample 4 in the ravine.

FIELD PHOTOGRAPHY LOG SHEET

DATE 10-1-87

TIME 12:54 A.M. P.M.

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

WEATHER Sunny windy and cool

SITE Municipal Landfill - Arlington Heights

TDD# F05-8708-001

PHOTOGRAPHED BY: Gerard Breen

SAMPLE ID# (if applicable) N/A

DESCRIPTION: Looking north toward residential area from the top of the large hill. Note the fence and the ravine at right center from where 54 was take

DATE 10-1-87

TIME 12:56 A.M. P.M.

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

WEATHER Sunny, windy, and cool.

SITE Municipal Landfill - Arlington Heights

TDD# F05-8708-001

PHOTOGRAPHED BY: Gerard Breen

SAMPLE ID# (if applicable) N/A

DESCRIPTION: Residental area to the northeast and east of large hill. Note fence ending near debris pile right of center.

FIELD PHOTOGRAPHY LOG SHEET

DATE 10-1-87

TIME 12:58 A.M. (P.M.)

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

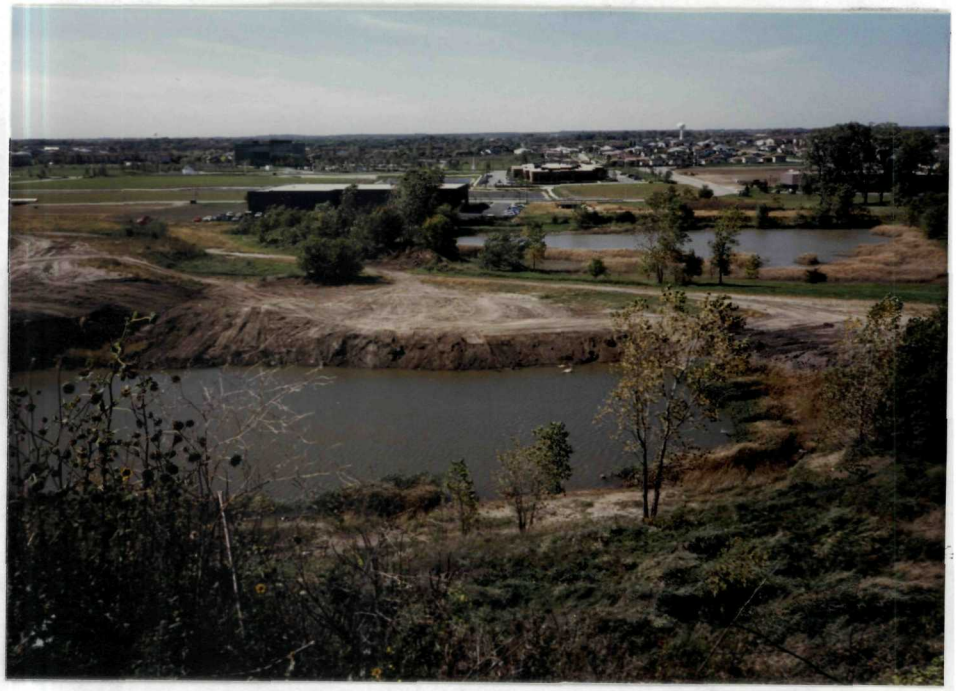
WEATHER Sunny, windy and cool

SITE Municipal Landfill - Arlington Heights

TDD# F05-8708-001

PHOTOGRAPHED BY: Gerard Breen

SAMPLE ID# (if applicable) N/A



DESCRIPTION: LAKE A IN FOREGROUND AND LAKE B IN REAR, LOOK TOWARD INDUSTRY AND RESIDENTIAL AREA FROM TOP OF FILL HILL.

DATE 10-1-87

TIME 1:00 A.M. (P.M.)

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

WEATHER Sunny, windy, and cool.

SITE Municipal Landfill - Arlington Heights

TDD# F05-8708-001

PHOTOGRAPHED BY: Gerard Breen

SAMPLE ID# (if applicable) N/A

DESCRIPTION: BUILDING ON-SITE include the water tank, the pump house next to it and the FIRE DEPARTMENT TRAINING TOWER.

FIELD PHOTOGRAPHY LOG SHEET

DATE 10-1-87

TIME 1:03 A.M. P.M.

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

WEATHER Sunny, windy and cool

SITE Municipal Landfill - Arlington Heights

TDD# F05-8708-001

PHOTOGRAPHED BY: Gerard Breen

SAMPLE ID# (if applicable) N/A

DESCRIPTION: Entrance gate at southeast corner of site. Note lack of fence on the east side and road up the large fill hill.

DATE 10-1-87

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

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

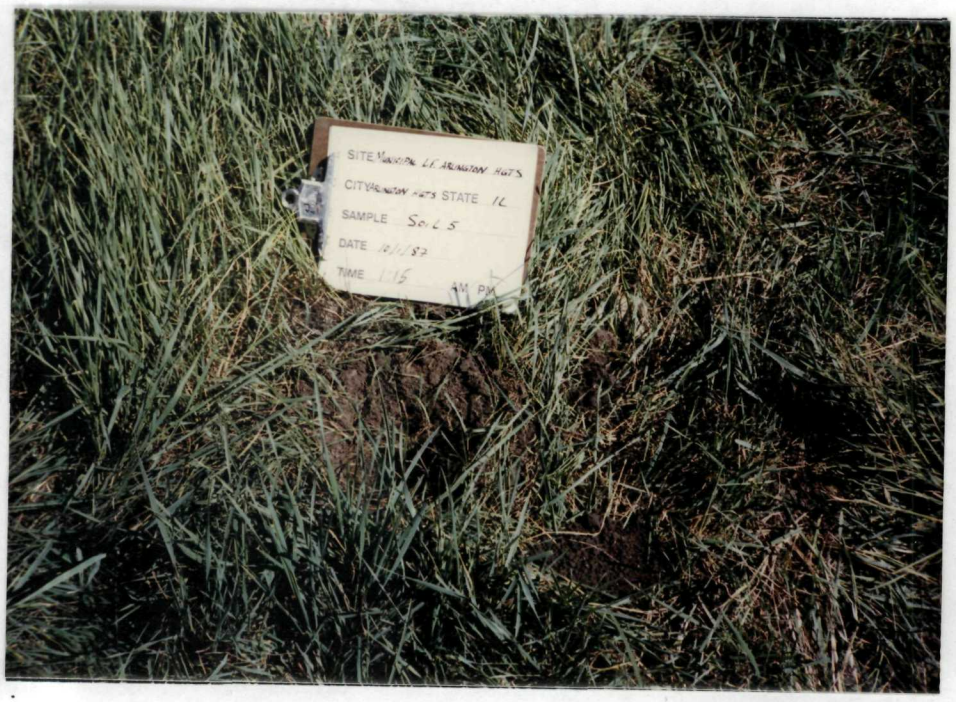
WEATHER Sunny, windy and cool.

SITE Municipal Landfill - Arlington Heights

TDD# F05-8708-001

PHOTOGRAPHED BY: Gerard Breen

SAMPLE ID# (if applicable) Soil 6 (S6)



DESCRIPTION: Background soil sample (S6) outside of the fence at the south end of site near the gate. Placard is incorrect in stating 'Soil 5'.

FIELD PHOTOGRAPHY LOG SHEET

DATE 10-1-87

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

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

WEATHER Sunny, windy, And cool.

SITE Municipal Landfill- Arlington Heights

TDD# F05-8708-001

PHOTOGRAPHED BY: GERARD BREEN

SAMPLE ID# (if applicable) Soil 6 (S6)

DESCRIPTION: FAR VIEW OF BACKGROUND SOIL SAMPLE.

DATE 10-1-87

TIME 2:30 A.M. P.M.

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

WEATHER Sunny, windy, And Cool

SITE Municipal Land Fill- Arlington Heights

TDD# F05-8708-001

PHOTOGRAPHED BY: GERARD BREEN

SAMPLE ID# (if applicable) N/A

DESCRIPTION: NEAR ENTRANCE GATE, MAINTENANCE HOUSE AND OTHER ON-SITE STRUCTURES IN THE BACKGROUND, WELL IS IN THE MAINTENANCE BUILDING.

FIELD PHOTOGRAPHY LOG SHEET

DATE 10-1-87

TIME 2:30 A.M. P.M.

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

WEATHER Sunny windy and cool

SITE Municipal Landfill - Arlington Heights

TDD# F05-8708-001

PHOTOGRAPHED BY: Gerard Breen

SAMPLE ID# (if applicable) N/A

DESCRIPTION: WATER TANK, FIRE DEPARTMENT TRAINING TOWER AND ROAD LEADING TO THE WEST SIDE OF THE SITE.

DATE 10-1-87

TIME 2:30 A.M. P.M.

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

WEATHER Sunny, windy, and cool.

SITE Municipal Landfill - Arlington Heights

TDD# F05-8708-001

PHOTOGRAPHED BY: Gerard Breen

SAMPLE ID# (if applicable) N/A

DESCRIPTION: INSIDE OF THE ENTRANCE GATE. NOTE THE LARGE HILL AND THE PROXIMITY OF HOUSES TO THE EAST OF THE HILL.

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CHICAGO, ILLINOIS

CHEMICAL EVALUATION FORM

SITE NAME: Municipal Landfill/ Arlington Heights PAN#: DATE: 12/16/87

CASE #: 8142 UNITS: mg/kg REVIEWER: BRJ

TOX/ PERS	COMPOUND	CRDL	3-5xCRDL	MEP 767	768	769	770	772		
	ALUMINUM									
	ANTIMONY									
	ARSENIC	2		7.8	11	7.4	6.4	6.9		
	BARIUM									
	BERYLLIUM	1		0.2	.3	1.6	.8	1.0		
	CADMIUM	1					1.3			
	CHROMIUM	2		45	12	21	30	12.3		
	COBALT	10		6.2	8.6	8.6	6.7	13		
	COPPER	5		25	43	38	30	35		
	LEAD	1		14	37	23	20	30		
	MERCURY									
	NICKEL	8		38	30	29	25	74		
	SELENIUM									
	SILVER									
	THALLIUM									
	TIN									
	VANADIUM	10		19	20	33	46	50		
	ZINC									
	CYANIDE									

ecology and environment

Rec: 12/10/87
13 pages

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 11.25.87

SUBJECT: Review of Region V CLP Data Received for Review on 11-16-87

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

TO: Data User: FIT

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

SITE NAME: MUNICIPAL LANDFILL/ARLINGTON HEIGHTS SMO case No. 8142

EPA Data Set No. SF 4492 No. of Samples: 5 D.U./Activity Numbers Y905/C72100

CRL No. 88FB01S91 - S95

SMO Traffic No. MEP767-770, 772

CLP Laboratory: CSMRI - ANALYTICA Hrs. Required for Review: 5

Following are our findings: The laboratory's portion of case #8142 consisted of 5 low conc. soil samples analyzed for metals and CN. The laboratory did not report any problems with the analysis.

ICP: Al RPD is 41%. Al data is estimated (J). Mg & Zn are flagged for high RPD values, but the RPD values are below the 35% limit for soils/sediments. Mg & Zn data are acceptable for use. V RPD of 22% is not flagged on Form I, however the data are acceptable.

GFAA: Sb spike %R is 0% and Sb data are < IDL. Sb data is unusable. Ag spike %R is 170% and Ag data are < IDL. Ag data are acceptable as spike %R calculated from incorrect sample result. Reviewer found 6.2 mg/kg sample result & 112% spike recovery. As data are acceptable

Hg: Hg data are within control limits.

(See page 2)

( ) 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: Duane Geuder, Quality Assurance Officer, EPA Support Services
James Petty, Chief Quality Assurance Research, EMSL, Las Vegas

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EPA FORM 1320-6 (Rev. 5/87)

DATA QUALIFIERS

Contractor: CSMRI-ANALYTICA Case 8142

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

CN: CN spike %R = 56%. Data is biased low and estimated (UJ). CN also run 4 days after holding time. For sample MEP 768 Duplicate % Solids are calculated from incorrect dry sample result. Reviewer found 2.93 g dry sample and 65% solids, which agrees closely with MEP768.

