SITE INSPECTION REPORT
FOR
DEBOER LANDFILL
PALOS HILLS, ILLINOIS
ILD980902092
F05-8705-110
PAN: FIL02495SA

DECEMBER 24, 1987

RECEIVED
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PLANNING AND CONTRACTS
MANAGEMENT UNIT

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International Specialists in the Environment

MEMORANDUM

DATE: December 24, 1987

TO: File

FROM: O. S. Patel, C.C. Johnson and Malhotra, P.C.

SUB.: Illinois/F05-8705-110/FIL0249SA
DeBoer Landfill
ILD980902092

The DeBoer Landfill is located on 35 acres of land in the third Principal Meridian in Cook County, Illinois (T.37N., R.12E., Sec. 13). The landfill is bordered by Harlem Avenue to the East, 105th street to the north and Stony Creek (Calumet feeder ditch) to the south and is in the city of Palos Hills. The site was identified to the United States Environmental Protection Agency (U.S. EPA) in the form of a Preliminary Assessment submitted by Illinois Environmental Protection Agency (IEPA).

The landfill is currently inactive and during its years of operation accepted a variety of refuse including clay, bricks, cinders, concrete sidewalk slabs, concrete curb and gutter, sand, broken asphalt pavement, wood, gravel, paper, rags, glass, old tires, tar paper and incineration ash.

A soil and foundation engineering report prepared by Soil Exploration and Engineering Company shows the waste fill to be between 10 feet and 32 feet in thickness. The report also showed that the natural material underlying the waste consisted of various sand, silt, clay, and gravel mixtures. Groundwater was encountered in the waste between depths of 2 and 16 feet below the present grade with an average depth of 8 feet.

The Chicago Ridge Landfill Company (James G. DeBoer, registered agent) owned the landfill. The facility was operated by DeBoer Brothers Inc. which was merged into Waste Management of Illinois Inc. on October 31,

1972, according to the Corporations Division of the Secretary of State. The operation of the site commenced in 1955 and ceased in February 1973. Approximately 10 years ago, James J. DeBoer donated the site to its current owner the City of Palos Hills. The city of Palos Hills is currently developing a recreation park on the site.

The site inspection conducted by the C.C. Johnson & Malhotra, P.C. Field Investigation Team (FIT) on July 16, 1987 included interviewing site representatives, conducting a site walkover, collecting six surface soil samples and taking pictures to document present site conditions. The site was not fenced and had no guarding system. In one small area of the site, open dumping of refuse was observed. During the inpsection, clay fill was being hauled onto the northern portion of the site to help direct surface runoff to the south and into Stony Creek. Single family residents are contiguous with the north boundary of the landfill. The site is relatively flat and is approximately level with 105th Street. No damage to flora or fauna was observed.

Prior to landfilling, the entire site area was within the flood plain of the west branch of Stony Creek. The present grade of the majority of the site is approximately 15 feet above the creek flood plain elevation.

The contaminants that were detected in the soil samples are tabulated in Table 1. The highest concentration of contaminants found in the soil samples are listed in the following paragraphs.

The following semi-volatile organics were detected in the soil samples, phenanthrene (1.9 ppm), fluoranthene (3.5 ppm), pyrene (2.5ppm), benzo (a) anthracene (1.6 ppm), chrysene (1.7 ppm), benzo (b) fluoranthene (2.1 ppm), benzo (k) fluoranthene (1.2 ppm), benzo (a) pyrene (1.5 ppm), indeno (1,2,3-cd) pyrene (1.2 ppm), benzo (g,h,i) perylene (1.1 ppm) and 4,4'-DDD (0.35 ppm). The inorganic contaminants detected in the soil samples were aluminium (10,100 ppm), arsenic (14 ppm), barium (282 ppm), calcium (102,000 ppm), chromium (23 ppm), copper (234 ppm), iron (99,500 ppm), lead (127 ppm), magnesium (54,400 ppm), manganese (443 ppm), nickel (72 ppm), tin (26 ppm), and zinc (465 ppm).

The contaminants that were detected in the onsite soil samples but were not detected in the background soil sample are, 4,4'-DDD (0.35 ppm), barium (282 ppm), nickel (72 ppm) and tin (26 ppm).

Palos Hills and most of the communities in a three mile radius of the site obtain their drinking water from Lake Michigan. Residents of Palos Park which is southwest of the site get their drinking water from private residential wells. Most of the wells in Palos Park are obtaining water from the bedrock (limestone) aquifer. Hickory Hills which is northwest of the site gets drinking water from a 1608 feet deep municipal well.

Stony Creek is adjacent to the southern boundry of the site and discharges into the Calumet Sag Channel which is used for recreation. Groundwater flow and surface water runoff are possible migration pathways. The site is underlain by glacial deposits composed of clayey gravel, silty gravel, clayey silt and sand. The bedrock underlying the glacial deposits is limestone. Although this site is easily accessible and the final cap is incomplete, no wastes were observed that would be considered a direct contact hazarad.

TABLE 1: Contaminants Found in Soil Samples Collected at DeBoer Landfill on 07/16/87, (Concentrations-mg/kg).

COMPOUNDS	SAMPLES					
	EN 496 MEP 001 S-1	EN 497 MEP 002 S-2	EN 498 MEP 003 S-3	EN 499 MEP 004 S-4	EN 500 MEP 005 S-5	EN 075 MEP 006 S-6 Background
Phenanthrene	1.9	1.3	ND	0.63	1.3	1.2
Fluoranthene	3.5	2.5	ND	1.0	2.8	2.5
Pyrene	2.5	1.9	ND	0.79	2.1	2.0
Benzo(a)Anthracne	1.6	1.3	ND	ND	1.3	1.2
Chrysene	1.7	1.4	ND	ND	1.4	1.3
Benzo(b)Fluoranthene	2.1	2.0	ND	ND	1.3	1.4
Benzo(k)Fluoranthene	1.2	1.2	ND	ND	0.82	0.77
Benzo(a)Pyrene	1.5	1.5	ND	ND	1.1	0.98
Indeno(1,2,3,-cd)Pyrene	1.2	1.2	ND	ND	0.78	0.80
Benzo(g,h,i)Pyrene	1.1	1.1	ND	ND	ND	0.73
4,4'-DDD	ND	0.35	ND	0.08	ND	ND
Aluminium	2250	3560	3710	3990	10,100	5,310
Arsenic	6.1	7	ND	14	14	8.6
Barium	ND	ND	282	ND	ND	ND
Calcium	102,000	75,500	71,800	85,900	39,100	64,300
Chromium	12	17	21	17	23	14
Copper	43	166	61	56	234	31
Iron	15,600	29,600	99,500	26,100	59,900	16,200
Lead	72	127	97	68	71	64
Magnesium	54,400	43,000	28,700	50,500	22,900	35,200
Manganese	395	428	401	443	425	369
Nickel	ND	37	31	50	72	ND
Tin	ND	ND	ND	26	ND	ND
Zinc	111	196	465	311	189	99

ITC	MEP 001	MEP 002	MEP 003	MEP 004	MEP 005	MEP 006					
OTC	EN 496	EN 497	EN 498	EN 499	EN 500	EN 675					
SAMPLE	Soil S-1	Soil S-2	Soil S-3	Soil S-4	Soil S-5	Soil S-6 Blank Sand					
COMPOUND											
chloromethane											
bromomethane											
vinyl chloride											
chloroethane											
methylene chloride											
acetone											
carbon disulfide											
1,1-dichloroethene											
1,1-dichloroethane											
trans-1,2,-dichloroethene											
chloroform											
1,2-dichloroethane											
2-butanone											
1,1,1-trichloroethane											
carbon tetrachloride											
vinyl acetate											
bromodichloromethane											
1,1,2,2-tetrachloroethane											
1,2-dichloropropane											
trans-1,3-dichloropropene											
trichloroethene											
dibromochloromethane											
1,1,2-trichloroethane											
benzene											
cis-1,3-dichloropropene											
2-chloroethylvinylether											
bromoform											
2-hexanone											
4-methyl-2-pentanone											
tetrachloroethene											
toluene											
chlorobenzene											
ethylbenzene											
styrene											
total xylenes											
N-nitrosodimethylamine											
phenol											
aniline											
bis(2-chloroethyl)ether											
2-chlorophenol											
1,3-dichlorobenzene											
1,4-dichlorobenzene											
benzyl alcohol											
1,2-dichlorobenzene											
2-methylphenol											
bis(2-chloroisopropyl)ether											
4-methylphenol											
N-nitroso-di-n-propylamine											
hexachloroethane											
nitrobenzene											
isophrone											
2-nitrophenol											
2,4-dimethylphenol											
benzoic acid											
bis(2-chloroethoxy)methane											
2,4-dichlorophenol											
1,2,4-trichlorobenzene											
napthalene											
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											
3-nitroaniline											
acenaphthene											
2,4-dinitrophenol											
4-nitrophenol											
dibenzofuran											
2,4-dinitrotoluene											
2,6-dinitrotoluene											
diethylphthalate											
4-chlorophenyl-phenylether											
flourene											
4-nitroaniline											
4,6-dinitro-2-methylphenol											
N-nitrosodiphenylamine											
4-bromophenyl-phenylether											
hexachlorobenzene											

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COMPOUND		LTC	MEP 001	MEP 002	MEP 003	MEP 004	MEP 005	MEP 006					
		DTC	EN496	EN497	EN498	EN499	EN500	EN095					
		SAMPLE	Soil S-1	Soil S-2	Soil S-3	Soil S-4	Soil S-5	Soil S-6 Background					
pentachlorophenol													
phenanthrene	ppb		1900	1300		630	1300	1200					
anthracene													
di-n-butylphthalate													
fluoranthene	ppb		3500	2500		1000	2800	2500					
benzidine													
pyrene	ppb		2500	1900		790	2100	2000					
butylbenzylphthalate													
3,3'-dichlorobenzidine													
benzo(a)anthracene	ppb		1600	1300			1300	1200					
bis(2-ethylhexyl)phthlate													
chrysene	ppb		1700	1400			1400	1300					
di-n-octyl phthlate													
benzo(bâk)fluoranthene	ppb	R	2100 1710	2000 1200			1300 630	1400 770					
benzo(a)pyrene	ppb		1500	1500			1100	950					
indeno(1,2,3-cd)pyrene	ppb		1200	1200			750	800					
dibenzo(a,h)anthracene													
benzo(g,h,i)perylene	ppb		1100	1100				730					
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	ppb			350		80							
endrin aldehyde													
endosulfan sulfate													
4,4'-DDT													
methoxychlor													
endrin ketone													
chlorodane													
toxaphene													
Aroclor-1016													
Aroclor-1221													
Aroclor-1232													
Aroclor-1242													
Aroclor-1248													
Aroclor-1254													
Aroclor-1260													
ELEMENT													
aluminum	ppm		2250	3560	3710	3990	10,100	5310					
antimony													
arsenic	ppm		61	7		14	14	5.6					
barium	ppm				282								
beryllium													
cadmium													
calcium	ppm		10,200	75,500	71,800	85,900	39,100	64,300					
chromium	ppm		12	17	21	17	23	14					
cobalt													
copper	ppm		43	166	61	56	234	31					
iron	ppm		15,600	29,600	99,500	26,100	59,900	16,200					
lead	ppm		72	127	97	68	71	64					
magnesium	ppm		54,400	43,000	28,700	50,500	22,900	35,200					
manganese	ppm		395	428	401	443	425	369					
mercury													
nickel	ppm			37	31	50	72						
potassium													
selenium													
silver													
sodium													
thallium													
tin	ppm					26							
vanadium													
zinc	ppm		111	196	465	311	159	99					
cyanide CHECK IF ANALYZED ( )													
TENTATIVELY IDENTIFIED ORGANICS													

STATE ILLINOIS SITE DeBoer Landfill TDD F05-8705 110 PAGE 2 OF 2, SET # ____

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D980902092

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
DeBoer Landfill	105th Street and Harlem Avenue

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Palos Hills	IL	60465	Cook (Illinois)	031	31

09 COORDINATES LATITUDE	LONGITUDE	10 TYPE OF OWNERSHIP (Check one)
41 42 00.0	087 48 00.0	☐ A. PRIVATE ☐ B. FEDERAL ☐ C. STATE ☐ D. COUNTY ■ E. MUNICIPAL ☐ F. OTHER ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
07 / 16 / 87 (MONTH DAY YEAR)	☐ ACTIVE ■ INACTIVE	1955 / 1973 (BEGINNING YEAR / ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)

☐ A. EPA ■ B. EPA CONTRACTOR C.C. Johnson and Malhotra (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR ___ (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR ___ (Name of firm) ☐ G. OTHER ___ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Brian Healy	Geologist	C.C.J.M.	(312) 621 3944

09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO
David P. Edwards	Geologist	C.C.J.M.	(312) 621 3944
David T. Heidlauf	Geologist	C.C.J.M.	(312) 621 3944
Omprakash S. Patel	Engineer	C.C.J.M.	(312) 621 3944
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
George Lutz	Commisioner of Public Works	CITY OF PALOS HILL, 9742 84th Avenue, Palos Hill, IL	(312) 598-4805
Ron Signist	Operator	FILL INC., PALOS HILLS, IL	(312) 598-2421
Butch Harper	Operator	FILL INC., PALOS HILLS, IL	(312) 598-2421
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
■ PERMISSION ☐ WARRANT	8:00 a.m.	Sunny, Low winds, 80°F - 90°F

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Clifford Gould	IEPA	(312) 345-9750

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Omprakash S. Patel	U.S. EPA	C.C. Johnson & Malhotra	(312) 621 3944	12 / 24 / 87 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D980902092

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

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

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

TONS Unknown
CUBIC YARDS Unknown
NO. OF DRUMS Unknown

03 WASTE CHARACTERISTICS (Check all that apply)

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

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			Unknown.
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

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

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
OCC	Phenanthrene	85-01-8	SOIL SAMPLE	1.9	PPM
	Fluoranthene	206-44-0		3.5	PPM
	Pyrene	129-00-0		2.5	PPM
	Benzo (a) Anthracene	56-55-3		1.6	PPM
	Chrysene	218-01-9		1.7	PPM
	Benzo (b) Fluoranthene	205-99-2		2.1	PPM
	Benzo (k) Fluoranthene	207-08-9		1.2	PPM
	Benzo (a) Pyrene	50-32-8		1.5	PPM
	Indeno (1,2,3-cd) Pyrene	193-39-5		1.2	PPM
	Benzo (g,h,i) Perylene	191-24-2		1.1	PPM
MES	Aluminium	7429-90-5		10,100	PPM
	Arsenic	7440-41-7		14	PPM
	Barium	999		252	PPM
	Chromium	7440-47-3		23	PPM
	Copper	7440-50-8		234	PPM
	Iron	999		99,500	PPM

V. FEEDSTOCKS (See Appendix for CAS Numbers)

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

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

1979 Registry of Toxic effects of chemical substances.
FIT SITE INSPECTION. dated 7/16/87

Continued from Part 12, Section IV.