Reviewed by: Margaret Dulke

Phone: 353-3088

Date: 11/25/87

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

Document Control No. _____
Page 1 of 1
Date 11-14-87

COVER PAGE
INORGANIC ANALYSES DATA PACKAGE

Lab Name CSMRI-Analytica, Inc.

Case No. 8142

SOW No. 785

Q. C. Report No. 3546

Sample Numbers

EPA No.	Lab ID No.	EPA No.	Lab ID No.
MEP 767			
MEP 768			
MEP 769			
MEP 770			
MEP 772			

RECEIVED
NOV 16 1987
U.S. EPA CENTRAL REGIONAL LAB

Comments: FIVE (5) LOW SOIL SAMPLES FOR AL METAL AND CYANIDE ANALYSES. Fe on Ag IEC OBSERVED & ECESSARY. IEC SHOWN ON RAW DATA AS FOLLOWS:
(0.000471) (Fe value > 21 ppm) + (uncorrected Ag value) = Ag true value

Added Footnote: NA - Not Applicable

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 analytical method used P (for ICP), A (for Flame AA) or F (for Furnace AA).
U - Indicates element was analyzed for but not detected. Report with the instrument detection limit value (e.g., 10U).
E - Indicates a value estimated or not reported due to the presence of interference. Explanatory note included on cover page.
s - Indicates value determined by Method of Standard Addition.
N - Indicates spike sample recovery is not within control limits.
* - Indicates duplicate analysis is not within control limits
+ - Indicates the correlation coefficient for method of standard addition is less than 0.995
M - Indicates duplicate injection results exceeded control limits.

Indicate method used: P for ICP; A for Flame AA, F for Furnace, and CV for Cold Vapor AA.

IFB Amend. One

Document Control No._____
Page 1 of 5

Form I

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

EPA Sample No.
MEP 767

Date 11-14-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME CSMRI-Analytica, Inc.
CASE NO. 8142
SOW NO. 785
Lab Receipt Date 10-2-87
LAB SAMPLE ID. NO. 3546-MEP 767
QC REPORT NO. 3546

Elements Identified and Measured

Concentration: Low X Medium____

Matrix: Water____ Soil X Sludge____ Other____

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

1. Aluminum	9120	*	P	13. Magnesium	47500	*	P
2. Antimony	15U ~~12U~~ MPC	N	F	14. Manganese	468		P
3. Arsenic	7.8 ~~6.2~~ MPC	N	F	15. Mercury	0.12 U		CV
4. Barium	[33] MPC		P	16. Nickel	38		P
5. Beryllium	[0.2]		P	17. Potassium	2920		P
6. Cadmium	1.2U ~~6.2U~~ MPC		P	18. Selenium	12U		F
7. Calcium	95000		P	19. Silver	2.5U	N MPC	P
8. Chromium	45		P	20. Sodium	1290		P
9. Cobalt	[6.2]		P	21. Thallium	2.5U		F
10. Copper	25		P	22. Vanadium	19		P
11. Iron	21500		P	23. Zinc	115	*	P
12. Lead	14		F	Percent Solids (%)	~~80.8~~ MPC 80.0 MPC		

Cyanide 0.6U N

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: SAMPLE DESCRIPTION: SOIL, MEDIUM + FINE, BROWN, ROOTS

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Lab Manager [signature]

IFB Amend One

Document Control No.
Page 2 of 5

Form I

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

EPA Sample No.
MEP 768

Date 11-14-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME CSMRI-Analytica, Inc.
CASE NO. 8142
SOW NO. 785
Lab Receipt Date 10-2-87
LAB SAMPLE ID. NO. —
QC REPORT NO. 3546

Elements Identified and Measured

Concentration: Low X Medium

Matrix: Water Soil X Sludge Other

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

1.	Aluminum	6670	* P	13.	Magnesium	54000	* P
2.	Antimony	19U ~~12U~~ MC	N F	14.	Manganese	613	P
3.	Arsenic	19 ~~12~~ MC	N S F	15.	Mercury	0.16U	CV
4.	Barium	[24]	P	16.	Nickel	30	P
5.	Beryllium	[0.3]	P	17.	Potassium	2230	P
6.	Cadmium	1.6U	P	18.	Selenium	1.6U	F
7.	Calcium	117000	P	19.	Silver	3.2U	N P
8.	Chromium	12	P	20.	Sodium	[502]	P
9.	Cobalt	[8.6]	P	21.	Thallium	3.2U	F
10.	Copper	43	P	22.	Vanadium	20	P
11.	Iron	29700	P	23.	Zinc	237	* P
12.	Lead	37 ~~DAM~~ ~~20~~ MC	S F		Percent Solids (%)	63	

Cyanide 0.8U N

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: SAMPLE DESCRIPTION: SOIL, FINE, MEDIUM, ~~BROWN WITH ROOTS~~ NR COARSE, DARK BROWN, WITH ROOTS

Lab Manager

IFB Amend. One

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Document Control No._____
Page 3 of 5

Form I

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

EPA Sample No.
MEP -769

Date 11-14-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME CSMRI-Analytica, Inc.

CASE NO. 8142

SOW NO. 785

Lab Receipt Date 10-2-87

LAB SAMPLE ID. NO. 3546-MEP 769

QC REPORT NO. 3546

Elements Identified and Measured

Concentration: Low X Medium_____

Matrix: Water_____ Soil X Sludge_____ Other_____

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

1.	Aluminum	13700	* P	13.	[illegible]esium	31 100	* P
2.	Antimony	~~17U~~ ~~17U~~ MPC	N F	14.	[illegible]anese	474	P
3.	Arsenic	7.4 ~~5.2~~ MPC	N F	15.	Mercury	0.14U	CV
4.	Barium	[55]	P	16.	Nickel	29	P
5.	Beryllium	[0.6]	P	17.	Potassium	3510	P
6.	Cadmium	1.4U	P	18.	Selenium	1.4U	F
7.	Calcium	68000	P	19.	Silver	2.9U	N ~~*~~ MPC P
8.	Chromium	21	P	20.	Sodium	423U	P
9.	Cobalt	[8.6]	P	21.	Thallium	2.9U	F
10.	Copper	38	P	22.	Vanadium	33	P
11.	Iron	27600	P	23.	Zinc	145	* P
12.	Lead	23 ~~16~~ MPC	F		Percent Solids (%)	70.~~4~~ MPC	

Cyanide 0.7 U N

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: SAMPLE DESCRIPTION: ~~SOIL, FINE, MEDIUM, COARSE, DARK~~ MPC ~~BROWN, WITH LEAVES~~ MPC ~~WITH ROOTS~~

SOIL, FINE, BROWN, WITH ROOTS

recycled paper

Lab Manager [signature]

IFB Amend. One

Document Control No._____

Form I

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

EPA Sample No.
MEP 770

Date 11-14-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME CSMRI-Analytica, Inc.

CASE NO. 8142

SOW NO. 785

Lab Receipt Date 10-2-87

LAB SAMPLE ID. NO. 3546-MEP 770

QC REPORT NO. 3546

Elements Identified and Measured

Concentration: Low X Medium_____

Matrix: Water_____ Soil X Sludge_____ Other_____

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

1. Aluminum	19500	*	P	13. Magnesium	6590	*	P
2. Antimony	16U ~~12U~~ MC	N	F	14. Manganese	397		P
3. Arsenic	6.4 ~~4.8~~ MC	N	F	15. Mercury	0.13 U		CV
4. Barium	105		P	16. Nickel	25		P
5. Beryllium	[0.87]		P	17. Potassium	2590		P
6. Cadmium	1.3		P	18. Selenium	1.3U ~~1.6U~~ MC		F
7. Calcium	10300		P	19. Silver	2.7U	N	MC ~~F~~ P
8. Chromium	30		P	20. Sodium	395U		P
9. Cobalt	[6.77]		P	21. Thallium	2.7U		F
10. Copper	30		P	22. Vanadium	46		P
11. Iron	32000		P	23. Zinc	97	*	P
12. Lead	20 ~~15~~ MC		F	Percent Solids (%)	~~74.9~~ MC 75		

Cyanide 0.7U N

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: SAMPLE DESCRIPTION: SOIL, FINE, BLACK AND BROWN WITH ROOTS

recycled paper

Lab Manager [signature]

IFB Amend. One

Document Control No._____

Page 5 of 5

Form I

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

EPA Sample No.
MEP 772

Date 11-14-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME CSMRI-Analytica, Inc.

CASE NO. 8142

SOW NO. 785

Lab Receipt Date 10-2-87

LAB SAMPLE ID. NO. 3546-MEP 772

QC REPORT NO. 3546

Elements Identified and Measured

Concentration: Low X Medium ____

Matrix: Water ____ Soil X Sludge ____ Other ____

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

1. Aluminum	23900	*	P	13. Magnesium	15100	*	P
2. Antimony	15U ~~12U~~ MPC	N	F	14. Manganese	664		P
3. Arsenic	6.9 ~~5.6~~ MPC	N	F	15. Mercury	0.12U		CV
4. Barium	116		P	16. Nickel	74		P
5. Beryllium	[1.0]		P	17. Potassium	5060		P
6. Cadmium	1.2U		P	18. Selenium	1.7U		F
7. Calcium	22000		P	19. Silver	2.5U	N	MPC P
8. Chromium	123		P	20. Sodium	1290		P
9. Cobalt	13		P	21. Thallium	2.5U		F
10. Copper	35		P	22. Vanadium	50		P
11. Iron	28900		P	23. Zinc	129	*	P
12. Lead	30 ~~24~~ MPC	S	F	Percent Solids (%)	81.3 MPC		
Cyanide	0.6U	N					

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: SAMPLE DESCRIPTION: SOIL, FINE, DARK BROWN WITH ROOTS

recycled paper

Lab Manager [signature]

IFB Amend. One

Document Control No. _____
Page 1 of 1

FORM III

Q. C. Report No. 3546
BLANKS

LAB NAME CSMRI-Analytica, Inc. CASE NO. 8142

DATE 11-N-87 Units: µg/L

Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank Matrix: LS (1)	Matrix: (2)
Metals:							
1. Aluminum	[142]	90U	[152]			[28]	
2. Antimony	60U	60U	60U			12U	
3. Arsenic	10U	10U	10U			2.0U ~~10U~~ MC	
4. Barium	11U	11U	11U			2.2U	
5. Beryllium	1U	[1]	1U			0.2U	
6. Cadmium	~~[47]~~ MC 5U	5U	5U			1.0U	
7. Calcium	147U	147U	147U			[31]	
8. Chromium	9U	[illegible]	9U			1.8U	
9. Cobalt	~~[12]~~ MC 12U	[illegible]	12U			2.4U	
10. Copper	[24]	[illegible]	[22]			[4.8]	
11. Iron	8U	[illegible]	8U			[15]	
12. Lead	10U	10U	10U	10U	10U	1.0U ~~1.0U~~ MC	
13. Magnesium	[168]	[175]	[289]			21U	
14. Manganese	3U	3U	3U			0.6U	
15. Mercury	0.2U	0.2U	~~0~~ MC			0.1U	
16. Nickel	11U	11U	11U			2.2U	
17. Potassium	629U	629U	629U			126U	
18. Selenium	5U	5U	5U			1.0U	
19. Silver	10U	10U	10U			2.0U	
20. Sodium	1480U	1480U	1480U			296U	
21. Thallium	10U	10U	10			2U	
22. Vanadium	7U	7U ~~[7]~~ MC	7U ~~[7]~~ MC			1.4U	
23. Zinc	8U	8U	[8]			[2.2]	
~~24. Tin~~ MC							
Other:							
Cyanide	10U	10U	10U			MC 0.5U	

Reporting Units: aqueous, ug/L; solid mg/kg

IFB A-end One.

Document Control No. _____
Page 1 of 1

FORM V
Q. C. Report No. 3546
SPIKE SAMPLE RECOVERY

LAB NAME CSMRI-Analytica, Inc.

CASE NO. 8142

EPA Sample No. MEP 767

DATE 11-14-87

Lab Sample ID No. 3546-MEP 767

Units mg/Kg

Matrix Soil

Compound	Control Limit ZR	Spiked Sample Result (SSR)	Sample Result (SR)	Spike Added (SA)	ZR(1)
Metals:					
1. Aluminum	75-125	7300	7300	NR	NR
2. Antimony	"	12U	12U	20	0 N
3. Arsenic	"	15	~~12~~ 6 MT 11/24/87	8	38 N
4. Barium	"	428	[26]	400	100
5. Beryllium	"	11	[0.2]	10	108
6. Cadmium	"	10	1U ~~5U~~ MC	10	100
7. Calcium	"	74000	76000	NR	NR
8. Chromium	"	77	36	40	102
9. Cobalt	"	102	[5.0]	100	97
10. Copper	"	71	20	50	102
11. Iron	"	16600	17200	NR	NR
12. Lead	"	21	11	10	100
13. Magnesium	"	36200	38000	NR	NR
14. Manganese	"	470	374	100	96
15. Mercury	"	0.54	0.1U	0.5	108
16. Nickel	"	132	30	100	102
17. Potassium	"	2160	2340	NR	NR
18. Selenium	"	1.7	1U	2	85
19. Silver	"	17 ~~9~~ MC	2U	10	~~90~~ MC 170 N
20. Sodium	"	1010	1030	NR	NR
21. Thallium	"	7.6	2U	10	76
22. Vanadium	"	120	15	100	105
23. Zinc	"	200	92	100	108
Other:					
Cyanide	"	2.8	0.5U	50 MC	56 N

(1) ZR = [(SSR - SR)/SA] x 100
"N" - Out of Control
"NR" - Not Required (by contract or due to initial sample amount > 4 X spike amount)

Document Control No.
Page 1 of 7

Form VI
Q. C. Report No. 3546
DUPLICATES

LAB NAME CSMRI-Analytica, Inc.

CASE NO. ~~35~~ MPC 8142

EPA Sample NO. MEP 767

DATE 11-14-87

Lab Sample ID No. 3546-MEP 767

Units mg/kg

Matrix Soil

Compound	Control Limit	Samples(S)	Duplicate(D)	RPD(1)
Metals:				
1. Aluminum	± 20 RPD ~~40 mg/kg~~ MPC	7300	4840	41 *
2. Antimony	± 12 mg/kg	12U	12U	NC
3. Arsenic	± 2 mg/kg	6.2 ~~2U~~ MPC	7.6 ~~2U~~ MPC	~~NC~~ MPC 20
4. Barium	± 40 mg/kg	[26]	[17]	NC
5. Beryllium	± 1 mg/kg	[0.2]	[0.2]	NC
6. Cadmium	± 1 mg/kg	1U	1U	NC
7. Calcium	± 20 RPD ~~1000 mg/kg~~ MPC	76000	70400	7.7
8. Chromium	± 2 mg/kg	36	33	8.7
9. Cobalt	± 10 mg/kg	[5.0]	[5.0]	NC
10. Copper	± 5 mg/kg	20	24	18 ~~8.7~~ MPC
11. Iron	± 20 RPD ~~20 mg/kg~~ MPC	17200	16100	6.6
12. Lead	± 20 RPD ~~1 mg/kg~~ MPC	11	12	8.7
13. Magnesium	± 20 RPD ~~1000 mg/kg~~ MPC	38000	30200	23 *
14. Manganese	± 20 RPD ~~3 mg/kg~~ MPC	374	354	5.5
15. Mercury	± .1 mg/kg	0.1U	0.1U	NC
16. Nickel	± 8 mg/kg	30	29	3.4
17. Potassium	± 1000 mg/kg	2340	1670	33 ~~*~~ MPC
18. Selenium	± 1 mg/kg	1U	1U	NC
19. Silver	± 2 mg/kg	2U	2U	NC
20. Sodium	± 1000 mg/kg	1030	1010	2.0
21. Thallium	± 2 mg/kg	2U	2U	NC
22. Vanadium	± 10 mg/kg	11-24-87 ~~19~~ MPC 15	12	22 ~~45~~ MPC 11-24-87
23. Zinc	± 20 RPD ~~4 mg/kg~~ MPC	11-24-87 MPC ~~115~~ 92	69	29 ~~50~~ MPC 11-24-87 *
Other:	± ~~mg/kg~~ MPC			
Cyanide	± 2 mg/kg	0.5U ~~NR~~ MPC	0.5U ~~NR~~ MPC	NC ~~NR~~ MPC

* Out of Control; NC - Non calculable RPD due to value(s) less than CRDL

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

Document Control No. _____
Page 1 of 1

Form VII
Q. C. Report No. 3546
INSTRUMENT DETECTION LIMITS AND
LABORATORY CONTROL SAMPLE

LAB NAME CSMRI-Analytics, Inc. CASE NO. 8142 DATE 11-14-87
LCS NO. EPA-LV

Compound	Required Detection Limits (CRDL)-ug/l	Instrument Detection Limits (IDL)-ug/l ICP/AA ID: ICP-2.5	Instrument Detection Limits (IDL)-ug/l Furnace ID: Z5000	Lab Control Sample ug/L mg/kg (circle one) True	Found	%R
Metals:						
1. Aluminum	200	90		1980	1900	96
2. Antimony	60		2	1090 ~~1010~~	1110	102
3. Arsenic	10		1	49.4	56	113
4. Barium	200	11		1980	1930	97
5. Beryllium	5	1		481	528	110
6. Cadmium	5	5		489	500	102
7. Calcium	5000	1		49800	58400	117
8. Chromium	10			506	535	106
9. Cobalt	50			474	485	102
10. Copper	25	1		542	574	106
11. Iron	100			1990	2200	111
12. Lead	5		~~1~~ 2	97.9	84	86
13. Magnesium	5000	105		25000	23900	96
14. Manganese	15	3		513	547	107
15. Mercury	0.2		0.2 CV	NR	NR	NR
16. Nickel	40	11		496	504	107
17. Potassium	5000	629		50200	56500	113
18. Selenium	5		2	98.2	106	108
19. Silver	10	10		509	458	90
20. Sodium	5000	1480		50700	58300	115
21. Thallium	10		~~1~~ 2	97.3	84	86
22. Vanadium	50	7		511	535	105
23. Zinc	20	8		3100	3410	110
Other:						
Cyanide	10	NR	NR	400	364	91

NR - Not Required

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

CRL Receipt Date 11-12-87 FIT Receipt Date 12-16-87 Review Completed 12-21-87

TO: Gerard BREEN

FROM: Jim Mertes

SUBJECT: Municipal Landfill/Arlington Heights

PAN: IL 0533 CASE # 8142

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
# 5	Low Soil	#	Low Soil
	Low Water		Low Water
	Drinking Water		Drinking Water
	Other		Other

Project Data Status X Completed!!

Incomplete, awaiting:

FIT Data Review Findings:

- HRS useable hits in sample EN550
- TIC's in all samples

Check Data Sheets for Transcription Errors

X Compounds were detected in sample(s); see enclosed sheet.

Book No. 7 Page No. 33 Date Sampled 10-1-87

26U:001

1 hr. charged to above PAN Q
week ending 12-26-87
J.M.

recycled paper

Rec'd 12/16/87
41 pages

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 12/14/87

SUBJECT: Review of Region V CLP Data
Received for Review on 11-12-87

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

TO: Data User: FIT

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

SITE NAME: Municipal Landfill/ Arlington Heights SMO case No. 8142

EPA Data Set No. SF4492 No. of Samples: 5 D.U./Activity Numbers Y905/C72100

CRL No. 88FB01S91 - S95

SMO Traffic No. EN545 - 548, 550

CLP Laboratory: Hazleton Hrs. Required for Review: 5

PAN #: IL0533

Following are our findings:

Tina Hold-Kaufman 12/11/87

( ) 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: Duane Geuder, Quality Assurance Officer, EPA Support Services
James Petty, Chief Quality Assurance Rese arch, EMSL, Las Vegas

EPA FORM 1320-6 (Rev. 5/87)

Municipal Landfill/Arlington-Heights

This case consists of ~~four~~ five soil samples for which full organic analysis was requested. The laboratory reported no problem with these samples.

A. Holding Times - Acceptable

B. Surrogates - Acceptable
Volatiles 4 out of 36; outside QC limits
Pesticides 1 out of 8; outside QC limits

C. MS/MSD - Acceptable
Recovery
Acid 2 out of 10; outside QC limits

D. Method Blank - Acceptable
Common lab artifacts including:
Methylene Chloride
Acetone
Toluene
Diethylphthalate
Di-n-butylphthalate
Other compounds detected include.
Trichloroethene
N-nitrosodiphenylamine
TICs

E. Calibration - Acceptable
Some compounds are outside specification with respect to RF, %RSD and/or %D. These compounds are so noted on the calibration outlier form.

F. Tuning - Acceptable

G. Pesticides - Acceptable
Linearity - Acceptable
DBC - Acceptable
DDT retention time greater than 12 minutes acceptable

ZGK 12/11/87

3/9

USER INFORMATION SHEET

Municipal Landfill/Arlington Heights
PAN # IL0533

Sample	TCL Compounds	TIC Compounds
EN545	See attached listing for compounds detected	VOA - 2 TICs SV - 20 TICs
EN545RE	See attched listing for compounds detected	
EN546	See attached listing for compounds detected	VOA - 2 TICs SV - 20 TICs
EN547	See attached listing for comopounds detected	VOA - 1 TIC SV - 10 TICs
EN548	See attached listing for compounds detected	VOAs- None SVs - 19 TICs
EN550	See attached listing for comopounds detected	VOAs- 3 TICs SVs - 20 TICS

PAHs (polyaromatic Hydrocarbons) detected above and below the CRDL Chloroform detected in all samples. Indeno (1,2,3-cd) pyrene detected in EN550; samples is J'd (estimated) due to its failure to meet QC standard calibration criteria.

ZGK 12/11/87

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

CASE/SAS # 8142 CONTRACTOR Hanfeton

Instrument #	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	9/24			10/06 1043			10/07 1319								
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane															
Bromomethane															
Vinyl Chloride															
Chloroethane					26	J									
Methylene Chloride															
Acetone															
Carbon Disulfide		41	J												
1,1-Dichloroethane															
1,1-Dichloroethene															
Trans-1,2-Dichloroethene															
Chloroform															
2-Butanone															
1,2-Dichloroethane															
1,1,1-Trichloroethane															
Carbon Tetrachloride															
Vinyl Acetate															
Bromodichloromethane															
1,2-Dichloropropane															
Trans-1,3-Dichloropropene															
Trichloroethene															
Dibromochloromethane															
1,1,2-Trichloroethane															
Benzene															
cis-1,3-Dichloropropene															
2-Chloroethylvinylether															
Bromoform															
4-Methyl-2-Pentanone															
2-Hexanone															
Tetrachloroethene															
1,1,2,2-Tetrachloroethane															
Toluene															
Chlorobenzene															
Ethylbenzene															
Styrene															
m-Xylene															
o/p-Xylene															

AFFECTED SAMPLES:

	EN 545	EN 550
	546	545 RE
	547	548 MS
	548	548 MSD
		548 MSD

all samples

Reviewer's Initials/Date: ZCK 12/7/87

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

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

CASE/SAS # 8142 CONTRACTOR Hayleton

Instrument # FINN50	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	10/26			10/27 844			10/27 2103								
	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								33	J						
1,2-Dichlorobenzene															
2-Methylphenol															
bis(2-chloroisopropyl)Ether															
4-Methylphenol															
N-Nitroso-Di-n-Propylamine															
Hexachloroethane															
Nitrobenzene															
Isophorone					29	J									
2-Nitrophenol															
2,4-Dimethylphenol															
Benzoic Acid															
bis(2-Chloroethoxy)Methane															
2,4-Dichlorophenol															
1,2,4-Trichlorobenzene															
Naphthalene															
4-Chloroaniline					190	J		130	J						
Hexachlorobutadiene															
4-Chloro-3-Methylphenol															
2-Methylnaphthalene															
Hexachlorocyclopentadiene															
2,4,6-Trichlorophenol															
2,4,5-Trichlorophenol															
2-Chloronaphthalene															
2-Nitroaniline								95	J						
Dimethyl Phthalate															
Acenaphthylene								27	J						
3-Nitroaniline								48	J						
Acenaphthene															
2,4-Dinitrophenol															
4-Nitrophenol															
Dibenzofuran															

AFFECTED SAMPLES:

all	EN 550	EN 545 MSD
samples	EN 545	EN 546
	EN 545 MS	
	EN 546	
	EN 547	

Reviewer Initials/Date: ZGK 12/7/87

* 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/SAS # 8142 CONTRACTOR Hayfexon

Instrument #	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	10/26			10/27			10/27								
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene					40	J									
2,6-Dinitrotoluene															
Diethylphthalate															
4-Chlorophenyl-phenylether															
Fluorene															
4-Nitroaniline					66	J		65	J						
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		37	J												
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.