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
MES	Lead	7439-92-1		127	PPM
	Magnesium	7439-95-4		54,400	PPM
	Manganese	7439-96-5		443	PPM
	Nickel	7440-02-0		72	PPM
	Tin	7440-31-5		23	PPM
	Zinc	7646-85-7		465	PPM
	Calcium	7440-70-2		102	PPM
PCD	4,4'-DDE	72-55-9	SOIL SAMPLE	0.35	PPM

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D980902092

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ■ A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 3397
04 NARRATIVE DESCRIPTION
A soil and Foundation Engineering report prepared by the soil Exploration and Engineering co, shows groundwater to be at an average depth of 8' below the present grade and the waste fill thickness to be between 10' & 32'. The upper glacial drift aquifer may be contaminated by the landfill. It is likely that upper aquifer may be hydraulically connected with the Bedrock (Limestone) aquifer.

01 ■ B SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 16,452
04 NARRATIVE DESCRIPTION
The Groundwater flow and the surface water runoff are likely migration pathways for introduction of contaminants into the stony creek. The stony Creek discharges into the Calumet Sag channel.

01 ☐ C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0
04 NARRATIVE DESCRIPTION
No contamination of air was observed during the site inspection

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0
04 NARRATIVE DESCRIPTION
No Fire/Explosive conditions were observed during the site inspection.

01 ■ E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 16,452
04 NARRATIVE DESCRIPTION
Although the site has no gates, no fence or no 24-hr guard system, no wastes were observed that could be a direct contact hazard.

01 ■ F. CONTAMINATION OF SOIL — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: 35 (ACRES)
04 NARRATIVE DESCRIPTION
Low concentrations of semi volatile organic compounds and heavy metals were detected in the onsite, as well as background samples. In the onsite soil samples 4-4'-DDD, Barium, Nickel and Tin were detected but they were not detected in the background soil sample.

01 ☐ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 3397
04 NARRATIVE DESCRIPTION
see 'A' above

01 ☐ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: 2
04 NARRATIVE DESCRIPTION
No worker Exposure or Injury was reported.

01 ☐ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION
No wastes that could be considered as a threat to the population Exposure/Injury were observed.

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D980902092

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
There are no reports of damage to flora and none was observed during the site inspection.

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)
There are no reports of damage to fauna and none was observed during the site inspection. However if any hazardous waste was accepted than contaminants may occur in aquatic life inhabitating in the Stony Creek.

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

01 ■ M. UNSTABLE CONTAINMENT OF WASTES (Spills/Runoff, Standing liquids, Leaking drums) — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
The landfill has no liner, and the wastes are covered but final cap in still incomplete

01 ■ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
If any contaminants were released in stony creek than damage to the offsite property is possible.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
None.

01 ■ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
General refuse like paper and rags were observed during 'FIT' site inspection.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
N/A.

III. TOTAL POPULATION POTENTIALLY AFFECTED: 17,220

IV. COMMENTS
Since the wastes were covered, all the samples were collected from the surface soils. No Groundwater samples were collected since there are no monitoring wells, residential wells, Public wells or municipal wells in the vicinity of the site. The site is presently converted into a recreation park. The background soil samples had most of the contaminants detected in the onsite soil sample.

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)
'FIT' site inspection dated 07/18/87
Soil and Foundation Engineering Report by Soil Exploration and Engineering Company.

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	D980902092

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
■ G. STATE (Specify)	Unknown	Unknown	Unknown	
☐ 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	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 N/A (Specify)

05 OTHER

■ A. BUILDINGS ON SITE

None

06 AREA OF SITE

35 (Acres)

07 COMMENTS

The wastes were placed directly on or below the ground surface without any containment measures. The wastes are covered but final cap is still incomplete.

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

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

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

No liner was used before disposal of wastes.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ■ NO

02 COMMENTS

The site has no gates, fence or a 24 hour guard. The wastes are covered but still final cap is pending. Open dumping was observed during the site inspection.

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

FIT site Inspection dated 07/16/87.
Soil and Foundation Engineering Report by soil Exploration and Engineering Company.

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D980902092

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)

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

02 STATUS

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

03 DISTANCE TO SITE

A. >3 (mi)
B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

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

02 POPULATION SERVED BY GROUND WATER 3397

03 DISTANCE TO NEAREST DRINKING WATER WELL 1.60 (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
7 (ft)	SSE	34 (ft)	144,000 (gpd)	☐ YES ■ NO

09 DESCRIPTION OF WELLS (Including useage, depth, and location relative to population and buildings)
Most of the private residential wells in the area are producing from the dolomite bedrock aquifer. Hickory Hills which is Northwest of the site gets water from a 1605 feet deep municipal well.

10 RECHARGE AREA
■ YES
☐ NO
COMMENTS On site soils may be recharging groundwater

11 DISCHARGE AREA
■ YES
☐ NO
COMMENTS Upper aquifer may be discharging into the stony Creek.

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
Stony Creek	☐	On site (mi)
Calumet channel	☐	2 (mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 5484 NO OF PERSONS	B. 10,968 NO OF PERSONS	C. 16,452 NO OF PERSONS

02 DISTANCE TO NEAREST POPULATION .01 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE 28886

04 DISTANCE TO NEAREST OFF-SITE BUILDING 0.1 (mi)

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

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D980902092

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
50 (ft)	32 (ft)	4.9 — 7.2

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
3.5 (in)	3.5 (in)	6 %	SE	10 %

09 FLOOD POTENTIAL

SITE IS IN 100 YEAR FLOODPLAIN

10 N/A

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

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE: A. N/A (mi)

OTHER: B. None (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

N/A (mi)

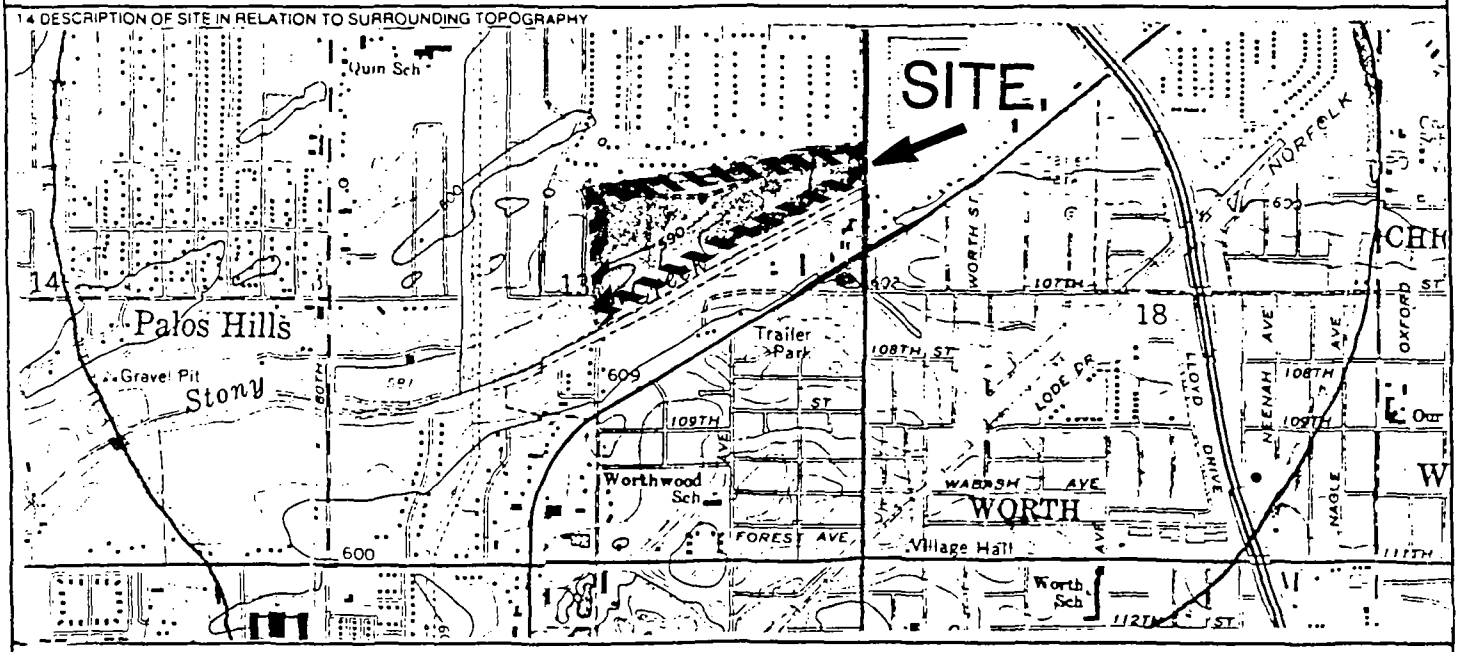
ENDANGERED SPECIES: None

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. 0.1 (mi)	B. 0.01 (mi)	C. >3.0 (mi)	D. >3.0 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY



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

FIT site inspection dated 07/16/87
U.S.G.S. Topographic maps.
Soil and Foundation Engineering Report by Soil Exploration and Engineering Company.

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D980902092

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	SIX	Organic - S cubed, Inorganic - RMAL	
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
HNU	No reading above background
Rad-Mini	No reading above background
Drager Pump (HCN Tubes)	No color change observed.

IV. PHOTOGRAPHS AND MAPS

01 TYPE ■ GROUND ☐ AERIAL

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

03 MAPS ■ YES ☐ NO

04 LOCATION OF MAPS Ecology and Environment Inc.

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

Currently the fill material is being hauled onto the site and spreaded for converting the site into a Public Park.

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

FIT SITE INSPECTION DATED 07/16/87

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	D980902612

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER
CITY OF PALOS HILL	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
9742 89th Avenue	

05 CITY	06 STATE	07 ZIP CODE
Palos Hill	IL	60465

01 NAME	02 D+B NUMBER

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

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

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

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

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

05 CITY	06 STATE	07 ZIP CODE

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER

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

12 CITY	13 STATE	14 ZIP CODE

08 NAME	09 D+B NUMBER

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

12 CITY	13 STATE	14 ZIP CODE

08 NAME	09 D+B NUMBER

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

12 CITY	13 STATE	14 ZIP CODE

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 D+B NUMBER
The Chicago Ridge Landfill Co	

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

05 CITY	06 STATE	07 ZIP CODE
Western Springs	IL	60558

01 NAME	02 D+B NUMBER

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

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

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

05 CITY	06 STATE	07 ZIP CODE

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

01 NAME	02 D+B NUMBER

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

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

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

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

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

05 CITY	06 STATE	07 ZIP CODE

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

FIT site inspection 07/16/87

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D980902092

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
City of Palos Hills	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
9742 89th Avenue	

05 CITY	06 STATE	07 ZIP CODE
Palos Hill	IL	60465

08 YEARS OF OPERATION	09 NAME OF OWNER

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

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

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER
Waste Management of Illinois			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
900 Jorie Boulevard			

05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
Oak Brook	IL				

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD
Unknown	

01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER
DeBoer Brothers Inc			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
646 Cockland			

05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
Western Springs	IL	60558			

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD
Unknown	Chicago Ridge Landfill Co.

01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

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

Legal proceedings by EPA v/s Chicago Ridge Landfill, Waste Management of Illinois & Incinerator, Inc.

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D 980 902 042

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
None	

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

05 CITY	06 STATE	07 ZIP CODE

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
Unknown.			

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

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

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

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

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

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

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

FIT site Inspection dated 07/16/87

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D980902092

II. PAST RESPONSE ACTIVITIES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D980902092

II PAST RESPONSE ACTIVITIES *(Continued)*

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

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

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

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

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

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

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

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

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

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

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

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

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

FIT site inspection dated 07/11/87

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D980902092

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☐ NO

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

A legal complaint was prepared by Environmental Protection Agency against Chicago Ridge Landfill company and waste management of Illinois, Inc; and Incinerator Inc., for violation of landfill operation and acceptance of incinerator ash. A settlement was than proposed, the outcome of this is unknown.

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

Legal complaint by EPA v Chicago Ridge Landfill Co., waste management of Illinois Inc., and Incinerator Inc.

EPA FORM 2070-13 (7-81)

IMMEDIATE REMOVAL ACTION CHECK SHEET

	Hazard Potential High	Moderate	Low
Fire & Explosive Hazard			
Flammable Materials None			✓
Explosives None			✓
Incompatable Chemicals None			✓
Direct Contact with Acutely Toxic Chemicals			
Site Security No Gate, No Fence or No 24-hr. guard	✓		
Leaking Drums or Tanks None			✓
Open Lagoons or Pits None			✓
Materials on Surface None			✓
Proximity of Population On site workers and residents adjecent to the site.	✓		
Evidence of Casual Site Use None.			✓
Contaminated Water Supply			
Exceeds 10 Day Snarl N/A			
Gross Taste or Odors None			✓
Alternate Water Available Yes Most of the communities in 3 mile get their water from Lake Michigan			✓
Potential Contamination Unknown			✓

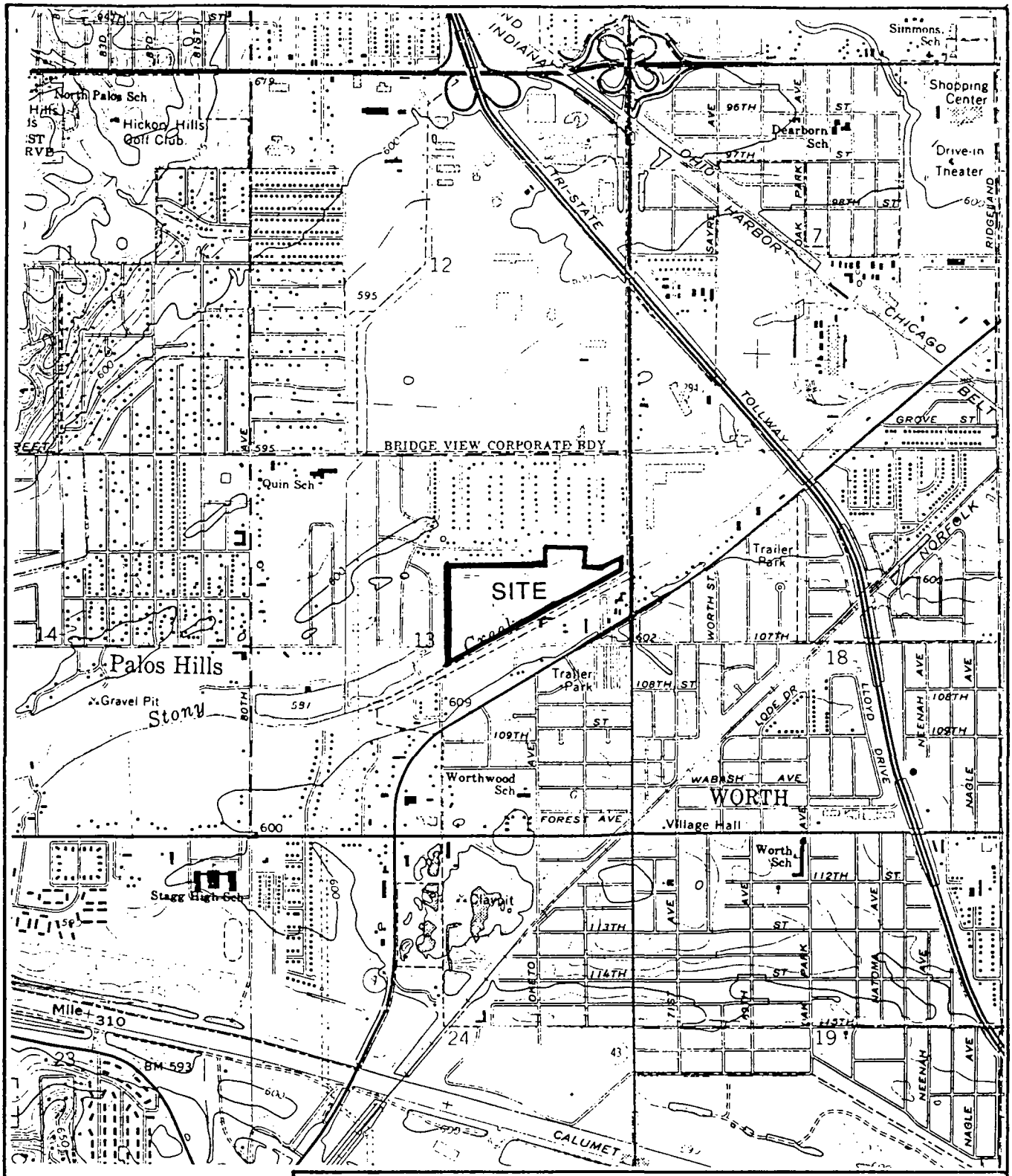
Is the site abandoned or active? The land fill operation is inactive but clay is hauled into the site to convert it into a basic.

Other Comments:

E&EFIT 1/56

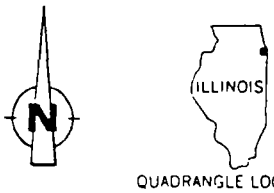
3

inal

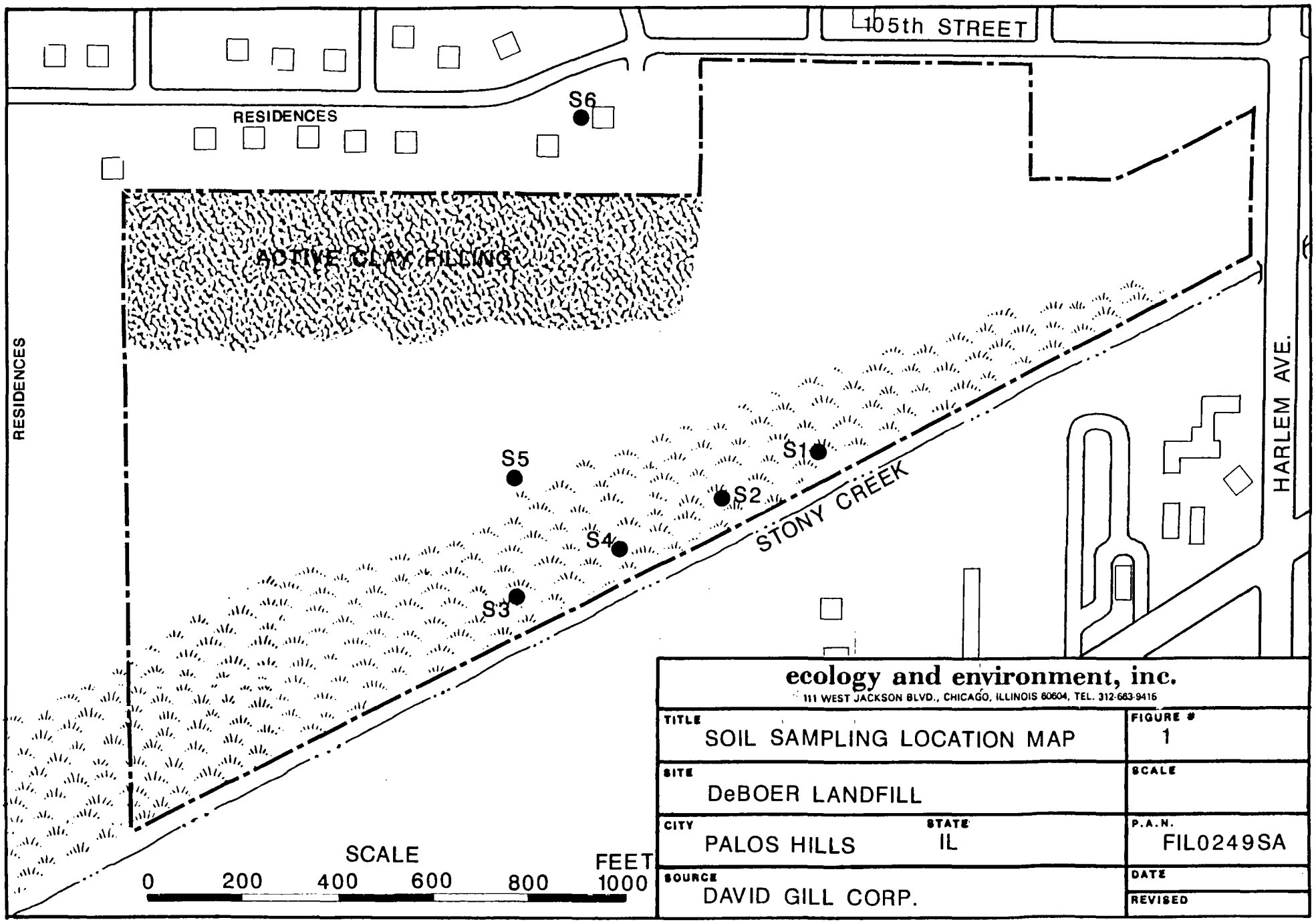


ecology and environment, inc.

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



TITLE: SITE LOCATION MAP	FIGURE #: 2
SITE: DeBOER LANDFILL	SCALE: 1:24,000
CITY: PALOS HILLS STATE: IL	P.A.N.: FIL0249SA
SOURCE: USGS PALOS PARK QUAD	DATE: 1963 REVISED: 1973


105th STREET
RESIDENCES
S6
ACTIVE CLAY FILLING
RESIDENCES
HARLEM AVE.
S1
S2
S3
S4
S5
STONY CREEK
SCALE
0 200 400 600 800 1000
FEET
ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
TITLE
SOIL SAMPLING LOCATION MAP
FIGURE #
1
SITE
DeBOER LANDFILL
SCALE
CITY
PALOS HILLS
STATE
IL
P.A.N.
FIL0249SA
SOURCE
DAVID GILL CORP.
DATE
REVISED

4

Cardinal

FIELD PHOTOGRAPHY LOG SHEET

FRAME NO. 16
DATE 07/11/87
TIME 13:24 A.M. (P.M.)
DIRECTION: N NNE NE ENE
(E) ESE SE SSE
S SSW SW WSW
W WNW NW NNW
WEATHER Sunny, Low winds, 80°F ~ 90°F

SITE DeBoer Landfill

PAN NO. FIL0249
PHOTOGRAPHER Brian Healy.
SAMPLE NO. –
DESCRIPTION: Landfill, Front Entrance.

FRAME NO.
DATE 07/11/87
TIME A.M. P.M.
DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WNW NW NNW
WEATHER Sunny, Low winds, 80 ~ 90°F

SITE Debner Landfill

PAN NO. FIL0249
PHOTOGRAPHER Brian Healy
SAMPLE NO.
DESCRIPTION:

FIELD PHOTOGRAPHY LOG SHEET

FRAME NO. 14
DATE 07/11/87
TIME 13:24 A.M. (P.M.)
DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
(W) WNW NW NNW
WEATHER Sunny, Low winds, 80°F ~ 90°F

SITE DeBoer Landfill

PAN NO. FIL0249
PHOTOGRAPHER Brian Healy.
SAMPLE NO. –
DESCRIPTION: Landfill, Access Road.

FRAME NO. 15
DATE 07/11/87
TIME 13:24 A.M. (P.M.)
DIRECTION: N NNE NE ENE
E ESE SE SSE
(S) SSW SW WSW
W WNW NW NNW
WEATHER Sunny, Low winds, 80 ~ 90°F

SITE Deboer Landfill

PAN NO. FIL0249
PHOTOGRAPHER Brian Healy
SAMPLE NO. –
DESCRIPTION: Landfill

FIELD PHOTOGRAPHY LOG SHEET

FRAME NO. 12
DATE 07/11/87
TIME 13:06 A.M. (P.M.)
DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
(W) WNW NW NNW
WEATHER Sunny, Low winds, 80°F ~ 90°F

SITE DeBoer Landfill

PAN NO. FIL0249
PHOTOGRAPHER Brian Healy.
SAMPLE NO. S-6
DESCRIPTION: soil Sample S-6

FRAME NO. 13
DATE 07/11/87
TIME 13:06 A.M. (P.M.)
DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
(W) WNW NW NNW
WEATHER Sunny, Low winds, 80 ~90°F

SITE Debner Landfill

PAN NO. FIL0249
PHOTOGRAPHER Brian Healy
SAMPLE NO. S-6
DESCRIPTION: Soil sample S-6

FIELD PHOTOGRAPHY LOG SHEET

FRAME NO. 10
DATE 07/11/87
TIME 12:38 A.M. (P.M.)
DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WNW NW NNW
WEATHER Sunny, Low winds, 80°F ~ 90°F

SITE DeBoer Landfill

PAN NO. FIL0249
PHOTOGRAPHER Brian Healy.
SAMPLE NO. S-5
DESCRIPTION: soil sample S-5

FRAME NO. 11
DATE 07/11/87
TIME 12:39 A.M. (P.M.)
DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WNW NW NNW
WEATHER Sunny, Low winds, 80 ~ 90°F

SITE Deboer Landfill

PAN NO. FIL0249
PHOTOGRAPHER Brian Healy
SAMPLE NO. S-5
DESCRIPTION: soil sample S-5

FRAME NO. 8
DATE 07/11/87
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, Low winds, 80°F ~ 90°F

SITE DeBoer Landfill

PAN NO. FIL0249
PHOTOGRAPHER Brian Healy.
SAMPLE NO. —
DESCRIPTION: soil sample S-4

FRAME NO. 9
DATE 07/11/87
TIME 12:30 A.M. P.M.
DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WNW NW NNW
WEATHER Sunny, Low winds, 80 ~ 90°F

SITE Deboer Landfill

PAN NO. FIL0249
PHOTOGRAPHER Brian Healy
SAMPLE NO. —
DESCRIPTION: Open dumping.