Reviewer's Initials/Date: ZGK 12/7/87

8/87

Case: _____

Contractor: Hayleton

TENTATIVELY IDENTIFIED COMPOUNDS
WATCH ASSESSMENT

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

CRITERIA

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

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

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

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

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

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

Reviewer's Initials/Date: ZGK 12/7/87

8142 8/9

COMPOUND	SAMPLE	DET. LIMIT	EN545	EN546	547	548	550			
chloromethane										
bromomethane										
vinyl chloride										
chloroethane										
methylene chloride										
acetone										
carbon disulfide										
1,1-dichloroethene										
1,1-dichloroethane										
trans-1,2,-dichloroethene										
chloroform			5	3J	4J	4J	3J			
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				2JB	1JB					
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			80J							
bis(2-chloroethoxy)methane										
2,4-dichlorophenol										
1,2,4-trichlorobenzene										
napthalene										
4-chloroaniline										
hexachlorobutadiene										
4-chloro-3-methylphenol										
2-methylnapthalene										
hexachlorocyclopentadiene										
2,4,6-trichlorophenol										
2,4,5-trichlorophenol										

VOA

5

ecology and environment

9/9

8142 COMPOUND	SAMPLE DET. LIMIT	ENS45	546	547	548	550			
V diethyl phthalate									
acenaphthylene						14J			
3-nitroaniline									
acenaphthene						110J			
2,4-dinitrophenol									
4-nitrophenol						55J			
dibenzofuran									
2,4-dinitrotoluene									
2,6-dinitrotoluene									
S diethylphthalate									
4-chlorophenyl-phenylether									
fluorene						140J			
V 4-nitroaniline									
4,6-dinitro-2-methylphenol									
N-nitrosodiphenylamine									
4-bromophenyl-phenylether									
hexachlorobenzene									
pentachlorophenol									
phenanthrene		56J	63J			2[illegible]			
anthracene						420			
di-n-butylphthalate									
fluoranthene		110J	100J		13J	4400			
benzidine									
pyrene		83J	75J	4J	13J	3100			
butylbenzylphthalate									
3,3'-dichlorobenzidine									
benzo(a)anthracene						1600			
bis(2-ethylhexyl)phthalate									
chrysene			50J			1600			
di-n-octylphthalate									
benzo(b&k)fluoranthene		75J	62J			35[illegible]			
benzo(a)pyrene						15[illegible]			
indeno(1,2,3-cd)pyrene						140J			
dibenzo(a,h)anthracene									
↑ benzo(g,h,i)perylene						1100			
↓ alpha-BHC									
beta-BHC									
delta-BHC									
gamma-BHC(lindane)									
P heptachlor									
aldrin									
E heptachlor epoxide									
endosulfan I									
S dieldrin									
T 4,4'-DDE									
endrin									
endosulfan II									
4,4'-DDD									
endrin aldehyde									
endosulfan sulfate									
4,4'-DDT									
methoxychlor									
endrin ketone									
chlordane									
toxaphene									
Aroclor-1016									
P Aroclor-1221									
C Aroclor-1232									
B Aroclor-1242									
Aroclor-1248									
Aroclor-1254									
Aroclor-1260									

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HAZLETON LABORATORIES AMERICA, INC.
3301 KINSMAN BLVD. • P.O. BOX 7545 • MADISON, WI 53707 • (608) 241-4471 • TLX 703956 HAZRAL MDS UD

November 9, 1987

RECEIVED
NOV 10 1987
U.S. EPA CENTRAL
REGIONAL LAB.

Sample Management Office
Viar and Company
209 Madison Street
Alexandria VA 22314

Enclosed is the data package for Case No. 8142. Under this case number, we received a total of five soil samples on October 2, 1987 from Region V. All samples were analyzed and reported according to the protocols provided under our Contract No. 68-01-7146 bid lot #1.

Please note the following summary comments relating to the contractual quality control in this case:

- GC-MS Tuning. All tuning requirements for both BFB and DFTPP for samples analyzed in this case were within contract criteria.

- Instrumental Calibrations. All instrumental calibrat ons for all fractions analyzed were within contract criteria for both initial and continuing calibrations.

- Method Blanks. All method blanks for the volatile, semivolatile, and pesticide fractions were found to be within contract criteria with the exception of the semi-volatile method blank, which contained di-n-butylphthalate in excess of 5 times the CRDL (2400 ug/kg). We are investigating the source of that contamination.

- Surrogate Recoveries. All calculated surrogate recoveries for the volatile, semivolatile and pesticide fractions were found to be within contract criteria with the following exceptions:

  Volatile fraction: Samples EN 545 and EN548MSD produced out of control surrogate recoveries for Toluene-d8 and were re-analyzed. The re-analysis of both EN545 and EN548MSD resulted in high, out of control recoveries for Toluene-d8. In the case of EN548MSD, it should be noted that between the unspiked and spiked aliquots, the Toluene-d8

recoveries were all very close to the upper QC limit, either being marginally in or marginally out. The reanalysis of both EN545 and EN548MSD are considered billable.

Pesticide fraction: The dibutylchlorendate recovery in sample EN548, reported at 159%, was above the upper advisory limit of 150%.

- Pesticide Confirmation Analysis. GC confirmation analysis of samples in this case was performed using a DB-608 Megabore Capillary Column. Please note that a 1.5% DBC shift criteria has been established by Joan Fisk when using Megabore capillary columns.

- Sample EN550 Pesticide Analysis. Technical chlordane in sample EN 550 was reported as less than the detection limit, based on the absence of a technical chlordane pattern and the failure of both the alpha and gamma chlordane isomers to be confirmed as present. It should be noted that gamma chlordane was indeed quantitated and confirmed to be present at approximately 25 ug/kg.

If you have any questions regarding this case or need any further clarifications, please feel free to call.

Sincerely,

David C. Hills
Manager, Environmental Analysis

DCH/sc

cc: Region V
USEPA EMSL-LV
Central File

INSTRUMENT DETECTION LIMITS

FINN 5100A

Organics Analysis Data Sheet
(Page 1)

HAZLETON LABORATORIES AMERICA

Volatile Compounds

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

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

INSTRUMENT DETECTION LIMITS

FINN 51 B

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

HAZLETON LABORATORIES AMERICA

CAS Number		ug/L
108-95-2	Phenol	4
111-44-4	bis(-2-Chloroethyl)Ether	2
95-57-8	2-Chlorophenol	2
541-73-1	1, 3-Dichlorobenzene	6
106-46-7	1, 4-Dichlorobenzene	2
100-51-6	Benzyl Alcohol	5
95-50-1	1, 2-Dichlorobenzene	4
95-48-7	2-Methylphenol	3
39638-32-9	bis(2-chloroisopropyl)Ether	4
106-44-5	4-Methylphenol	4
621-64-7	N-Nitroso-Di-n-Propylamine	2
67-72-1	Hexachloroethane	1
98-95-3	Nitrobenzene	2
78-59-1	Isophorone	3
88-75-5	2-Nitrophenol	5
105-67-9	2, 4-Dimethylphenol	3
65-85-0	Benzoic Acid	5
111-91-1	bis(-2-Chloroethoxy)Methane	1
120-83-2	2, 4-Dichlorophenol	3
120-82-1	1, 2, 4-Trichlorobenzene	2
91-20-3	Naphthalene	1
106-47-8	4-Chloroaniline	4
87-68-3	Hexachlorobutadiene	1
59-50-7	4-Chloro-3-Methylphenol	6
91-57-6	2-Methylnaphthalene	3
77-47-4	Hexachlorocyclopentadiene	10
88-06-2	2, 4, 6-Trichlorophenol	13
95-95-4	2, 4, 5-Trichlorophenol	13
91-58-7	2-Chloronaphthalene	10
88-74-4	2-Nitroaniline	9
131-11-3	Dimethyl Phthalate	10
208-96-8	Acenaphthylene	10
99-09-2	3-Nitroaniline	6

CAS Number		ug/L
83-32-9	Acenaphthene	11
51-28-5	2, 4-Dinitrophenol	11
100-02-7	4-Nitrophenol	4
132-64-9	Dibenzofuran	10
121-14-2	2, 4-Dinitrotoluene	8
606-20-2	2, 6-Dinitrotoluene	9
84-66-2	Diethylphthalate	7
7005-72-3	4-Chlorophenyl-phenylether	9
86-73-7	Fluorene	10
100-01-6	4-Nitroaniline	8
534-52-1	4, 6-Dinitro-2-Methylphenol	5
86-30-6	N-Nitrosodiphenylamine (1)	7
101-55-3	4-Bromophenyl-phenylether	6
118-74-1	Hexachlorobenzene	4
87-86-5	Pentachlorophenol	3
85-01-8	Phenanthrene	4
120-12-7	Anthracene	2
84-74-2	Di-n-Butylphthalate	3
206-44-0	Fluoranthene	5
129-00-0	Pyrene	8
85-68-7	Butylbenzylphthalate	4
91-94-1	3, 3'-Dichlorobenzidine	1
56-55-3	Benzo(a)Anthracene	3
117-81-7	bis(2-Ethylhexyl)Phthalate	3
218-01-9	Chrysene	5
117-84-0	Di-n-Octyl Phthalate	14
205-99-2	Benzo(b)Fluoranthene	10
207-08-9	Benzo(k)Fluoranthene	17
50-32-8	Benzo(a)Pyrene	7
193-39-5	Indeno(1, 2, 3-cd)Pyrene	14
53-70-3	Dibenzo(a, h)Anthracene	16
191-24-2	Benzo(g, h, i)Perylene	12

(1)-Cannot be separated from diphenylamine

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Hazleton Laboratories America

Instrument Detection Limits
HP 5779
1.5% SP 2250
1.95% SP 2401

ORGANICS ANALYSIS
DATA SHEET
Pesticide/PCBs

CAS Number	Compound	µg/mL	H_2O µg/L	Soil µg/kg
319-84-6	Alpha-BHC	0.00086	0.0086	0.57
319-85-7	Beta-BHC	0.00049	0.0049	0.33
319-86-8	Delta-BHC	0.00042	0.0042	0.28
56-89-9	Gamma-BHC (lindane)	0.0062	0.062	4.1
76-44-8	Heptachlor	0.00049	0.0049	0.33
309-00-2	Aldrin	0.00042	0.0042	0.28
1024-57-3	Heptachlor Epoxide	0.00028	0.0028	0.19
959-98-8	Endosulfan I	0.00042	0.0042	0.28
60-57-1	Dieldrin	0.00042	0.0042	0.28
72-55-9	4-4-DDE	0.00028	0.0028	0.19
72-20-8	Endrin	0.0030	0.030	2.0
33213-65-9	Endosulfan II	0.0021	0.021	1.4
72-54-8	4-4-DDD	0.00057	0.0057	0.38
1031-07-8	Endosulfan Sulfate	0.0011	0.011	0.73
50-29-3	4-4-DDT	0.00014	0.0014	0.93
72-43-5	Methoxychlor	0.031	0.31	21
53494-70-6	Endrin Ketone	0.00085	0.0085	0.57
57-74-9	Chlordane	0.0085	0.085	5.7
8001-35-2	Toxaphene	0.0049	0.049	3.3
12674-11-2	Aroclor-1016	0.0085	0.085	5.7
11104-28-2	Aroclor-1221	0.025	0.25	17
11141-16-5	Aroclor-1232	0.025	0.25	17
53469-21-9	Aroclor-1242	0.025	0.25	17
12672-29-6	Aroclor-1248	0.025	0.25	17
11097-69-1	Aroclor-1254	0.025	0.25	17
11096-82-5	Aroclor-1260	0.025	0.25	17

H_2O: (10 x µg/mL) reflects on 100 x concentration factor for waters per CLP protocol.