FRAME NO. 6
DATE 07/11/87
TIME 12:06 A.M. (P.M.)
DIRECTION: N NNE NE ENE
(E) ESE SE SSE
S SSW SW WSW
W WNW NW NNW
WEATHER Sunny, Low winds, 80°F ~ 90°F

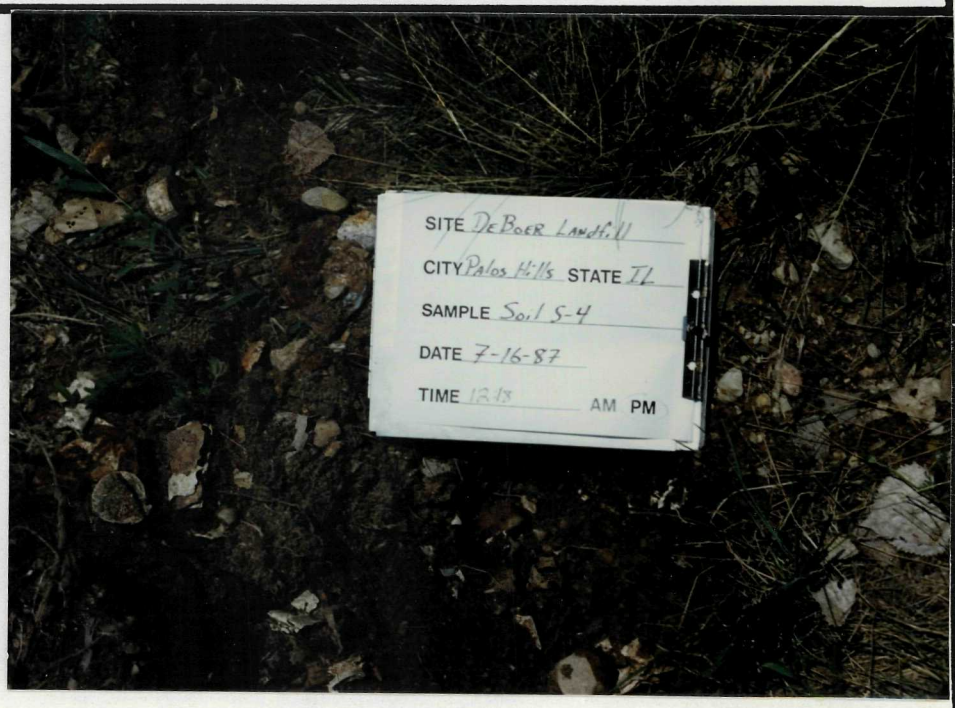
SITE DeBoer Landfill

PAN NO. FIL0249
PHOTOGRAPHER Brian Healy.
SAMPLE NO. —
DESCRIPTION: Stony Creek, adjecent to the landfill

FRAME NO. 7
DATE 07/11/87
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, Low winds, 80 ~ 90°F

SITE Deboer Landfill

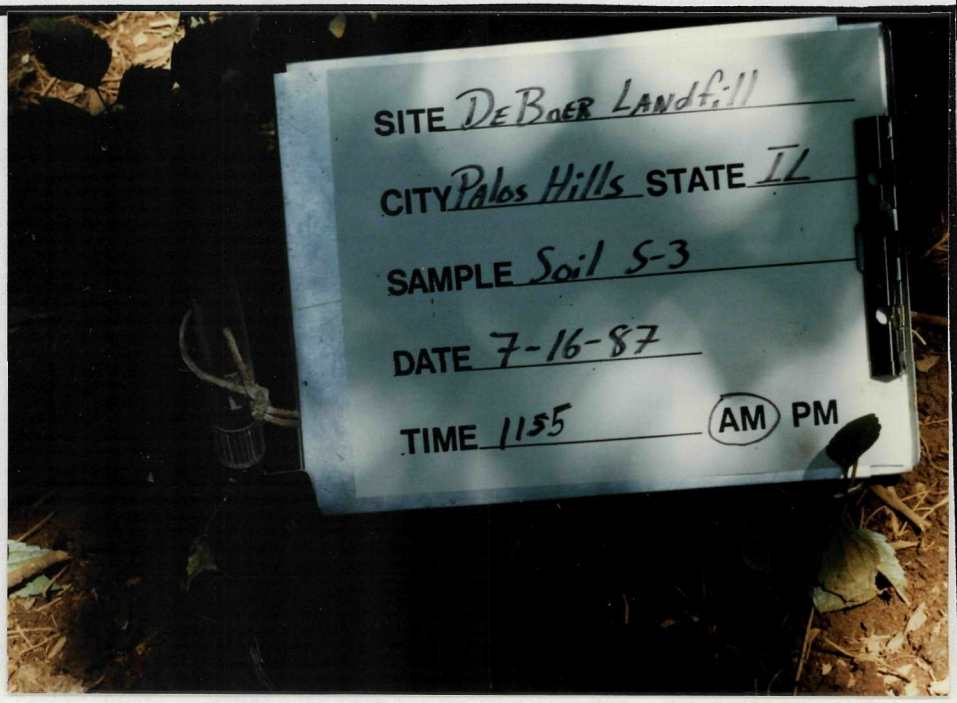
PAN NO. FIL0249
PHOTOGRAPHER Brian Healy
SAMPLE NO. S-4
DESCRIPTION: Soil Sample S-4



FRAME NO. 4
DATE 07/11/87
TIME 12:03 A.M. (P.M.)
DIRECTION: (N) NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WNW NW NNW
WEATHER Sunny, Low winds, 80°F ~ 90°F

SITE DeBoer Landfill

PAN NO. FIL0249
PHOTOGRAPHER Brian Healy.
SAMPLE NO. S-3
DESCRIPTION: soil sample, S-3.



FRAME NO. 5
DATE 07/11/87
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, Low winds, 80 ~ 90°F

SITE Deboer Landfill

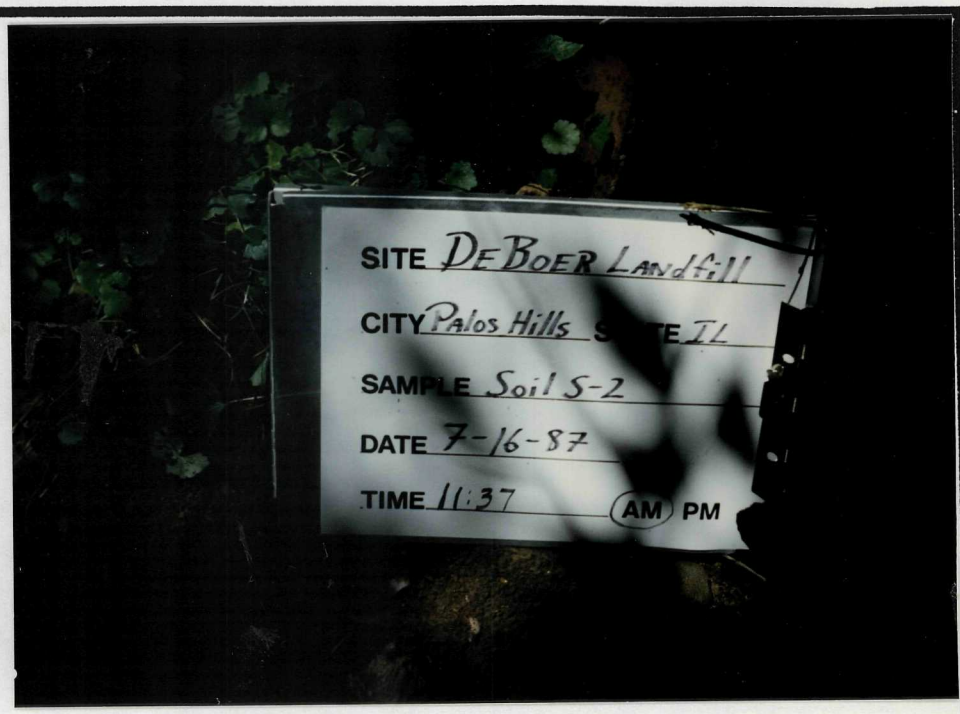
PAN NO. FIL0249
PHOTOGRAPHER Brian Healy
SAMPLE NO. S-3
DESCRIPTION: Soil sample, S-3

FIELD PHOTOGRAPHY LOG SHEET

FRAME NO. 2
DATE 07/11/87
TIME 11:45 A.M. P.M.
DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WNW (NW) NNW
WEATHER Sunny, Low winds, 80°F ~ 90°F

SITE DeBoer Landfill

PAN NO. FIL0249
PHOTOGRAPHER Brian Healy.
SAMPLE NO. S-2
DESCRIPTION: soil sample S-2



FRAME NO. 3
DATE 07/11/87
TIME 11:46 (A.M.) P.M.
DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WNW (NW) NNW
WEATHER Sunny, Low winds, 80 ~ 90°F

SITE Deboer Landfill

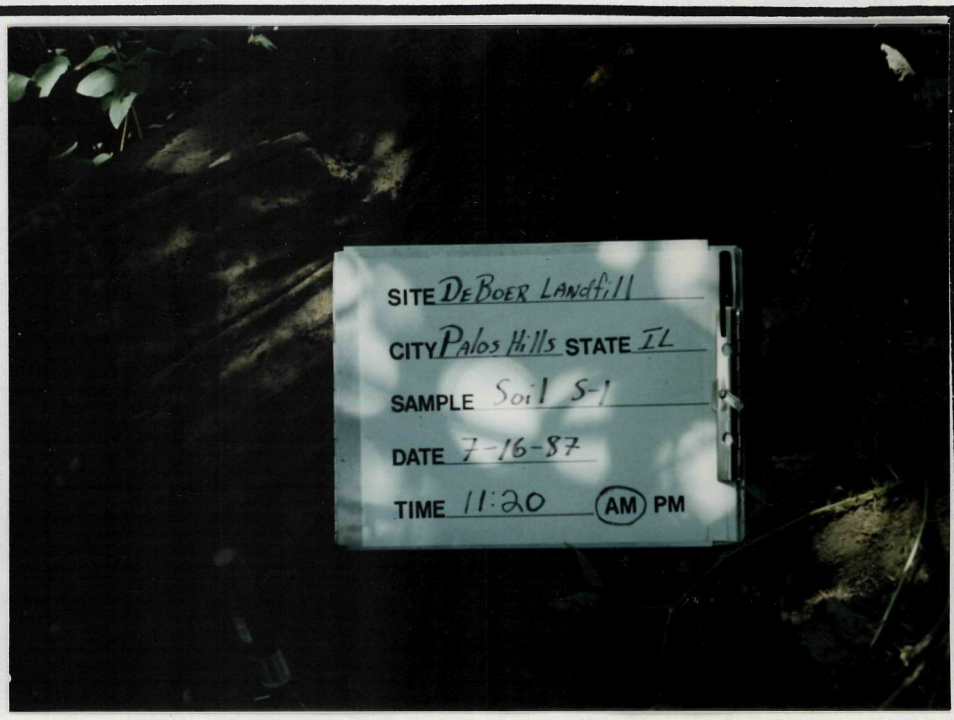
PAN NO. FIL0249
PHOTOGRAPHER Brian Healy
SAMPLE NO. S-2
DESCRIPTION: soil sample S-2

FIELD PHOTOGRAPHY LOG SHEET

FRAME NO. 0
DATE 07/11/87
TIME 11:30 (A.M.) P.M.
DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
(W) WNW NW NNW
WEATHER Sunny, Low winds, 80°F ~ 90°F

SITE DeBoer Landfill

PAN NO. FIL0249
PHOTOGRAPHER Brian Healy.
SAMPLE NO. S-1
DESCRIPTION: Soil-1, soil sample.



FRAME NO. 1
DATE 07/11/87
TIME 11:32 (A.M.) P.M.
DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
(W) WNW NW NNW
WEATHER Sunny, Low winds, 80 ~90°F

SITE Debner Landfill

PAN NO. FIL0249
PHOTOGRAPHER Brian Healy
SAMPLE NO. S-1
DESCRIPTION: soil sample S-1

ITC	MCP 001	MCP 002	MCP 003	MCP 004	MCP 005	MCP 006					
OTC	EN 496	EN 497	EN 498	EN 499	EN 500	EN 675					
SAMPLE	Soil S-1	Soil S-2	Soil S-3	Soil S-4	Soil S-5	Soil S-6 Charcoal					
COMPOUND											
chloromethane											
bromomethane											
vinyl chloride											
chloroethane											
methylene chloride											
acetone											
carbon disulfide											
1,1-dichloroethene											
1,1-dichloroethane											
trans-1,2,-dichloroethene											
chloroform											
1,2-dichloroethane											
2-butanone											
1,1,1-trichloroethane											
carbon tetrachloride											
vinyl acetate											
bromodichloromethane											
1,1,2,2-tetrachloroethane											
1,2-dichloropropane											
trans-1,3-dichloropropene											
trichloroethene											
dibromochloromethane											
1,1,2-trichloroethane											
benzene											
cis-1,3-dichloropropene											
2-chloroethylvinylether											
bromoform											
2-hexanone											
4-methyl-2-pentanone											
tetrachloroethene											
toluene											
chlorobenzene											
ethylbenzene											
styrene											
total xylenes											
N-nitrosodimethylamine											
phenol											
aniline											
bis(2-chloroethyl)ether											
2-chlorophenol											
1,3-dichlorobenzene											
1,4-dichlorobenzene											
benzyl alcohol											
1,2-dichlorobenzene											
2-methylphenol											
bis(2-chloroisopropyl)ether											
4-methylphenol											
N-nitroso-di-n-propylamine											
hexachloroethane											
nitrobenzene											
isophrone											
2-nitrophenol											
2,4-dimethylphenol											
benzoic acid											
bis(2-chloroethoxy)methane											
2,4-dichlorophenol											
1,2,4-trichlorobenzene											
napthalene											
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											
3-nitroaniline											
acenaphthene											
2,4-dinitrophenol											
4-nitrophenol											
dibenzofuran											
2,4-dinitrotoluene											
2,6-dinitrotoluene											
diethylphthalate											
4-chlorophenyl-phenylether											
flourene											
4-nitroaniline											
4,6-dinitro-2-methylphenol											
N-nitrosodiphenylamine											
4-bromophenyl-phenylether											
hexachlorobenzene											

STATE ILLINOIS SITE DeBoex Landfill IDD Fat-5705-112 PAGE 1 OF 2 SET 1

COMPOUND		TIC	MCP 001	MCP 002	MCP 003	MCP 004	MCP 005	MCP 006					
		OTC	EN496	EN497	EN498	EN499	EN500	EN095					
		SAMPLE	Soil S-1	Soil S-2	Soil S-3	Soil S-4	Soil S-5	Soil S-6 Background					
pentachlorophenol													
phenanthrene	ppb		1900	1300		630	1300	1200					
anthracene													
di-n-butylphthalate													
fluoranthene	ppb		3500	2500		1000	2800	2500					
benzidine													
pyrene	ppb		2500	1900		790	2100	2000					
butylbenzylphthalate													
3,3'-dichlorobenzidine													
benzo(a)anthracene	ppb		1600	1300			1300	1200					
bis(2-ethylhexyl)phthlate													
chrysene	ppb		1700	1400			1400	1300					
di-n-octyl phthlate													
benzo(b&k)fluoranthene	ppb		2100 1200	2000 1200			1300 810	1400 910					
benzo(a)pyrene	ppb		1500	1500			1100	950					
indeno(1,2,3-cd)pyrene	ppb		1200	1200			780	800					
dibenzo(a,h)anthracene													
benzo(g,h,i)perylene	ppb		1100	1100				730					
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	ppb			350		80							
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	ppm		2250	3560	3710	3990	10,100	5310					
antimony													
arsenic	ppm		61	7		14	14	8.6					
barium	ppm				282								
beryllium													
cadmium													
calcium	ppm		10,200	75,500	71,800	85,900	39,100	64,300					
chromium	ppm		12	17	21	17	23	14					
cobalt													
copper	ppm		43	166	61	56	234	31					
iron	ppm		15,600	29,600	99,500	26,100	59,900	16,200					
lead	ppm		72	127	97	68	71	64					
magnesium	ppm		54,400	43,000	25,700	50,500	22,900	25,200					
manganese	ppm		395	428	401	443	425	369					
mercury													
nickel	ppm			37	31	50	72						
potassium													
selenium													
silver													
sodium													
thallium													
tin	ppm					26							
vanadium													
zinc	ppm		111	196	465	311	189	99					
cyanide CHECK IF ANALYZED ( )													
TENTATIVELY IDENTIFIED ORGANICS													

STATE ILLINOIS SITE DeBoer Landfill TDD F05-8705 110 PAGE 2 OF 2, SET # ____

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

RECEIVED SEP 17 1987

COPY

Date Received for Review 9/17/87 Date Review Completed 9/24/87

To: Brian Healy

From: Zena Gold-Kaufman

Subject: DeBoer Lndfl

PAN: IL0249 Case # 7632

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
#	Low Soil	# 6	Low Soil
	Low Water		Low Water
	Drinking Water		Drinking Water
	Other		Other

Project Data Status

Completed!!

Incomplete, awaiting:

Low soil organics

FIT Data Review Findings:

Mercurury is estimated - biased high

Check OADS forms for transcription errors

✓ Compounds were detected in sample(s); see enclosed Chemical Evaluation Form.

Book No. 6 Page No. 200

7/16

ecology and environment, inc.
CHICAGO, ILLINOIS

CHEMICAL EVALUATION FORM

SITE NAME: DeBoer Lndfl PAN# IL0249 DATE: 9/17/87

CASE # 7632 UNITS- mg/kg REVIEWER: ZGK

TOX/ PERS	COMPOUND	CRDL	3-5xCRDL	MEP 001	002	003	004	005	006	
	ALUMINUM									
	ANTIMONY									
	ARSENIC	2		6.1	7		14	14	86	
	BARIUM									
	BERYLLIUM	1		[0.63]					[0.85]	
	CADMIUM	1						[3.1]		
	CHROMIUM	2		12	17	21	17	23	14	
	COBALT	10		[5.2]	[9.1]	~~X~~	[7.9]	[12]	[6.5]	
	COPPER	5		43	166	61	56	23J ~~X~~1	31	
	LEAD	1		72	127	97	68	71	64	
	MERCURY J	.008			0.23J		0.14J			
	NICKEL J	8		[18]	37	31	~~X~~ 50	72	[21]	
	SELENIUM R	1								
	SILVER									
	THALLIUM									
	TIN						26			
	VANADIUM	10		[10]	[13]	[19]	[13]	[26]	[15]	
	ZINC									
	CYANIDE									

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

RECEIVED SEP 17 1987

DATE: 9.15.87

SUBJECT: Review of Region V CLP Data Received for Review on 8-21-87

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

TO: Data User: FIT

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

SITE NAME: DeBOER LANDFILL SMO case No. 7632

EPA Data Set No. SF 4204 No. of Samples: 6 D.U./Activity Numbers Y905/C72100

CRL No. 87FH12560-565

SMO Traffic No. MEP 001-006

CLP Laboratory: RMAL Hrs. Required for Review: 2

Following are our findings: This review covers 6 low soil samples analyzed for metals and cyanide.

Duplicate analysis gave RPD 22% for mn. limits of ±35% apply for soil duplicate analysis.

Spike recoveries for Hg (132%), Se (0%), Ag (52%) are shown above. All Se data are unusab. Detection limit for Ag could be elevated and all Ag data are estimated.

All positive hit data for Hg are estimate but results less than IDL are acceptable.

All other QC audits are acceptable.

Ida Levin 9.15.87

( ) 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 Research, EMSL, Las Vegas

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

U.S. EPA Contract Laboratory Program
Sample Management Office
209 Madison St. - Alexandria, VA 22314
703/557-2490 FTS: 8-557-2490

00001

Date 8-20-87

RECEIVED SEP 17 1987

COVER PAGE
INORGANIC ANALYSIS DATA PACKAGE

Lab Name ROCKY MOUNTAIN ANALYTICAL
SOW No. 784

Case No. 7632
QC Report No. 87062

Sample Numbers

EPA No.	Lab ID No.	EPA No.	Lab ID No.
MEP001D			
MEP001			
MEP001S			
MEP002			
MEP003			
MEP004			
MEP005			
MEP006			
[MEP999]			

Comments: 6 LOW SOILS FOR TOTAL METALS AND CYANIDE ANALYSIS
SERIAL DILUTION OF SAMPLE MEP006 IS IDENTIFIED AS [MEP999]

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

Footnotes:

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

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
209 Madison St. - Alexandria, VA 22314
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MEP001

Date 8-20-87

RECEIVED SEP 1 1987

INORGANIC ANALYSIS DATA SHEET

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

CASE NO. 7632
QC REPORT NO. 87063

Elements Identified and Measured

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

mg/kg dry weight

1.	ALUMINUM	2250	P	13.	MAGNESIUM	54400	P
2.	ANTIMONY	14U	P	14.	MANGANESE	395	P X
3.	ARSENIC	6.1	F	15.	MERCURY	0.11U	CV R
4.	BARIUM	[29]	P	16.	NICKEL	[18]	P
5.	BERYLLIUM	[0.63]	P	17.	POTASSIUM	[625]	P
6.	CADMIUM	2.2U	P	18.	SELENIUM	28U	F R R
7.	CALCIUM	102000	P	19.	SILVER	2.2U	P R R
8.	CHROMIUM	12	P	20.	SODIUM	[642]	P
9.	COBALT	[5.2]	P	21.	THALLIUM	5.6U	F
10.	COPPER	43	P	22.	TIN	12U	P
11.	IRON	15600	P	23.	VANADIUM	[10]	P
12.	LEAD	72	F	24.	ZINC	111	P

Cyanide 0.56U AS Percent Solids (%) 90

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: Selenium Value is reported at an additional 10X dilution
Lead Value is reported at an additional 5X dilution

Lab Manager [signature]

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
209 Madison St. - Alexandria, VA 22314
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MEP002

RECEIVED SEP 17 1987

Date 8-20-87

INORGANIC ANALYSIS DATA SHEET

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

CASE NO. 7632
QC REPORT NO. 87062

Elements Identified and Measured

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

mg/kg dry weight

1.	ALUMINUM	3560	P	13.	MAGNESIUM	43000	P
2.	ANTIMONY	16U	P	14.	MANGANESE	428	P X
3.	ARSENIC	7	F	15.	MERCURY	0.23	CV R
4.	BARIUM	[75]	P	16.	NICKEL	37	P
5.	BERYLLIUM	0.63U	P	17.	POTASSIUM	[642]	P
6.	CADMIUM	2.5U	P	18.	SELENIUM	3.2U	F R
7.	CALCIUM	75500	P	19.	SILVER	2.5U	P R
8.	CHROMIUM	17	P	20.	SODIUM	690U	P
9.	COBALT	[9.1]	P	21.	THALLIUM	6.3U	F
10.	COPPER	166	P	22.	TIN	14U	P
11.	IRON	29600	P	23.	VANADIUM	[13]	P
12.	LEAD	127	F	24.	ZINC	196	P

Cyanide 0.63U AS Percent Solids (%) 79

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

Comments: Lead Value is reported at an additional 10X dilution

Lab Manager

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
209 Madison St. - Alexandria, VA 22314
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MEP003

Date 8-20-87

RECEIVED SEP 1 1987

INORGANIC ANALYSIS DATA SHEET

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

CASE NO. 7632
QC REPORT NO. 87062

Elements Identified and Measured

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

mg/kg dry weight

1.	ALUMINUM	3710	P	13.	MAGNESIUM	28700	P
2.	ANTIMONY	18U	P	14.	MANGANESE	401	P X
3.	ARSENIC	7.1U	F	15.	MERCURY	0.14U	CV R
4.	BARIUM	282	P	16.	NICKEL	31	P
5.	BERYLLIUM	0.71U	P	17.	POTASSIUM	[1180]	P
6.	CADMIUM	2.9U	P	18.	SELENIUM	3.6U	F R R
7.	CALCIUM	71800	P	19.	SILVER	2.9U	P R U
8.	CHROMIUM	21	P	20.	SODIUM	779U	P
9.	COBALT	6.4U	P	21.	THALLIUM	7.1U	F
10.	COPPER	61	P	22.	TIN	16U	P
11.	IRON	99500	P	23.	VANADIUM	[19]	P
12.	LEAD	97	F	24.	ZINC	465	P

Cyanide 0.71U AS Percent Solids (%) 70

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

Comments: Lead value is reported at an additional 5x dilution

Lab Manager [illegible]

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
209 Madison St. - Alexandria, VA 22314
703/557-2490 FTS: 8-557-2490

EPA Sample No. MEP004

RECEIVED SEP 17 1987

Date 8-20-87

INORGANIC ANALYSIS DATA SHEET

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

CASE NO. 7632
QC REPORT NO. 87062

Elements Identified and Measured

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

mg/kg dry weight

1.	ALUMINUM	3990	P	13.	MAGNESIUM	50500	P
2.	ANTIMONY	15U	P	14.	MANGANESE	443	P X
3.	ARSENIC	14	F	15.	MERCURY	0.14	CV R ✓
4.	BARIUM	[37]	P	16.	NICKEL	50	P
5.	BERYLLIUM	[0.66]	P	17.	POTASSIUM	[949]	P
6.	CADMIUM	2.4U	P	18.	SELENIUM	29U	F R R
7.	CALCIUM	85900	P	19.	SILVER	2.4U	P R U
8.	CHROMIUM	17	P	20.	SODIUM	641U	P
9.	COBALT	[7.9]	P	21.	THALLIUM	5.9U	F
10.	COPPER	56	P	22.	TIN	26	P
11.	IRON	26100	P	23.	VANADIUM	[13]	P
12.	LEAD	68	F	24.	ZINC	311	P

Cyanide 0.59U AS Percent Solids (%) 85

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: Selenium Value is reported at an additional 10x dilution
Lead Value is reported at an additional 5x dilution

Lab Manager [illegible]

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
209 Madison St. - Alexandria, VA 22314
703/557-2490 FTS: 8-557-2490

EPA Sample No. MEP005

RECEIVED SEP 17 1987

Date 8-20-87

INORGANIC ANALYSIS DATA SHEET

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

CASE NO. 7632
QC REPORT NO. 870622

Elements Identified and Measured

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

mg/kg dry weight

1.	ALUMINUM	10100	P	13.	MAGNESIUM	22900	P
2.	ANTIMONY	17U	P	14.	MANGANESE	425	P X
3.	ARSENIC	14	F	15.	MERCURY	0.14U	CV R
4.	BARIUM	[77]	P	16.	NICKEL	72	P
5.	BERYLLIUM	0.68U	P	17.	POTASSIUM	[2290]	P
6.	CADMIUM	[3.1]	P	18.	SELENIUM	34U	F R
7.	CALCIUM	39100	P	19.	SILVER	2.7U	P R
8.	CHROMIUM	23	P	20.	SODIUM	747U	P
9.	COBALT	[12]	P	21.	THALLIUM	6.8U	F
10.	COPPER	234	P	22.	TIN	15U	P
11.	IRON	59900	P	23.	VANADIUM	[26]	P
12.	LEAD	71	F	24.	ZINC	189	P

Cyanide 0.68U AS Percent Solids (%) 73

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: Selenium Value is reported at an additional 10x dilution
Lead Value is reported at an additional 5X dilution