Soil: $\left(\frac{1,000}{1.5} \times \mu g/mL\right)$ reflects on normal concentration factor for soils per CLP protocol.

Date Analyzed: 03/14/86

(0361b/lma)

Hazleton Laboratories America

Instrument Detection Limits
HP 10802
DB608

ORGANICS ANALYSIS
DATA SHEET
Pesticide/PCBs

CAS Number	Compound	µg/mL	H_2O µg/L	Soil µg/kg
319-84-6	Alpha-BHC	0.0015	0.015	1.0
319-85-7	Beta-BHC	0.0011	0.011	0.73
319-86-8	Delta-BHC	0.0016	0.016	1.10
56-89-9	Gamma-BHC (lindane)	0.0020	0.020	1.3
76-44-8	Heptachlor	0.0017	0.017	1.1
309-00-2	Aldrin	0.0020	0.020	1.3
1024-57-3	Heptachlor Epoxide	0.0006	0.006	0.40
959-98-8	Endosulfan I	0.0008	0.008	0.53
60-57-1	Dieldrin	0.0023	0.023	1.5
72-55-9	4-4-DDE	0.0020	0.020	1.3
72-20-8	Endrin	0.0028	0.028	1.9
33213-65-9	Endosulfan II	0.0030	0.030	2.0
72-54-8	4-4-DDE	0.0025	0.025	1.7
1031-07-8	Endosulfan Sulfate	0.0030	0.030	2.0
50-29-3	4-4-DDT	0.0018	0.018	1.2
72-43-5	Methoxychlor	0.0048	0.048	3.2
53494-70-6	Endrin Ketone	0.0080	0.080	5.3
57-74-9	Chlordane	0.035	0.35	23
8001-35-2	Toxaphene	0.039	0.39	26
12674-11-2	Aroclor-1016	0.035	0.35	23
11104-28-2	Aroclor-1221	0.002	0.02	1.3
11141-16-5	Aroclor-1232	0.015	0.15	10
53469-21-9	Aroclor-1242	0.025	0.25	17
12672-29-6	Aroclor-1248	0.012	0.12	8
11097-69-1	Aroclor-1254	0.005	0.05	3.3
11096-82-5	Aroclor-1260	0.014	0.14	9.3

H_2O: (10 x µg/mL) reflects on 100 x concentration factor for waters per CLP protocol.

Soil: $\left(\frac{1,000}{1.5} \times \mu g/mL\right)$ reflects on normal concentration factor for soils per CLP protocol.

Date Analyzed: 04/21/87

(0361b/lma)

SOIL SURROGATE PERCENT RECOVERY SUMMARY

Case No. 8142 Contract Laboratory HAZLETON LABORATORIES Contract No. 68-01-7146

Low X 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)
EN545	119*	79	91	58	67	93			54	54	72	95
EN545RE	124*	81	97	NA	NA	NA			NA	NA	NA	NA
EN545MS	NA	NA	NA	60	71	98			56	53	75	106
EN545MSD	NA	NA	NA	61	66	103			52	56	77	116
EN546	116	78	85	55	66	98			46	50	77	107
EN547	117	77	83	69	75	109			53	59	60	112
EN548	113	77	81	41	46	98			27	33	62	159*
EN548MS	117	81	99	NA	NA	NA			NA	NA	NA	NA
EN548MSD	118*	80	99	NA	NA	NA			NA	NA	NA	NA
EN548MSD RE	119*	78	98	NA	NA	NA			NA	NA	NA	NA
EN550	116	83	98	44	66	94			47	46	67	87
M.BIK-1	91	89	88	69	75	136			58	67	58	121
M.BIK-2	102	101	96	NA	NA	NA			NA	NA	NA	NA
H.BIK	100	95	99	NA	NA	NA			NA	NA	NA	NA
	4											
		0	0	0	0							

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

**ADVISORY LIMITS ONLY

Volatiles: 4 out of 36 ; outside of QC limits

Semi-Volatiles: 0 out of 48 ; outside of QC limits

Pesticides: 1 out of 8 ; outside of QC limits

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Comments: NA = NOT APPLICABLE

FORM II

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. 8142 Contractor HAZLETON LABORATORIES Contract No. 68-01-7146

Low Level X Medium Level _____

FRACTION	COMPOUND	CONC. SPIKE ADDED (ug/Kg)	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS* RPD	QC LIMITS* RECOVERY
VOA SMO SAMPLE NO. EN548	1,1-Dichloroethene	66	0	55	83	54	82	1	22	59-172
	Trichloroethene	↓	0	64	97	64	97	0	24	62-137
	Chlorobenzene	↓	0	68	103	68	103	0	21	60-133
	Toluene	↓	3	75	109	74	108	1	21	59-139
	Benzene	↓	0	61	92	61	92	0	21	66-142
B/N SMO SAMPLE NO. EN545	1,2,4-Trichlorobenzene	2050	0	1430	70	1400	68	3	23	38-107
	Acenaphthene	2050	0	1280	62	1230	60	3	19	31-137
	2,4 Dinitrotoluene	2050	0	1340	65	1390	68	5	47	28-89
	Pyrene	2050	83	2110	99	1650	76	23	36	35-142
	N-Nitrosodi-n-Propylamine	2050	0	1090	53	1190	58	9	38	41-126
	1,4-Dichlorobenzene	2050	0	1020	50	940	46	8	27	28-104
ACID SMO SAMPLE NO. EN545	Pentachlorophenol	4100	0	2420	59	2350	57	3	47	17-109
	Phenol	4100	0	2060	50	2010	49	2	35	26-90
	2-Chlorophenol	4100	0	8	0.2*	9	0.2*	0	50	25-102
	4-Chloro-3-Methylphenol	4100	0	2850	70	2500	61	13	33	26-103
	4-Nitrophenol	4100	0	2930	71	3400	83	24	50	11-114
PEST SMO SAMPLE NO. EN545	Lindane	16.4	0	9.14	56	9.88	60	7.8	50	46-127
	Heptachlor	16.4	0	12.6	77	14.1	86	11	31	35-130
	Aldrin	16.4	0.63	8.77	50	8.90	50	1.5	43	34-132
	Dieldrin	41.0	1.68	30.0	69	34.8	81	15	38	31-134
	Endrin	41.0	0	37.5	91	45.4	111	19	45	42-139
	4,4'-DDT	41.0	0	35.3	86	39.5	96	11	50	23-134

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

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

RECOVERY: VOAs 0 out of 10 ; outside QC limits
B/N 1 out of 12 ; outside QC limits
ACID 2 out of 10 ; outside QC limits
PEST 0 out of 12 ; outside QC limits

Comments:

FORM III

7/85

recycled paper

METHOD BLANK SUMMARY

Case No. 8142 Region 5 Contractor HAZLETON LABORATORIES Contract No. 68-01-7146

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	CONC. LEVEL	INST. ID	CAS NUMBER	COMPOUND (MSL, TIC OR UNKNOWN)	CONC.	UNITS	CRDL
1087V43	10/06/87	VOA	soil	L	5100A	75-09-2	Methylene Chloride	2 J	µg/kg	5
						67-64-1	Acetone	10		10
						108-88-3	Toluene	1 J		5
1087V49	10/07/87	VOA	soil	L	5100A	75-09-2	Methylene Chloride	4 J	µg/kg	5
						67-64-1	Acetone	18		10
						79-01-6	Trichloroethene	1 J		5
						108-88-3	Toluene	2 J		5
BAN405	10/26/87	BNA	SOIL	L	FINN 51B	84-66-2	Diethylphthalate	14	mg/kg	330
						86-30-6	N-Nitrosodiphenylamine	85		330
						84-74-2	Di-N-Butylphthalate	2400		330
						117-81-7	Bis(2-Ethylhexyl) Phthalate	22		330
						3970-62-5	3-pentanol, 2, 2-Dimethyl	160		—
						57-15-8	2-propanol, 1,1,1,1-Trichloro-2methyl	320		—
						17851-53-5	1,2 Benzenedicarboxylic Acid, Butyl 1,2 methylpropyl ester	210		—
3692	10/21/87	PEST	SOIL	L	5779	—	None found	—	—	—

Comments:

FORM IV 7/85

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Sample Number
EN545

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: HAZLETON LABORATORIES
Case No: 8142
Lab Sample ID No: 71000455
QC Report No:
Sample Matrix: Soil
Contract No: 68-01-7146
Data Release Authorized By: [signature]
Date Sample Received: 10/02/87

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 10/06/87
Date Analyzed: 10/06/87
Conc/Dil Factor: 1 pH 8.3
Percent Moisture: (Not Decanted) 18.4 CF = 1.23

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	12 U
74-83-9	Bromomethane	12 U
75-01-4	Vinyl Chloride	12 U
75-00-3	Chloroethane	12 U
75-09-2	Methylene Chloride	13 B
67-64-1	Acetone	36 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	5
107-06-2	1, 2-Dichloroethane	6 U
78-93-3	2-Butanone	12 U
71-55-6	1, 1, 1-Trichloroethane	6 U
56-23-5	Carbon Tetrachloride	6 U
108-05-4	Vinyl Acetate	12 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	12 U
75-25-2	Bromoform	6 U
108-10-1	4-Methyl-2-Pentanone	12 U
591-78-6	2-Hexanone	12 U
127-18-4	Tetrachloroethene	6 U
79-34-5	1, 1, 2, 2-Tetrachloroethane	6 U
108-88-3	Toluene	3 J B
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 this 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

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Laboratory Name: HAZLETON LABORATORIES

Case No: 8142

Sample Number
EN 545

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 10/5/87

Date Analyzed: 10/27/87

Conc/Dil Factor: 1

Percent Moisture (Decanted) 18.4

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	410u	
111-44-4	bis(-2-Chloroethyl)Ether		
95-57-8	2-Chlorophenol		
541-73-1	1, 3-Dichlorobenzene		
106-46-7	1, 4-Dichlorobenzene		
100-51-6	Benzyl Alcohol		
95-50-1	1, 2-Dichlorobenzene		
95-48-7	2-Methylphenol		
39638-32-9	bis(2-chloroisopropyl)Ether		
106-44-5	4-Methylphenol		
621-64-7	N-Nitroso-Di-n-Propylamine		
67-72-1	Hexachloroethane		
98-95-3	Nitrobenzene		
78-59-1	Isophorone		
88-75-5	2-Nitrophenol		
105-67-9	2, 4-Dimethylphenol	✓	
65-85-0	Benzoic Acid	80 J	•
111-91-1	bis(-2-Chloroethoxy)Methane	410u	
120-83-2	2, 4-Dichlorophenol	✓	
120-82-1	1, 2, 4-Trichlorobenzene		
91-20-3	Naphthalene		
106-47-8	4-Chloroaniline		
87-68-3	Hexachlorobutadiene		
59-50-7	4-Chloro-3-Methylphenol		
91-57-6	2-Methylnaphthalene		
77-47-4	Hexachlorocyclopentadiene		
88-06-2	2, 4, 6-Trichlorophenol	✓	
95-95-4	2, 4, 5-Trichlorophenol	2000u	•
91-58-7	2-Chloronaphthalene	410u	
88-74-4	2-Nitroaniline	2000u	•
131-11-3	Dimethyl Phthalate	410u	
208-96-8	Acenaphthylene	✓	
99-09-2	3-Nitroaniline	2000u	•