Lab Manager [illegible]

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
209 Madison St. - Alexandria, VA 22314
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MEP006

Date 8-20-87

RECEIVED SEP 7 1987

INORGANIC ANALYSIS DATA SHEET

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

CASE NO. 7632
QC REPORT NO. 87062

Elements Identified and Measured

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

mg/kg dry weight

1.	ALUMINUM	5310	P	13.	MAGNESIUM	35200	P
2.	ANTIMONY	15U	P	14.	MANGANESE	369	P I
3.	ARSENIC	8.6	F	15.	MERCURY	0.12U	CV R
4.	BARIUM	[35]	P	16.	NICKEL	[21]	P
5.	BERYLLIUM	[0.85]	P	17.	POTASSIUM	[1230]	P
6.	CADMIUM	2.5U	P	18.	SELENIUM	31U	F R R
7.	CALCIUM	64300	P	19.	SILVER	2.5U	P R U
8.	CHROMIUM	14	P	20.	SODIUM	673U	P
9.	COBALT	[6.5]	P	21.	THALLIUM	6.2U	F
10.	COPPER	31	P	22.	TIN	14U	P
11.	IRON	16200	P	23.	VANADIUM	[15]	P
12.	LEAD	64	FS	24.	ZINC	99	P

Cyanide 0.62U AS Percent Solids (%) 81

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

Comments: Selenium Value is reported at an additional 10X dilution
Lead Value is determined by MSA

Lab Manager [illegible]

QC EXCEPTION SUMMARY REPORT

CASE # 7632
DATA SET # 4204
LAB Q.C.# 87062
DATE: 9.15.87

SITE DeBoer Landfill
LAB RMAL
REVIEWED BY [illegible]

MATRIX: GS
CONC. : GL

WATER SAMPLE SPK.
WATER SAMPLE DUP.
SOIL SAMPLE SPK. MEP001
SOIL SAMPLE DUP. MEP001

	OVERALL CASE QC									MATRIX SPECIFIC QC						SAMPLE SPECIFIC QC		FIELD QC			REGIONAL QC			OTHER COMMENTS
	Holding Time	Cal Blanks	Init Calibr	Contin Calibr	Prep Blk AQ	Prep Blk SOL	ICS %R	LCS % AQ	LCS % SOL	Sol Dup RPD	Sol Spk. %R	AQ Dup RPD	AQ Spk. %R	Ser Dilu AQ	Ser Dilu SOL	GFAA Dup	GFAA Spike	Blank	Dup RPD	Spike %R	Blind Blank	Blind Spike %R	Split Sample RPD	
Aluminum																								
Antimony																								
Arsenic																								
Barium																								
Beryllium																								
Cadmium																								
Calcium																								
Chromium																								
Cobalt																								
Copper																								
Iron																								
Lead																								
Magnesium																								
Manganese										22														
Mercury											132													
Nickel																								
Potassium																								
Selenium											0													
Silver											52													
Sodium																								
Thallium																								
Tin																								
Vanadium																								
Zinc																								
Cyanide																								

RECEIVED SEP 17 1987

1/3

00011

Form III

Q.C. Report No. 87062

BLANKS

RECEIVED SEP 1 1987

LAB NAME ROCKY MOUNTAIN ANALYTICAL

CASE NO. 7632

DATE 8-20-87

UNITS ug/L

Matrix Soil

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. ALUMINUM		15U					
2. ANTIMONY		25U					
3. ARSENIC							
4. BARIUM		3U					
5. BERYLLIUM		1U					
6. CADMIUM		4U					
7. CALCIUM		179U					
8. CHROMIUM		4U					
9. COBALT		9U					
10. COPPER		6U					
11. IRON		24U					
12. LEAD							
13. MAGNESIUM		153U					
14. MANGANESE		4U					
15. MERCURY							
16. NICKEL		8U					
17. POTASSIUM		175U					
18. SELENIUM							
19. SILVER		4U					
20. SODIUM		1090U					
21. THALLIUM							
22. TIN		22U					
23. VANADIUM		7U					
24. ZINC		[3.7]					
Other:							
Cyanide							

2/3

00012

RECEIVED SEP 17 1987

Form III

Q.C. Report No. 87062

BLANKS

LAB NAME ROCKY MOUNTAIN ANALYTICAL CASE NO. 7632

DATE 8-20-87 UNITS ug/L

Matrix SOIL

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. ALUMINUM	15U	15U	15U			[23]	
2. ANTIMONY	25U	25U	25U			25U	
3. ARSENIC	10U	10U	10U			10U	
4. BARIUM	3U	3U	3U			3U	
5. BERYLLIUM	1U	1U	1U			1U	
6. CADMIUM	4U	4U	4U			4U	
7. CALCIUM	179U	179U	179U			179U	
8. CHROMIUM	4U	4U	4U			4U	
9. COBALT	9U	9U	9U			9U	
10. COPPER	6U	6U	6U			[8]	
11. IRON	24U	24U	24U			[41]	
12. LEAD	5U	5U	5U			5U	
13. MAGNESIUM	153U	153U	153U			153U	
14. MANGANESE	4U	4U	4U			[6.2]	
15. MERCURY	0.2U	0.2U				0.2U	
16. NICKEL	8U	8U	8U			8U	
17. POTASSIUM	175U	175U	175U			175U	
18. SELENIUM	5U	5U	5U			5U	
19. SILVER	4U	4U	4U			4U	
20. SODIUM	1090U	1090U	1090U			1090U	
21. THALLIUM	10U	10U				10U	
22. TIN	22U	22U	22U			[25]	
23. VANADIUM	7U	7U	7U			7U	
24. ZINC	3U	3U	[3]			[10]	
Other:							
Cyanide	10U	10U	10U	10U		10U	

Form III

3 of 3

00013

Q.C. Report No. 87062

BLANKS

RECEIVED DEP 1987

LAB NAME ROCKY MOUNTAIN ANALYTICAL

CASE NO. 7632

DATE 8/20/87

UNITS ug/L

Matrix Soil

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

Form V

Q.C. Report No. 87062

SPIKE SAMPLE RECOVERY

RECEIVED SEP 17 1987

LAB NAME ROCKY MOUNTAIN ANALYTICAL

CASE NO. 7632
EPA Sample No. MEP001
Lab Sample ID No. --
Units mg/kg

DATE 8-20-87

MATRIX SOIL

Compound	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spike Added (SA)	%R[1]
Metals:					
1. ALUMINUM	75-125	2360	2020	NR	
2. ANTIMONY	75-125	198	12U	250	79
3. ARSENIC	75-125	26	5.5	20	102
4. BARIUM	75-125	998	[26]	1000	97
5. BERYLLIUM	75-125	26	[0.56]	25	102
6. CADMIUM	75-125	25	2U	25	100
7. CALCIUM	75-125	81400	91800	NR	
8. CHROMIUM	75-125	109	11	100	98
9. COBALT	75-125	247	[4.7]	250	97
10. COPPER	75-125	168	39	125	103
11. IRON	75-125	15700	14100	NR	
12. LEAD	75-125	82	65	10	170
13. MAGNESIUM	75-125	41400	48900	NR	
14. MANGANESE	75-125	611	355	250	102
15. MERCURY	75-125	0.66	0.1U	0.5	132
16. NICKEL	75-125	263	[17]	250	98
17. POTASSIUM	75-125	[636]	[563]	NR	
18. SELENIUM	75-125	25U	25U	5	0
19. SILVER	75-125	13	2U	25	52
20. SODIUM	75-125	[887]	[578]	NR	
21. THALLIUM	75-125	20	5U	25	80
22. TIN	75-125	226	11U	250	90
23. VANADIUM	75-125	262	[9.1]	250	101
24. ZINC	75-125	362	100	250	105
Other:					
Cyanide	75-125	4.6	0.5U	5	92

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

Comments: Selenium matrix Spike & Sample Results reported at additional 10X dilutions. Lead matrix Spike & Sample Results are reported at additional 5X dilutions

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

Form VI

Q.C. Report No. 87062

DUPLICATES

LAB NAME ROCKY MOUNTAIN ANALYTICAL

DATE 8-20-87

CASE NO. 7632
EPA Sample No. MEP001
Lab Sample ID No.
Units mg/kg

Matrix SOIL

RECEIVED SEP 7 1987

Compound	Control Limit[1]	Sample(S)	Duplicate(D)	RPD[2]	
Metals:					
1. ALUMINUM		2020	2380	16	
2. ANTIMONY		12U	12U	NC	
3. ARSENIC		5.5	6	8.7	
4. BARIUM		[26]	[30]	NC	
5. BERYLLIUM		[0.56]	[0.56]	NC	
6. CADMIUM		2U	2U	NC	
7. CALCIUM		91800	91900	0.11	
8. CHROMIUM		11	8	32	
9. COBALT		[4.7]	[5.6]	NC	
10. COPPER		39	46	16	
11. IRON		14100	12700	10	
12. LEAD		65	62	4.7	
13. MAGNESIUM		48900	49000	0.2	
14. MANGANESE		355	441	22	X
15. MERCURY		0.1U	0.1U	NC	
16. NICKEL		[17]	[20]	NC	
17. POTASSIUM		[563]	[654]	NC	
18. SELENIUM		25U	25U	NC	
19. SILVER		2U	2U	NC	
20. SODIUM		[578]	[682]	NC	
21. THALLIUM		5U	5U	NC	
22. TIN		11U	11U	NC	
23. VANADIUM		[9.1]	[9.6]	NC	
24. ZINC		100	110	9.5	
Other:					
% Solids		90	90	0	
Cyanide		0.5U	0.5U	NC	

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

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

Form VII

00017

Q.C. Report No. 87062
INSTRUMENT DETECTION LIMITS AND
LABORATORY CONTROL SAMPLE

RECEIVED Sep 17 1987

LAB NAME ROCKY MOUNTAIN ANALYTICAL
DATE 8-20-87

CASE NO 7632
UNITS ug/L

Compound	Required Detection Limits (CRDL)-ug/l	Instrument Detection Limits (IDL)-ug/l ICP/AA	Furnace	Lab Control Sample True	Found	%R
Metals:						
1. ALUMINUM	200	15		1980	2080	105
2. ANTIMONY	60	25		~~800~~ 1000	1090	~~136~~ 100
3. ARSENIC	10	31	2	49	40	82
4. BARIUM	200	3		1980	1980	100
5. BERYLLIUM	5	1		481	504	105
6. CADMIUM	5	4		489	507	104
7. CALCIUM	5000	179		49800	53600	108
8. CHROMIUM	10	4		506	516	102
9. COBALT	50	9		474	504	106
10. COPPER	25	6		542	583	108
11. IRON	100	24		1990	2080	104
12. LEAD	5	20	1	98	84 S	86
13. MAGNESIUM	5000	153		25000	26600	107
14. MANGANESE	15	4		513	535	104
15. MERCURY	0.2		0.2CV	1.0	1.00	100
16. NICKEL	40	8		496	491	99
17. POTASSIUM	5000	175		50200	57900	115
18. SELENIUM	5		1	98	108	110
19. SILVER	10	4		509	497	98
20. SODIUM	5000	1090		50700	55000	108
21. THALLIUM	10		1	97	88 S	91
22. TIN	40	22		2000	1950	97
23. VANADIUM	50	7		511	534	104
24. ZINC	20	3		3100	3060	99
Other:						
Cyanide	10		10AS	58	58	100

CV - Cold Vapor
AS - Automated Spectrophotometric

Lead & Thallium Values determined by MSA

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

CRL Receipt Date 8-27-87 FIT Receipt Date 11-1-87 Review Completed 11-19-87

TO: D. Henly

FROM: Jim Mertes

SUBJECT: De Bar L.F.

PAN: IL 0249 SA CASE # 7632

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
# 6	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:

See Attached DATA Summary Sheets

Check Data Sheets for Transcription Errors

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

Book No. 6 Page No. 201 Date Sampled 7-16-87

26U:001

1 hr. charged to site week IL0249SAQ
ending 11-14-87 J. Mertes

recycled paper

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

Received 42 pages
NOV 18 1987

DATE: 11/ /87

SUBJECT: Review of Region V CLP Data Received for Review on August 27, 1987

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

TO: Data User: FIT

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

SITE NAME: De Boer Landfill SMO case No. 7632

EPA Data Set No. SF 4204 No. of Samples: 6 D.U./Activity Numbers 1905 C72100

CRL No. 87FH12560 - 87FH12565

SMO Traffic No. EN496 - EN075

CLP Laboratory: S3 Hrs. Required for Review: 18

Following are our findings:

EN 075, EN 496, EN 497, EN 499 and EN 500 had detectable amounts of various BNA compounds. EN 075 had one pesticide detected below the CRDL. Samples EN 497 and EN 499 each had one pesticide detected.

E.E.

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

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

De Boer Landfill
Case #7632

Six low soil/sediment samples were analyzed for full CLP TCL analysis.

A. Holding Times: Acceptable
Holding time requirements met.

B. Surrogates: Soil
EN496 and EN075 each had one BNA surrogate outlier. EN498 had 3 outliers in its initial run and 5 on the rerun analysis, all the results were low so some type of matrix effect can be assumed. Reported results are those of the reanalysis.

In the pesticide surrogate analysis EN496, EN497, EN498 its matrix spike and matrix spike duplicate were all high.

VOA met QC limits.
10 out of 72 Semi-Voa were outside QC limits.
5 out of 9 pesticides were outside QC limits

C. Matrix Spike/Matrix Spike Duplicate:
Soil
Acceptable
1 RPD out of 5 VOA outside QC limits.
1 RPD out of 6 B/N outside QC limits.
4 out of 12 B/N recoveries outside QC limits

D. Method Blanks:
Acceptable
Contaminants were found at levels below the CRDL and the associated results were flagged with a B(found in blank).