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	410u	
51-28-5	2, 4-Dinitrophenol	2000u	•
100-02-7	4-Nitrophenol	2000u	•
132-64-9	Dibenzofuran	410u	
121-14-2	2, 4-Dinitrotoluene	✓	
606-20-2	2, 6-Dinitrotoluene	✓	
84-66-2	Diethylphthalate	27BJ	
7005-72-3	4-Chlorophenyl-phenylether	410u	
86-73-7	Fluorene	✓	
100-01-6	4-Nitroaniline	2000u	•
534-52-1	4, 6-Dinitro-2-Methylphenol	2000u	•
86-30-6	N-Nitrosodiphenylamine (1)	410u	
101-55-3	4-Bromophenyl-phenylether	✓	
118-74-1	Hexachlorobenzene	✓	
87-86-5	Pentachlorophenol	2000u	•
85-01-8	Phenanthrene	56J	
120-12-7	Anthracene	410u	
84-74-2	Di-n-Butylphthalate	2600B	
206-44-0	Fluoranthene	40J	
129-00-0	Pyrene	83J	
85-68-7	Butylbenzylphthalate	410u	
91-94-1	3, 3'-Dichlorobenzidine	820u	•
56-55-3	Benzo(a)Anthracene	410u	
117-81-7	bis(2-Ethylhexyl)Phthalate	64BJ	
218-01-9	Chrysene	43J	
117-84-0	Di-n-Octyl Phthalate	410u	
205-99-2	Benzo(b)Fluoranthene	75J	Coelute
207-08-9	Benzo(k)Fluoranthene		
50-32-8	Benzo(a)Pyrene	410u	
193-39-5	Indeno(1, 2, 3-cd)Pyrene		
53-70-3	Dibenzo(a,h)Anthracene		
191-24-2	Benzo(g,h,i)Perylene	✓	

(1)-Cannot be separated from diphenylamine

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ecology and environment

Laboratory Name HAZLETON LABORATORIES

Case No 8142

Sample Number
EN 545

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared: 10-5-87

Date Analyzed: 10-22-87

Conc/Dil Factor: 1

Percent Moisture (decanted) 18.4%

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	9.8u
319-85-7	Beta-BHC	9.8u
319-86-8	Delta-BHC	9.8u
58-89-9	Gamma-BHC (Lindane)	9.8u
76-44-8	Heptachlor	9.8u
309-00-2	Aldrin	9.8u
1024-57-3	Heptachlor Epoxide	9.8u
959-98-8	Endosulfan I	9.8u
60-57-1	Dieldrin	20u
72-55-9	4,4'-DDE	20u
72-20-8	Endrin	20u
33213-65-9	Endosulfan II	20u
72-54-8	4,4'-DDD	20u
1031-07-8	Endosulfan Sulfate	20u
50-29-3	4,4'-DDT	20u
72-43-5	Methoxychlor	98u
53494-70-5	Endrin Ketone	20u
57-74-9	Chlordane	98u
8001-35-2	Toxaphene	200u
12674-11-2	Aroclor-1016	98u
11104-28-2	Aroclor-1221	98u
11141-16-5	Aroclor-1232	98u
53469-21-9	Aroclor-1242	98u
12672-29-6	Aroclor-1248	98u
11097-69-1	Aroclor-1254	200u
11096-82-5	Aroclor-1260	200u

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 24g V_t 20,000ul V_i 4.0ul

Laboratory Name HAZLETON LABORATORIES

Case No 8142

Sample Number
EN548

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. 57-15-8	2-Propanol; 1,1,1-Trichloro-2-Methyl	BNA	356	340
2.	Unknown		474	330
3. 17301-32-5	Undecane, 4,7-Dimethyl		993	240
4. 13287-21-3	Tridecane 6-Methyl		1173	320
5. 54105-67-8	Heptadecane, 2,6-Dimethyl		1178	500
6. 74764-11-7	Iron, Tricarbonyl(N-(Benzenamine-N-Phenyl-2-Pyridinylmethylene		1256	220
7. 629-92-5	Nonadecane		1264	290
8. 17851-53-5	1,2-Benzenedicarboxylic Acid, Butyl Ester 2-Methylpropyl		1307	310
9.	Unknown		1336	200
10. 10544-50-0	Sulfur		1417	4300
11. 2432-89-5	Decanedioic Acid, Didecyl Ester		1749	430
12. 630-02-4	Octacosane		1867	280
13.	Unknown		1977	260
14.	Unknown		1982	210
15.	Unknown		2092	250
16.	Unknown		2112	290
17.	Unknown		2143	370
18.	Unknown		2158	230
19.	Unknown		2186	1700
20.	Unknown		2208	230
21. 109-66-0	Pentane	VOA	225	29
22. 110-54-3	Hexane		332	7
23. —	No Pesticides found	PEST	—	—
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Sample Number
EN545 RE

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: HAZLETON LABORATORIES
Case No: 8142
Lab Sample ID No: 71000455
QC Report No:
Sample Matrix: Soil
Contract No: 68-01-7146
Data Release Authorized By: David C. Gill
Date Sample Received: 10/02/87

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 10/07/87
Date Analyzed: 10/07/87
Conc/Dil Factor: 1 pH 8.3
Percent Moisture: (Not Decanted) 18.4 CF=1.23

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	12U
74-83-9	Bromomethane	12U
75-01-4	Vinyl Chloride	12U
75-00-3	Chloroethane	12U
75-09-2	Methylene Chloride	11 B
67-64-1	Acetone	22 B
75-15-0	Carbon Disulfide	6U
75-35-4	1, 1-Dichloroethene	6U
75-34-3	1, 1-Dichloroethane	6U
156-60-5	Trans-1, 2-Dichloroethene	6U
67-66-3	Chloroform	2J
107-06-2	1, 2-Dichloroethane	6U
78-93-3	2-Butanone	12U
71-55-6	1, 1, 1-Trichloroethane	6U
56-23-5	Carbon Tetrachloride	6U
108-05-4	Vinyl Acetate	12U
75-27-4	Bromodichloromethane	6U

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

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

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Laboratory Name HAZLETON LABORATORIES

Case No 8142

Sample Number
EN 545 RE

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.	No volatiles found	VOA		
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
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16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

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Sample Number
EN 546

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: HAZLETON LABORATORIES

Case No: 8142

Lab Sample ID No: 71000456

QC Report No:

Sample Matrix: soil

Contract No: 68-01-7146

Data Release Authorized By: David C Gilles

Date Sample Received: 10/02/87

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 10/06/87

Date Analyzed: 10/06/87

Conc/Dil Factor: 1 pH 8.2

Percent Moisture: (Not Decanted) 25.5 C.F. = 1.34

CAS Number		ug/l or (ug/Kg) (Circle One)
74-87-3	Chloromethane	13U
74-83-9	Bromomethane	13U
75-01-4	Vinyl Chloride	13U
75-00-3	Chloroethane	13U
75-09-2	Methylene Chloride	9 B
67-64-1	Acetone	40 B
75-15-0	Carbon Disulfide	7U
75-35-4	1, 1-Dichloroethene	7U
75-34-3	1, 1-Dichloroethane	7U
156-60-5	Trans-1, 2-Dichloroethene	7U
67-66-3	Chloroform	3J
107-06-2	1, 2-Dichloroethane	7U
78-93-3	2-Butanone	13U
71-55-6	1, 1, 1-Trichloroethane	7U
56-23-5	Carbon Tetrachloride	7U
108-05-4	Vinyl Acetate	13U
75-27-4	Bromodichloromethane	7U

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

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

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Laboratory Name: HAZLETON LABORATORIES

Case No: 8142

Sample Number
EN 546

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 10/5/87

Date Analyzed: 10/27/87

Conc/Dil Factor: 1

Percent Moisture (Decanted) 25.5

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	450 u
111-44-4	bis-2-ChloroethylEther	
95-57-8	2-Chlorophenol	
541-73-1	1, 3-Dichlorobenzene	
106-46-7	1, 4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	
95-50-1	1, 2-Dichlorobenzene	
95-48-7	2-Methylphenol	
39638-32-9	bis(2-chloroisopropyl)Ether	
106-44-5	4-Methylphenol	
621-64-7	N-Nitroso-Di-n-Propylamine	
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	
78-59-1	Isophorone	
88-75-5	2-Nitrophenol	
105-67-9	2, 4-Dimethylphenol	
65-85-0	Benzoic Acid	2200 u *
111-91-1	bis-2-Chloroethoxy)Methane	450 u
120-83-2	2, 4-Dichlorophenol	
120-82-1	1, 2, 4-Trichlorobenzene	
91-20-3	Naphthalene	
106-47-8	4-Chloroaniline	
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	
91-57-6	2-Methylnaphthalene	
77-47-4	Hexachlorocyclopentadiene	
88-06-2	2, 4, 6-Trichlorophenol	
95-95-4	2, 4, 5-Trichlorophenol	2200 u *
91-58-7	2-Chloronaphthalene	450 u
88-74-4	2-Nitroaniline	2200 u *
131-11-3	Dimethyl Phthalate	450 u
208-96-8	Acenaphthylene	
99-09-2	3-Nitroaniline	2200 u *

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	450 u
51-28-5	2, 4-Dinitrophenol	2200 u *
100-02-7	4-Nitrophenol	2200 u *
132-64-9	Dibenzofuran	450 u
121-14-2	2, 4-Dinitrotoluene	
606-20-2	2, 6-Dinitrotoluene	
84-66-2	Diethylphthalate	
7005-72-3	4-Chlorophenyl-phenylether	
86-73-7	Fluorene	
100-01-6	4-Nitroaniline	2200 u *
534-52-1	4, 6-Dinitro-2-Methylphenol	2200 u *
86-30-6	N-Nitrosodiphenylamine (1)	450 u
101-55-3	4-Bromophenyl-phenylether	
118-74-1	Hexachlorobenzene	
87-86-5	Pentachlorophenol	2200 u *
85-01-8	Phenanthrene	65 J
120-12-7	Anthracene	450 u
84-74-2	Di-n-Butylphthalate	530 B
206-44-0	Fluoranthene	100 J
129-00-0	Pyrene	75 J
85-68-7	Butylbenzylphthalate	450 u
91-94-1	3, 3'-Dichlorobenzidine	900 u *
56-55-3	Benzo(a)Anthracene	450 u
117-81-7	bis(2-Ethylhexyl)Phthalate	150 BJ
218-01-9	Chrysene	50 J
117-84-0	Di-n-Octyl Phthalate	450 u
205-99-2	Benzo(b)Fluoranthene	62 J } coelute
207-08-9	Benzo(k)Fluoranthene	} coelute
50-32-8	Benzo(a)Pyrene	450 u
193-39-5	Indeno(1, 2, 3-cd)Pyrene	
53-70-3	Dibenzo(a,h)Anthracene	
191-24-2	Benzo(g,h,i)Perylene	

(1)-Cannot be separated from diphenylamine

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ecology and environment

Laboratory Name HAZLETON LABORATORIES

Case No 8142

Sample Number
EN 546

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared 10-5-87

Date Analyzed: 10-22-87

Conc/Dil Factor: 1

Percent Moisture (decanted) 25.5

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	11 u
319-85-7	Beta-BHC	11 u
319-86-8	Delta-BHC	11 u
58-89-9	Gamma-BHC (Lindane)	11 u
76-44-8	Heptachlor	11 u
309-00-2	Aldrin	11 u
1024-57-3	Heptachlor Epoxide	11 u
959-98-8	Endosulfan I	11 u
60-57-1	Dieldrin	21 u
72-55-9	4, 4'-DDE	21 u
72-20-8	Endrin	21 u
33213-65-9	Endosulfan II	21 u
72-54-8	4, 4'-DDD	21 u
1031-07-8	Endosulfan Sulfate	21 u
50-29-3	4,4'-DDT	21 u
72-43-5	Methoxychlor	110 u
53494-70-5	Endrin Ketone	21 u
57-74-9	Chlordane	110 u
8001-35-2	Toxaphene	210 u
12674-11-2	Aroclor-1016	110 u
11104-28-2	Aroclor-1221	110 u
11141-16-5	Aroclor-1232	110 u
53469-21-9	Aroclor-1242	110 u
12672-29-6	Aroclor-1248	110 u
11097-69-1	Aroclor-1254	210 u
11096-82-5	Aroclor-1260	210 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 22 g V_t 20,000 µl V_i 4.0 µl

Laboratory Name HAZLETON LABORATORIES

Case No 8142

Sample Number
EN546

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. 17801-32-5	Undecane, 4,7-Dimethy	BNA	991	260
2. 6418-91-3	Tridecane, 3-Methyl		1177	320
3. 1921-70-6	Pentadecane, 2,6,10,14-Tetramethyl		1177	520
4. 74764-11-7	Iron Tricarbonyl [N-(Phenyl)-2-Pyridinylmethylene] Benzenamine, N-N		1255	250
5. 629-92-5	Nonadecane		1263	320
6. 10544-50-0	Sulfur		1417	7500
7. 54105-67-8	Heptadecane, 2,6-Dimethyl		1484	280
8.	Unknown		1541	350
9.	Unknown		1548	290
10. 629-97-0	Docosane		1554	770
11.	Unknown		1561	300
12.	Unknown		1565	690
13.	Unknown		1696	410
14. 629-99-2	Pentacosane		1975	410
15.	Unknown		2091	520
16.	Unknown		2112	460
17.	Unknown		2187	4200
18.	Unknown		2206	680
19.	Unknown		2223	280
20.	Unknown	↓	2288	850
21. 629-14-1	1,2-Diethoxyethane	VOA	191	8
22. 109-66-0	Pentane	↓	226	20
23. —	No Pesticides found	PEST	—	—
24.				
25.				
26.				
27.				
28.				
29.				
30.				

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Sample Number
EN 547

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: HAZLETON LABORATORIES
Case No: 8142
Lab Sample ID No: 71000457
QC Report No:
Sample Matrix: Soil
Contract No: 68-01-7146
Data Release Authorized By: David C Gilb
Date Sample Received: 10/02/87

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 10/06/87
Date Analyzed: 10/06/87
Conc/Dil Factor: 1 pH 8.1
Percent Moisture: (Not Decanted) 24.2 C·F = 1.32

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	13U
74-83-9	Bromomethane	13U
75-01-4	Vinyl Chloride	13U
75-00-3	Chloroethane*	13U
75-09-2	Methylene Chloride	6JB
67-64-1	Acetone	31B
75-15-0	Carbon Disulfide	7U
75-35-4	1, 1-Dichloroethene	7U
75-34-3	1, 1-Dichloroethane	7U
156-60-5	Trans-1, 2-Dichloroethene	7U
67-66-3	Chloroform	4J
107-06-2	1, 2-Dichloroethane	7U
78-93-3	2-Butanone	13U
71-55-6	1, 1, 1-Trichloroethane	7U
56-23-5	Carbon Tetrachloride	7U
108-05-4	Vinyl Acetate	13U
75-27-4	Bromodichloromethane	7U

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

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

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Laboratory Name: HAZLETON LABORATORIES

Case No: 8142

Sample Number
EN547

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 10/5/87

Date Analyzed: 10/27/87

Conc/Dil Factor: 1

Percent Moisture (Decanted) 24.2

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	440u
111-44-4	bis-2-Chloroethyl Ether	
95-57-8	2-Chlorophenol	
541-73-1	1, 3-Dichlorobenzene	
106-46-7	1, 4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	
95-50-1	1, 2-Dichlorobenzene	
95-48-7	2-Methylphenol	
39638-32-9	bis(2-chloroisopropyl)Ether	
106-44-5	4-Methylphenol	
621-64-7	N-Nitroso-Di-n-Propylamine	
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	
78-59-1	Isophorone	
88-75-5	2-Nitrophenol	
105-67-9	2, 4-Dimethylphenol	✓
65-85-0	Benzoic Acid	2200u
111-91-1	bis-2-Chloroethoxyl Methane	440u
120-83-2	2, 4-Dichlorophenol	
120-82-1	1, 2, 4-Trichlorobenzene	
91-20-3	Naphthalene	
106-47-8	4-Chloroaniline	
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	
91-57-6	2-Methylnaphthalene	
77-47-4	Hexachlorocyclopentadiene	
88-06-2	2, 4, 6-Trichlorophenol	✓
95-95-4	2, 4, 5-Trichlorophenol	2200u
91-58-7	2-Chloronaphthalene	440u
88-74-4	2-Nitroaniline	2200u
131-11-3	Dimethyl Phthalate	440u
208-96-8	Acenaphthylene	440u
99-09-2	3-Nitroaniline	2200u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	440u
51-28-5	2, 4-Dinitrophenol	2200u
100-02-7	4-Nitrophenol	2200u
132-64-9	Dibenzofuran	440u
121-14-2	2, 4-Dinitrotoluene	
606-20-2	2, 6-Dinitrotoluene	✓
84-66-2	Diethylphthalate	18 BJ
7005-72-3	4-Chlorophenyl-phenylether	440u
86-73-7	Fluorene	✓
100-01-6	4-Nitroaniline	2200u
534-52-1	4, 6-Dinitro-2-Methylphenol	2200u
86-30-6	N-Nitrosodiphenylamine (1)	59 BJ
101-55-3	4-Bromophenyl-phenylether	440u
118-74-1	Hexachlorobenzene	✓
87-86-5	Pentachlorophenol	2200u
85-01-8	Phenanthrene	440u
120-12-7	Anthracene	✓
84-74-2	Di-n-Butylphthalate	3300B
206-44-0	Fluoranthene	440u
129-00-0	Pyrene	4 J
85-68-7	Butylbenzylphthalate	440u
91-94-1	3, 3'-Dichlorobenzidine	880u
56-55-3	Benzo(a)Anthracene	440u
117-81-7	bis(2-Ethylhexyl)Phthalate	25 BJ
218-01-9	Chrysene	440u
117-84-0	Di-n-Octyl Phthalate	
205-99-2	Benzo(b)Fluoranthene	
207-08-9	Benzo(k)Fluoranthene	
50-32-8	Benzo(a)Pyrene	
193-39-5	Indeno(1, 2, 3-cd)Pyrene	
53-70-3	Dibenz(a, h)Anthracene	
191-24-2	Benzo(g, h, i)Perylene	✓

(1)-Cannot be separated from diphenylamine

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Laboratory Name HAZLETON LABORATORIES

Case No 8142

Sample Number
EN 547

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared: 10·5·87

Date Analyzed 10·22·87

Conc/Dil Factor 1

Percent Moisture (decanted) 24.2%

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	11u
319-85-7	Beta-BHC	11u
319-86-8	Delta-BHC	11u
58-89-9	Gamma-BHC (Lindane)	11u
76-44-8	Heptachlor	11u
309-00-2	Aldrin	11u
1024-57-3	Heptachlor Epoxide	11u
959-98-8	Endosulfan I	11u
60-57-1	Dieldrin	21u
72-55-9	4, 4'-DDE	21u
72-20-8	Endrin	21u
33213-65-9	Endosulfan II	21u
72-54-8	4, 4'-DDD	21u
1031-07-8	Endosulfan Sulfate	21u
50-29-3	4, 4'-DDT	21u
72-43-5	Methoxychlor	110u
53494-70-5	Endrin Ketone	21u
57-74-9	Chlordane	110u
8001-35-2	Toxaphene	210u
12674-11-2	Aroclor-1016	110u
11104-28-2	Aroclor-1221	110u
11141-16-5	Aroclor-1232	110u
53469-21-9	Aroclor-1242	110u
12672-29-6	Aroclor-1248	110u
11097-69-1	Aroclor-1254	210u
11096-82-5	Aroclor-1260	210u

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 23 g V_t 20,000 ul V_i 4.0 ul

Laboratory Name HAZLETON LABORATORIES

Case No 8142

Sample Number EN547

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. 109-66-0	Pentane	VOA	225	11
2. 3970-62-5	3-Pentanol, 2,2-Dimethyl	BNA	256	240
3. 3240-09-3	5-Hexene-2-one, 5-methyl		319	210
4. 57-15-8	2-Propanol, 1,1,1,1-Trichloro-2-Methyl		355	400
5. 17851-53-5	1,2-Benzenedicarboxylic Acid, Butyl 2-Methyl propyl Ester		1307	400
6.				
7.	Unknown		2143	190
8.	Unknown		2166	940
9.	Unknown		2169	310
10.	Unknown		2175	330
11.	Unknown		2210	1800
12. —	No Pesticides found	PEST	—	—
13.				
14.				
15.				
16.				
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30.				

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Sample Number
EN548

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: HAZLETON LABORATORIES

Case No: 8142

Lab Sample ID No: 7100045 8

QC Report No:

Sample Matrix: Soil

Contract No: 68-01-7146

Data Release Authorized By: David C. Gillis

Date Sample Received: 10/02/87

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 10/06/87

Date Analyzed: 10/06/87

Conc/Dil Factor: 1 pH 7.9

Percent Moisture: (Not Decanted) 23.7 CF = 1.31

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	13U
74-83-9	Bromomethane	13U
75-01-4	Vinyl Chloride	13U
75-00-3	Chloroethane*	13U
75-09-2	Methylene Chloride	7JB
67-64-1	Acetone	12JB
75-15-0	Carbon Disulfide	7U
75-35-4	1, 1-Dichloroethene	7U
75-34-3	1, 1-Dichloroethane	7U
156-60-5	Trans-1, 2-Dichloroethene	7U
67-66-3	Chloroform	4J
107-06-2	1, 2-Dichloroethane	7U
78-93-3	2-Butanone	13U
71-55-6	1, 1, 1-Trichloroethane	7U
56-23-5	Carbon Tetrachloride	7U
108-05-4	Vinyl Acetate	13U
75-27-4	Bromodichloromethane	7U

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

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

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Laboratory Name: HAZLETON LABORATORIES

Case No: 8142

Sample Number
EN 54X

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 10/5/87

Date Analyzed: 10/20/87

Conc/Dil Factor: 1

Percent Moisture (Decanted) 23.7

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	440u	
111-44-4	bis(-2-Chloroethyl)Ether		
95-57-8	2-Chlorophenol		
541-73-1	1, 3-Dichlorobenzene		
106-46-7	1, 4-Dichlorobenzene		
100-51-6	Benzyl Alcohol		
95-50-1	1, 2-Dichlorobenzene		
95-48-7	2-Methylphenol		
39638-32-9	bis(2-chloroisopropyl)Ether		
106-44-5	4-Methylphenol		
621-64-7	N-Nitroso-Di-n-Propylamine		
67-72-1	Hexachloroethane		
98-95-3	Nitrobenzene		
78-59-1	Isophorone		
88-75-5	2-Nitrophenol		
105-67-9	2, 4-Dimethylphenol	✓	
65-85-0	Benzoic Acid	2200u	•
111-91-1	bis(-2-Chloroethoxy)Methane	440u	
120-83-2	2, 4-Dichlorophenol		
120-82-1	1, 2, 4-Trichlorobenzene		
91-20-3	Naphthalene		
106-47-8	4-Chloroaniline		
87-68-3	Hexachlorobutadiene		
59-50-7	4-Chloro-3-Methylphenol		
91-57-6	2-Methylnaphthalene		
77-47-4	Hexachlorocyclopentadiene		
88-06-2	2, 4, 6-Trichlorophenol	✓	
95-95-4	2, 4, 5-Trichlorophenol	2200u	•
91-58-7	2-Chloronaphthalene	440u	
88-74-4	2-Nitroaniline	2200u	•
131-11-3	Dimethyl Phthalate	440u	
208-96-8	Acenaphthylene	✓	
99-09-2	3-Nitroaniline	2200u	•