E. Calibration: Acceptable
Outliers were noted and flagged on the calibration outlier forms. They did not effect any detected compounds not previously flagged.

F. GC/MS Tuning:
Acceptable
Met tuning specifications.

G. Pesticides: Acceptable
Linearity acceptable
DBC shift acceptable
DDT retention time >12 min. acceptable

Correct 72 hour sequence was followed.
DDT/Endrin degradation check acceptable.

H. Summary:

EN075, EN496, EN497, EN499, and EN500 had detectable amounts of various BNA compounds. EN075 had one pesticide detected below the CRDL. Samples EN497 and EN499 each had one pesticide detected.

COMPOUND	SAMPLE	DET. LIMIT	µg/Kg EN075	EN496	EN497	EN498	EN499	EN500		
chloromethane										
bromomethane										
vinyl chloride										
chloroethane										
methylene chloride		8	[3 J]							
acetone										
carbon disulfide										
1,1-dichloroethene										
1,1-dichloroethane										
trans-1,2,-dichloroethene										
chloroform										
1,2-dichloroethane										
2-butanone										
1,1,1-trichloroethane										
carbon tetrachloride										
vinyl acetate										
bromodichloromethane										
1,1,2,2-tetrachloroethane										
1,2-dichloropropane										
trans-1,3-dichloropropene										
trichloroethene										
dibromochloromethane										
1,1,2-trichloroethane										
benzene										
cis-1,3-dichloropropene										
2-chloroethylvinylether										
bromoform										
2-hexanone										
4-methyl-2-pentanone										
tetrachloroethene										
toluene										
chlorobenzene										
ethylbenzene										
styrene										
total xylenes										
N-nitrosodimethylamine detection		limits								
phenol										
aniline										
bis(2-chloroethyl)ether										
2-chlorophenol										
1,3-dichlorobenzene										
1,4-dichlorobenzene										
benzyl alcohol										
1,2-dichlorobenzene										
2-methylphenol										
bis(2-chloroisopropyl)ether										
4-methylphenol										
N-nitroso-di-n-propylamine										
hexachloroethane										
nitrobenzene										
isophrone										
2-nitrophenol										
2,4-dimethylphenol										
benzoic acid										
bis(2-chloroethoxy)methane										
2,4-dichlorophenol										
1,2,4-trichlorobenzene										
napthalene 570,640				(47 J)	[140 J]					
4-chloroaniline										
hexachlorobutadiene										
4-chloro-3-methylphenol										
2-methylnapthalene 570,640				[22 J]	[41 J]					
hexachlorocyclopentadiene										
2,4,6-trichlorophenol										

	COMPOUND	SAMPLE	DET. LIMIT	ug/Kg EN075	EN496	EN497	EN498	EN499	EN500		
V	dimethyl phthalate	detection limits →									
	acenaphthylene 620, ,640,			[97 J]		[33 J]					
	3-nitroaniline										
	acenaphthene 620,570,640,770,620,		720	[48 J]	[280 J]	[180 J]	[6 J]	[86 J]	[120 J]		
	2,4-dinitrophenol										
	4-nitrophenol										
	dibenzofuran 620,570,640,770,620,		720	[56 J]	[110 J]	[99 J]	[4 J]	[37 J]	[52 J]		
	2,4-dinitrotoluene										
S	2,6-dinitrotoluene										
	diethylphthalate										
	4-chlorophenyl-phenylether										
V	fluorene 620,570,640,770,620,		720	[98 J]	[230 J]	[140 J]	[6 J]	[67 J]	[120 J]		
	4-nitroaniline										
	4,6-dinitro-2-methylphenol										
	N-nitrosodiphenylamine		770				[6 J]				
	4-bromophenyl-phenylether										
	hexachlorobenzene										
	pentachlorophenol										
	phenanthrene 620,570,640,770,620,		720	1200	1900	1300	[50 J]	630	1300		
	anthracene 620,570,640,770,620,		720	[280 J]	[520 J]	[320 J]	[11 J]	[130 J]	[320 J]		
	di-n-butylphthalate 620,570,640,770,		620,720	[22 JB]	[120 JB]	[160 JB]	[29 JB]	[120 JB]	[53 JB]		
	fluoranthene 620,570,640,770,620,		720	2500	3500	2500	[120 J]	1000	2800		
	benzidine										
	pyrene 620,570,640,770,620,720			2000	2500	1900	[90 J]	790	2100		
	butylbenzylphthalate , ,640,770, ,		720			[59 J]	[23 J]		[220 J]		
	3,3'-dichlorobenzidine										
	benzo(a)anthracene 620,570,640,770,		620,720	1200	1600	1300	[48 J]	[460 J]	1300		
	bis(2-ethylhexyl)phthalate 620,570,640,770,620,720			[54 JB]	[170 JB]	[990 B]	[125 JB]	[230 JB]	[97 JB]		
	chrysene 620,570,640,770,620,720			1300	1700	1400	[115 J]	[520 J]	1400		
	di-n-octylphthalate 620							[13 J]			
	benzo(b&k)fluoranthene 620,570,640,770,		620,720	2170	3300	3200	[140 J]	[820 J]	2120		
	benzo(a)pyrene 620,570,640,770,620,		720	980	1500	1500	[70 J]	[440 J]	1100		
	indeno(1,2,3-cd)pyrene 620,570,640,770,		620,720	800	1200	1200		[290 J]	780		
	dibenzo(a,h)anthracene 620,570,640,770,		620,720	[220 J]	[500 J]	[400 J]	[18 J]	[91 J]	[210 J]		
↑	benzo(g,h,i)perylene 620,570,640,770,		620,720	730	1100	1100	[80 J]	[300 J]	[740 J]		
↓	alpha-BHC										
	beta-BHC										
	delta-BHC										
	gamma-BHC(lindane)										
P	heptachlor										
	aldrin										
E	heptachlor epoxide										
	endosulfan I										
S	dieldrin										
T	4,4'-DDE		20	[17 J]							
	endrin										
	endosulfan II										
	4,4'-DDD		21			350					
	endrin aldehyde		20					80			
	endosulfan sulfate										
	4,4'-DDT										
	methoxychlor										
	endrin ketone										
	chlordane										
	toxaphene										
P	Aroclor-1016										
	Aroclor-1221										
C	Aroclor-1232										
B	Aroclor-1242										
	Aroclor-1248										
	Aroclor-1254										
	Aroclor-1260										

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

CASE/SAS # 7632 CONTRACTOR S3

Instrument # VG1	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	7-14-87			7-22-87			7-23-87								
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane															
Bromomethane															
Vinyl Chloride															
Chloroethane															
Methylene Chloride															
Acetone	0.144		J												
Carbon Disulfide															
1,1-Dichloroethane															
1,1-Dichloroethene															
Trans-1,2-Dichloroethene															
Chloroform															
2-Butanone	0.037		R	0.035		R	0.037		R						
1,2-Dichloroethane	0.227		J												
1,1,1-Trichloroethane															
Carbon Tetrachloride															
Vinyl Acetate	0.069		J												
Bromodichloromethane	0.038		R	0.039		R	0.040		R						
1,2-Dichloropropane															
Trans-1,3-Dichloropropene															
Trichloroethene															
Dibromochloromethane	0.297		J												
1,1,2-Trichloroethane															
Benzene															
cis-1,3-Dichloropropene	0.285		J												
2-Chloroethylvinylether	0.059		J												
Bromoform															
4-Methyl-2-Pentanone	0.027		R	0.025		R	0.025		R						
2-Hexanone	0.047		R				0.044		R						
Tetrachloroethene															
1,1,2,2-Tetrachloroethane															
Toluene															
Chlorobenzene															
Ethylbenzene															
Styrene															
m-Xylene															
o/p-Xylene															

AFFECTED SAMPLES:

All samples	EN 075	EN 499
	EN 496	EN 500
	EN 497	EN 496 MS
	EN 498	EN 496 MSD
	Blank	Blank

Reviewer's Initials/Date: YCT 11/31/87

* 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 1)

CASE/SAS # 7632 CONTRACTOR S^3

Instrument # HP#1	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	7-27-87			8-5-87			8-12-87			8-19-87			8-20-87		
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Phenol															
bis(-2-Chloroethyl)Ether															
2-Chlorophenol															
1,3-Dichlorobenzene															
1,4-Dichlorobenzene															
Benzyl Alcohol															
1,2-Dichlorobenzene															
2-Methylphenol															
bis(2-chloroisopropyl)Ether															
4-Methylphenol															
N-Nitroso-Di-n-Propylamine															
Hexachloroethane															
Nitrobenzene					27.45	J									
Isophorone															
2-Nitrophenol															
2,4-Dimethylphenol															
Benzoic Acid					27.21	J									
bis(2-Chloroethoxy)Methane															
2,4-Dichlorophenol															
1,2,4-Trichlorobenzene															
Naphthalene															
4-Chloroaniline															
Hexachlorobutadiene															
4-Chloro-3-Methylphenol															
2-Methylnaphthalene															
Hexachlorocyclopentadiene															
2,4,6-Trichlorophenol															
2,4,5-Trichlorophenol					25.61	J									
2-Chloronaphthalene															
2-Nitroaniline															
Dimethyl Phthalate															
Acenaphthylene															
3-Nitroaniline															
Acenaphthene															
2,4-Dinitrophenol		50.48	J		47.68	J									
4-Nitrophenol															
Dibenzofuran															

AFFECTED SAMPLES:

All samples	EN 075	EN 498	EN 498 Re	Blank
	EN 496			
	EN 496 MS			
	EN 496 MSD			
	EN 497			
	EN 499			
	EN 500			
	Blank			

Reviewer Initials/Date: JCT 11/13/87

* 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 # 7632 CONTRACTOR S^3

Instrument # HP1	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	7-27-87			8-5-87			8-12-87								
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene															
2,6-Dinitrotoluene															
Diethylphthalate															
4-Chlorophenyl-phenylether															
Fluorene															
4-Nitroaniline															
4,6-Dinitro-2-Methylphenol				26.10		J									
N-Nitrosodiphenylamine															
4-Bromophenyl-phenylether															
Hexachlorobenzene															
Pentachlorophenol															
Phenanthrene															
Anthracene															
Di-n-Butylphthalate															
Fluoranthene															
Pyrene															
Butylbenzylphthalate															
Benzo(a)Anthracene															
bis(2-Ethylhexyl)Phthalate															
Chrysene															
Di-n-Octyl Phthalate															
Benzo(b)Fluoranthene															
Benzo(k)Fluoranthene															
Benzo(a)Pyrene															
Indeno(1,2,3-cd)Pyrene															
Dibenz(a,h)Anthracene															
Benzo(g,h,i) Perylene															

SEE PAGE 1 FOR AFFECTED SAMPLES.

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

Reviewer's Initials/Date: LCT 11/3/87

Case: 7632 De Boer Landfill

Contractor: S^3

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: LaJ 11-3-87

SF 4204

S-CUBED

A Division of Maxwell Laboratories, Inc.

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AUG 27 1987
US EPA CENTRAL REGIONAL LAB.
536 S. CLARK STREET
CHICAGO, ILLINOIS 60605

August 24, 1987

Volume 1 of 2

NARRATIVE CASE 7632
S-CUBED CONTRACT NO. 68-01-7261

This case consists of six soils samples for full analysis. Volatile analyses showed these samples to be very clean. Extractable analyses yielded moderate levels of polynuclear aromatic hydrocarbons in all samples. Several samples also contained moderate levels of DDD.

The major problem encountered with this case is the consistently low recoveries of BNA surrogates in Sample EN498. Both the original and the re-extracted data are presented here. Please note, Sample EN498RE was spiked twice with internal standards, as is apparent from the consistently double IS areas in this analyses. All quantitation has been corrected to reflect this error.