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	440u	
51-28-5	2, 4-Dinitrophenol	2200u	•
100-02-7	4-Nitrophenol	2200u	•
132-64-9	Dibenzofuran	440u	
121-14-2	2, 4-Dinitrotoluene		
606-20-2	2, 6-Dinitrotoluene		
84-66-2	Diethylphthalate	2785	
7005-72-3	4-Chlorophenyl-phenylether	440u	
86-73-7	Fluorene	✓	
100-01-6	4-Nitroaniline	2200u	•
534-52-1	4, 6-Dinitro-2-Methylphenol	2200u	•
86-30-6	N-Nitrosodiphenylamine (1)	360J	
101-55-3	4-Bromophenyl-phenylether	440u	
118-74-1	Hexachlorobenzene	✓	
87-86-5	Pentachlorophenol	2200u	•
85-01-8	Phenanthrene	440u	
120-12-7	Anthracene	✓	
84-74-2	Di-n-Butylphthalate	3900u	
206-44-0	Fluoranthene	135J	
129-00-0	Pyrene	135J	
85-68-7	Butylbenzylphthalate	440u	
91-94-1	3, 3'-Dichlorobenzidine	880u	•
56-55-3	Benzo(a)Anthracene	440u	
117-81-7	bis(2-Ethylhexyl)Phthalate		
218-01-9	Chrysene		
117-84-0	Di-n-Octyl Phthalate		
205-99-2	Benzo(b)Fluoranthene		
207-08-9	Benzo(k)Fluoranthene		
50-32-8	Benzo(a)Pyrene		
193-39-5	Indeno(1, 2, 3-cd)Pyrene		
53-70-3	Dibenz(a,h)Anthracene		
191-24-2	Benzo(g,h,i)Perylene		

(1)-Cannot be separated from diphenylamine

✓ ✓

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Laboratory Name HAZLETON LABORATORIES

Case No 8142

Sample Number
EN 548

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 10-5-87

Date Analyzed: 10-22-87

Conc/Dil Factor: 1

Percent Moisture (decanted) 23.7

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	10u
319-85-7	Beta-BHC	10u
319-86-8	Delta-BHC	10u
58-89-9	Gamma-BHC (Lindane)	10u
76-44-8	Heptachlor	10u
309-00-2	Aldrin	10u
1024-57-3	Heptachlor Epoxide	10u
959-98-8	Endosulfan I	10u
60-57-1	Dieldrin	21u
72-55-9	4, 4'-DDE	21u
72-20-8	Endrin	21u
33213-65-9	Endosulfan II	21u
72-54-8	4, 4'-DDD	21u
1031-07-8	Endosulfan Sulfate	21u
50-29-3	4, 4'-DDT	21u
72-43-5	Methoxychlor	100u
53494-70-5	Endrin Ketone	21u
57-74-9	Chlordane	100u
8001-35-2	Toxaphene	210u
12674-11-2	Aroclor-1016	100u
11104-28-2	Aroclor-1221	100u
11141-16-5	Aroclor-1232	100u
53469-21-9	Aroclor-1242	100u
12672-29-6	Aroclor-1248	100u
11097-69-1	Aroclor-1254	210u
11096-82-5	Aroclor-1260	210u

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 23g V_t 20,000 µl V_i 4.0 µl

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Laboratory Name HAZLETON LABORATORIES

Case No 8142

Sample Number
EN 548

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.	No volatiles found	VOA	—	—
2. 57-15-8	2-Propanol, 1,1,1-Trichloro-2-Methyl	BNA	353	220
3. 17851-53-5	1,2-Benzenedicarboxylic Acid, Butyl		1308	360
4.	2-Methylpropyl Ester			
5. 7206-25-9	9-Octadecene		1764	180
6. 74264-11-7	Iron, Tricarbonyl[N-(Phenyl-2-Pyridinylmethylene)		1929	250
7.	Benzenamine-N,N'] -			
8. 1454-85-9	1-Heptadecanol		1996	580
9. 629-99-2	Pentacosane		2083	470
10.	Unknown		2101	560
11.	Unknown		2145	890
12.	Unknown		2154	360
13.	Unknown		2159	370
14.	Unknown		2170	340
15.	Unknown		2179	360
16.	Unknown		2199	960
17.	Unknown		2216	1400
18.	Unknown		2220	1300
19.	Unknown		2231	1700
20.	Unknown		2252	260
21. —	No pesticides found	PEST	—	—
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Sample Number
EN 550

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: HAZLETON LABORATORIES
Case No: 8142
Lab Sample ID No: 71000459
QC Report No:
Sample Matrix: Soil
Contract No: 68-01-7146
Data Release Authorized By: David C. Gyll
Date Sample Received: 10/02/87

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 10/07/87
Date Analyzed: 10/07/87
Conc/Dil Factor: 1 pH 8.1
Percent Moisture: (Not Decanted) 17.5 CF = 1.21

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	12 U
74-83-9	Bromomethane	12 U
75-01-4	Vinyl Chloride	12 U
75-00-3	Chloroethane	12 U
75-09-2	Methylene Chloride	20 B
67-64-1	Acetone	24 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	3 J
107-06-2	1, 2-Dichloroethane	6 U
78-93-3	2-Butanone	12 U
71-55-6	1, 1, 1-Trichloroethane	6 U
56-23-5	Carbon Tetrachloride	6 U
108-05-4	Vinyl Acetate	12 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	12 U
75-25-2	Bromoform	6 U
108-10-1	4-Methyl-2-Pentanone	12 U
591-78-6	2-Hexanone	12 U
127-18-4	Tetrachloroethene	6 U
79-34-5	1, 1, 2, 2-Tetrachloroethane	6 U
108-88-3	Toluene	6 B
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

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Laboratory Name: HAZLETON LABORATORIES

Case No: 8142

Sample Number
EN550

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 10/5/82

Date Analyzed: 10/27/87

Conc/Dil Factor: 1

Percent Moisture (Decanted) 175

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	400u
111-44-4	bis(-2-Chloroethyl)Ether	
95-57-8	2-Chlorophenol	
541-73-1	1, 3-Dichlorobenzene	
106-46-7	1, 4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	
95-50-1	1, 2-Dichlorobenzene	
95-48-7	2-Methylphenol	
39638-32-9	bis(2-chloroisopropyl)Ether	
106-44-5	4-Methylphenol	
621-64-7	N-Nitroso-Di-n-Propylamine	
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	
78-59-1	Isophorone	
88-75-5	2-Nitrophenol	
105-67-9	2, 4-Dimethylphenol	
65-85-0	Benzoic Acid	2000u
111-91-1	bis(-2-Chloroethoxy)Methane	400u
120-83-2	2, 4-Dichlorophenol	
120-82-1	1, 2, 4-Trichlorobenzene	
91-20-3	Naphthalene	
106-47-8	4-Chloroaniline	
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	
91-57-6	2-Methylnaphthalene	
77-47-4	Hexachlorocyclopentadiene	
88-06-2	2, 4, 6-Trichlorophenol	
95-95-4	2, 4, 5-Trichlorophenol	2000u
91-58-7	2-Chloronaphthalene	400u
88-74-4	2-Nitroaniline	2000u
131-11-3	Dimethyl Phthalate	400u
208-96-8	Acenaphthylene	14J
99-09-2	3-Nitroaniline	2000u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	110J
51-28-5	2, 4-Dinitrophenol	2000u
100-02-7	4-Nitrophenol	2000u
132-64-9	Dibenzofuran	55J
121-14-2	2, 4-Dinitrotoluene	400u
606-20-2	2, 6-Dinitrotoluene	
84-66-2	Diethylphthalate	20BJ
7005-72-3	4-Chlorophenyl-phenylether	400u
86-73-7	Fluorene	140J
100-01-6	4-Nitroaniline	2000u
534-52-1	4, 6-Dinitro-2-Methylphenol	2000u
86-30-6	N-Nitrosodiphenylamine (1)	400u
101-55-3	4-Bromophenyl-phenylether	
118-74-1	Hexachlorobenzene	
87-86-5	Pentachlorophenol	2000u
85-01-8	Phenanthrene	2100
120-12-7	Anthracene	420
84-74-2	Di-n-Butylphthalate	2900B
206-44-0	Fluoranthene	1400
129-00-0	Pyrene	3100
85-68-7	Butylbenzylphthalate	400u
91-94-1	3, 3'-Dichlorobenzidine	800u
56-55-3	Benzo(a)Anthracene	1600
117-81-7	bis(2-Ethylhexyl)Phthalate	140BJ
218-01-9	Chrysene	1600
117-84-0	Di-n-Octyl Phthalate	400u
205-99-2	Benzo(b)Fluoranthene	3500
207-08-9	Benzo(k)Fluoranthene	
50-32-8	Benzo(a)Pyrene	1800
193-39-5	Indeno(1, 2, 3-cd)Pyrene	1400
53-70-3	Dibenz(a, h)Anthracene	400u
191-24-2	Benzo(g, h, i)Perylene	1100

DL= 400

HRS

HRS coelite

J ZGK*

(1)-Cannot be separated from diphenylamine

Form I

7 85

*data "J" d due to initial calibration - high RSD

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Laboratory Name HAZLETON LABORATORIES

Case No 8142

Sample Number
EN 550

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared: 10·5·87

Date Analyzed: 10·22·87

Conc/Dil Factor: 1

Percent Moisture (decanted) 17.5 %

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	9.7u
319-85-7	Beta-BHC	9.7u
319-86-8	Delta-BHC	9.7u
58-89-9	Gamma-BHC (Lindane)	9.7u
76-44-8	Heptachlor	9.7u
309-00-2	Aldrin	9.7u
1024-57-3	Heptachlor Epoxide	9.7u
959-98-8	Endosulfan I	9.7u
60-57-1	Dieldrin	19u
72-55-9	4,4'-DDE	19u
72-20-8	Endrin	19u
33213-65-9	Endosulfan II	19u
72-54-8	4,4'-DDD	19u
1031-07-8	Endosulfan Sulfate	19u
50-29-3	4,4'-DDT	19u
72-43-5	Methoxychlor	97u
53494-70-5	Endrin Ketone	19u
57-74-9	Chlordane	97u
8001-35-2	Toxaphene	190u
12674-11-2	Aroclor-1016	97u
11104-28-2	Aroclor-1221	97u
11141-16-5	Aroclor-1232	97u
53469-21-9	Aroclor-1242	97u
12672-29-6	Aroclor-1248	97u
11097-69-1	Aroclor-1254	190u
11096-82-5	Aroclor-1260	190u

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 25 g V_t 20,000 µl V_i 4.0 µl

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Laboratory Name HAZLETON LABORATORIES

Case No 8142

Sample Number
EN 550

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. 17851-53-5	1,2-Benzenedicarboxylic Acid Butyl 2-Ethylpropyl Ester	BNA	1306	200
2.	Unknown		1332	340
3. 10544-50-0	Sulfur		1412	610
4. 22360-77-6	Naphthalene, 1,8-Di-1-propynyl		1484	360
5. 243-42-5	Benzo [B] Naphtho [2,3-D] Furan		1508	200
6. 238-84-6	11H - Benzo [A] Fluorene		1548	250
7. 243-17-4	11H - Benzo [B] Fluorene		1560	230
8. 203-12-3	Benzo [GHI] Fluoranthene		1664	220
9. 195-19-7	Benzo [C] Phenanthrene		1722	220
10.	Unknown		1866	210
11. 205-82-3	Benzo [J] Fluoranthene		1907	310
12. 205-99-2	Benz [E] Acephenanthrylene		1933	1700
13. 18435-45-9	1-Nonadecane		1981	2800
14. 629-99-2	Pentacosane		2081	350
15.	Unknown		2093	900
16.	Unknown		2148	3400
17.	Unknown		2157	1300
18.	Unknown		2190	1600
19.	Unknown		2208	400
20.	Unknown		2228	340
21. 629-14-1	Ethane, 1,2-diethoxy	VOA	187	10
22. 109-66-0	Pentane		224	12
23. 110-54-3	Hexane		332	6
24. —	No Pesticides found	PEST	—	—
25.				
26.				
27.				
28.				
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