JoAnn E Wilkinson

JoAnn Wilkinson, Project Manager

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HSL GC-MS ANALYSIS OF VOLATILES

Instrument ID : VG1
Charge Number : 12079

S^3 Contract #68-01-7261

TARGET COMPOUND DETECTION LIMIT ANALYSIS REPORT

Compound	Cn1	Cn2	Cn3	CnMEAN	DET. LIM. (3XSD)
Chloromethane	48.338	49.777	51.873	49.996	5.334
Bromomethane	48.299	50.254	51.440	49.998	4.758
Vinyl Chloride	49.786	50.070	50.197	50.018	0.632
Chloroethane	48.479	50.821	50.670	49.990	3.932
Methylene Chloride	50.499	49.353	50.137	49.996	1.758
Acetone	55.969	37.555	56.140	49.888	32.043
Carbon Disulfide	49.412	50.138	50.444	49.998	1.590
1,1-Dichloroethene	49.730	49.671	50.608	50.003	1.574
1,1-Dichloroethane	49.782	49.931	50.300	50.004	0.800
trans-1,2-Dichloroethene	49.692	50.093	50.220	50.002	0.827
Chloroform	49.841	49.428	50.717	49.995	1.975
1,2-Dichloroethane	49.223	47.932	52.378	49.844	6.862
2-Butanone	49.697	47.620	52.735	50.017	7.717
1,1,1-Trichloroethane	49.814	49.542	50.523	49.960	1.520
Carbon Tetrachloride	49.496	50.122	50.415	50.011	1.409
Vinyl Acetate	49.597	48.622	52.688	50.302	6.368
Bromodichloromethane	49.038	50.781	48.276	49.365	3.852
1,2-Dichloropropane	50.438	49.119	50.736	50.098	2.582
trans-1,3-Dichloropropene	38.873	37.696	37.417	37.995	2.318
Trichloroethene	50.069	49.246	50.825	50.047	2.369
Dibromochloromethane	50.983	49.001	49.853	49.946	2.983
1,1,2-Trichloroethane	50.261	49.428	50.428	50.039	1.608
Benzene	50.029	49.337	50.614	49.993	1.918
cis-1,3-Dichloropropene	63.362	61.716	61.292	62.123	3.280
2-Chloroethylvinylether	51.641	47.362	50.038	49.680	6.485
Bromoform	50.498	49.343	50.117	49.986	1.765
2-Hexanone	48.554	49.394	50.831	49.593	3.455
4-Methyl-2-Pentanone	49.087	48.782	50.971	49.613	3.557
Tetrachloroethene	48.642	50.797	50.739	50.059	3.684
1,1,2,2-Tetrachloroethane	49.419	49.855	50.814	50.029	2.140
Toluene	49.265	50.156	50.537	49.986	1.958
Chlorobenzene	49.631	49.891	50.417	49.980	1.201
Ethylbenzene	49.223	50.463	50.391	50.026	2.088
Styrene	49.785	49.810	50.449	50.015	1.128
m-Xylene	49.167	50.132	50.668	49.989	2.282
o-/p-Xylene	98.783	100.286	100.833	99.967	3.185

Instrument
Detection
Limit

HP1

S^3 Contract #68-01-7261

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	7.7
111-44-4	bis(-2-Chloroethyl)Ether	5.5
95-57-8	2-Chlorophenol	1.8
541-73-1	1, 3-Dichlorobenzene	2.1
106-46-7	1, 4-Dichlorobenzene	2.4
100-51-6	Benzyl Alcohol	3.3
95-50-1	1, 2-Dichlorobenzene	3.0
95-48-7	2-Methylphenol	4.0
39638-32-9	bis(2-chloroisopropyl)Ether	9.6
106-44-5	4-Methylphenol	5.9
621-64-7	N-Nitroso-Di-n-Propylamine	2.5
67-72-1	Hexachloroethane	4.6
98-95-3	Nitrobenzene	6.1
78-59-1	Isophorone	3.7
88-75-5	2-Nitrophenol	3.9
105-67-9	2, 4-Dimethylphenol	2.4
65-85-0	Benzoic Acid	8.6
111-91-1	bis(-2-Chloroethoxy)Methane	2.2
120-83-2	2, 4-Dichlorophenol	1.72
120-82-1	1, 2, 4-Trichlorobenzene	1.9
91-20-3	Naphthalene	2.2
106-47-8	4-Chloroaniline	2.3
87-68-3	Hexachlorobutadiene	0.2
59-50-7	4-Chloro-3-Methylphenol	3.1
91-57-6	2-Methylnaphthalene	4.2
77-47-4	Hexachlorocyclopentadiene	0.3
88-06-2	2, 4, 6-Trichlorophenol	0.7
95-95-4	2, 4, 5-Trichlorophenol	1.1
91-58-7	2-Chloronaphthalene	0.9
88-74-4	2-Nitroaniline	1.6
131-11-3	Dimethyl Phthalate	0.9
208-96-8	Acenaphthylene	2.2
99-09-2	3-Nitroaniline	4.2

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	1.4
51-28-5	2, 4-Dinitrophenol	2.3
100-02-7	4-Nitrophenol	7.0
132-64-9	Dibenzofuran	0.6
121-14-2	2, 4-Dinitrotoluene	0.7
606-20-2	2, 6-Dinitrotoluene	1.0
84-66-2	Diethylphthalate	1.9
7005-72-3	4-Chlorophenyl-phenylether	4.4
86-73-7	Fluorene	1.2
100-01-6	4-Nitroaniline	7.5
534-52-1	4, 6-Dinitro-2-Methylphenol	2.3
86-30-6	N-Nitrosodiphenylamine (1)	5.1
101-55-3	4-Bromophenyl-phenylether	1.2
118-74-1	Hexachlorobenzene	4.4
87-86-5	Pentachlorophenol	4.1
85-01-8	Phenanthrene	3.7
120-12-7	Anthracene	1.6
84-74-2	Di-n-Butylphthalate	2.3
206-44-0	Fluoranthene	1.6
129-00-0	Pyrene	2.6
85-68-7	Butylbenzylphthalate	2.4
91-94-1	3, 3'-Dichlorobenzidine	1.3
56-55-3	Benzo(a)Anthracene	3.4
117-81-7	bis(2-Ethylhexyl)Phthalate	2.1
218-01-9	Chrysene	3.1
117-84-0	Di-n-Octyl Phthalate	8.3
205-99-2	Benzo(b)Fluoranthene	6.6
207-08-9	Benzo(k)Fluoranthene	5.6
50-32-8	Benzo(a)Pyrene	7.8
193-39-5	Indeno(1, 2, 3-cd)Pyrene	8.4
53-70-3	Dibenz(a, h)Anthracene	5.8
191-24-2	Benzo(g, h, i)Perylene	5.9

(1)-Cannot be separated from diphenylamine

LABORATORY DETECTION LIMITS

S-CUBED

CONTRACT 68-01-7261

VOLATILES

Units are µg/L for water or µg/kg for dry soils assuming a 5.0 mL or 5.0 g sample size.

PP #	CAS #		
(2V)	107-02-8	acrolein	5.6
(3V)	107-13-1	acrylonitrile	5.2
(5V)	71-43-2	benzene	1.8
(6V)	56-23-5	carbon tetrachloride	1.5
(7V)	108-90-7	chlorobenzene	0.7
(10V)	107-06-2	1,2-dichloroethane	2.5
(11V)	71-55-6	1,1,1-trichloroethane	1.1
(13V)	75-34-3	1,1-dichloroethane	1.8
(14V)	79-00-5	1,1,2-trichloroethane	2.6
(15V)	79-34-5	1,1,2,2-tetrachloroethane	0.9
(16V)	75-00-3	chloroethane	4.3
(19V)	110-75-8	2-chloroethylvinyl ether	2.3
(25V)	67-66-3	chloroform	1.6
(29V)	75-35-4	1,1-dichloroethene	0.6
(30V)	156-60-5	trans-1,2-dichloroethene	1.3
(32V)	78-87-5	1,2-dichloropropane	0.5
(33V)	10061-02-6	trans-1,3-dichloropropene	1.9
	10061-01-05	cis-1,3-dichloropropene	1.8
(38V)	100-41-4	ethylbenzene	0.5
(64V)	75-09-2	methylene chloride	1.8
(65V)	74-87-3	chloromethane	5.3
(66V)	74-83-9	bromomethane	2.8
(67V)	75-25-2	bromoform	2.1
(68V)	75-27-4	bromodichloromethane	4.9
(69V)	75-69-4	fluorotrichloromethane	A
(70V)	75-71-8	dichlorodifluoromethane	A
(71V)	124-48-1	chlorodibromomethane	2.9
(85V)	127-18-4	tetrachloroethene	0.6
(86V)	108-88-3	toluene	1.7
(87V)	79-01-6	trichloroethene	2.0
(88V)	75-01-4	vinyl chloride	2.3
	67-64-1	acetone	1.0
	78-93-3	2-butanone	5.0
	75-15-0	carbondisulfide	2.8
	519-78-6	2-hexanone	1.2
	108-10-1	4-methyl-2-pentanone	0.7
	100-42-5	styrene	4.7
	108-05-4	vinyl acetate	2.5
	1330-20-7	total xylenes	2.2

PESTICIDES

Units are µg/L for water or µg/kg for dry soils assuming a 1.0 L or 1.0 kg sample size and a 1.0 mL final extract volume.

PP #	CAS #		GC/MS	GC/ECD
(89P)	309-00-2	aldrin	5.8	$1.5 \times 10^{-}$
(90P)	60-57-1	dieldrin	6.2	$0.6 \times 10^{-}$
(91P)	57-74-9	chlordane	*	$27.4 \times 10^{-}$
(92P)	50-29-3	4,4'-DDT	12	$1.5 \times 10^{-}$
(93P)	72-55-9	4,4'-DDE	10	$0.2 \times 10^{-}$
(94P)	72-54-8	4,4'-DDD	15	$1.2 \times 10^{-}$
(95P)	115-29-7	α-endosulfan	*	$0.9 \times 10^{-}$
(96P)	115-29-7	β-endosulfan	*	$2.1 \times 10^{-}$
(97P)	1031-07-8	endosulfan sulfate	17	$0.6 \times 10^{-}$
(98P)	72-20-8	endrin	19	$1.2 \times 10^{-}$
(99P)	7421-93-4	endrin aldehyde	*	$1.5 \times 10^{-}$
(100P)	76-44-8	heptachlor	4.9	$1.1 \times 10^{-}$
(101P)	1024-57-3	heptachlor epoxide	6.5	$0.1 \times 10^{-}$
(102P)	319-84-6	α-BHC	1.2	$6.6 \times 10^{-}$
(103P)	319-85-7	β-BHC	6.2	$6.9 \times 10^{-}$
(104P)	319-86-8	δ-BHC	2.8	$1.2 \times 10^{-}$
(105P)	58-89-9	γ-BHC (lindane)	3.9	$1.2 \times 10^{-}$
(106P)	53469-21-9	PCB-1242	*	$19.8 \times 10^{-}$
(107P)	11097-69-1	PCB-1254	*	$27.3 \times 10^{-}$
(108P)	11104-28-2	PCB-1221	*	$38.3 \times 10^{-}$
(109P)	11141-16-5	PCB-1232	*	$21.0 \times 10^{-}$
(110P)	12672-29-6	PCB-1248	*	$70.1 \times 10^{-}$
(111P)	11096-82-5	PCB-1260	*	$61.5 \times 10^{-}$
(112P)	12674-11-2	PCB-1016	*	$40.4 \times 10^{-}$
(113P)	8001-35-2	toxaphene	*	$2.5 \times 10^{-}$

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)

DATE EXTRACTED/PREPARED: _____

DATE ANALYZED: _____

PERCENT MOISTURE: _____

CONC./DILUTION FACTOR: _____

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

A - Not required for the contract.
B - Unit µg/L.
NA - Not applicable.
*Standard not available in high enough concentration for GC/MS.

December 1983

SOIL SURROGATE PERCENT RECOVERY SUMMARY

Case No. 7632 Contract Laboratory S-CUBED Contract No. 68-01-7261

Low ✓ Medium _____

	VOLATILE			SEMI-VOLATILE								PESTICIDE
SMO TRAFFIC NO.	TOLUENE-D8 (81-117)	BFB (74-121)	1,2 DICHLORO-ETHANE-D4 (70-121)	NITRO-BENZENE-D5 (23-120)	2-FLUORO-BIPHENYL (30-115)	TERPHENYL-D14 (18-137)			PHENOL-D6 (24-113)	2-FLUORO-PHENOL (25-121)	2,4,6 TRIBROMO-PHENOL (19-122)	DIBUTYL-CHLORENDATE** (20-150)
EN496	116	99	91	61	68	74			43	38	18*	339*
EN496MS	115	79	81	66	85	77			66	70	76	NA
EN496MSD	106	89	94	49	58	62			47	48	46	NA
EN497	110	88	98	61	77	73			65	68	69	458*
EN498	103	92	96	~~950~~	76	76			19*	9*	5*	172*
EN499	115	84	92	65	89	77			68	69	49	135
EN500	111	97	95	64	78	82			66	63	40	120
EN075	116	96	94	54	73	72			42	31	13*	80
(1) LAB BLANK	101	101	96	69	73	84			60	75	64	100
(2) LAB BLANK	100	98	92	67	75	91			35	72	65	NA
EN 498MS												214*
EN 498MSD												229*
EN498 REEXT				21*	22*	21			13*	13*	10*	NA
(3) LAB BLANK				75	76	79			81	83	68	NA

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

**ADVISORY LIMITS ONLY

Volatiles: 0 out of 30 ; outside of QC limits

Semi-Volatiles: 10 out of 72 ; outside of QC limits

Pesticides: 5 out of 9 ; outside of QC limits

7/85

Comments: (1) 23YV1071 (VOA) ; LB720 (BNA)
(2) 23YV1021 (ALSO VOA HOLDING BLANK) ; LB723 (BNA)
(3) LB813 (BNA)

FORM II

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. 7632 Contractor S-CUBED Contract No. 68-01-7261

Low Level ✓ Medium Level

FRACTION	COMPOUND	CONC. SPIKE ADDED (ug/Kg)	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS* RPD	QC LIMITS* RECOVERY
VOA SMO SAMPLE NO. EN496	1,1-Dicholorethene	60	0	100	167	72	120	33*	22	59-172
	Trichloroethene	57	0	53	93	54	95	2	24	62-137
	Chlorobenzene	62	0	55	89	60	97	9	21	60-133
	Toluene	62	0	71	115	67	108	6	21	59-139
	Benzene	63	0	60	95	63	100	5	21	66-142
B/N SMO SAMPLE NO. EN496	1,2,4-Trichlorobenzene	2840	0	1320	46	998	35*	19	23	38-107
	Acenaphthene	2840	276	1410	50	1617	57	9	19	31-137
	2,4 Dinitrotoluene	2840	0	1300	46	1100	39	3.2	47	28-89
	Pyrene	2840	1390	2420	78	4810	169*	52*	36	35-142
	N-Nitrosodi-n-Propylamine	2840	0	1072	38*	1028	36*	4	38	41-126
	1,4-Dichlorobenzene	2840	0	1140	40	863	30	20	27	28-104
ACID SMO SAMPLE NO. EN496	Pentachlorophenol	5680	0	1550	27	1230	22	14	47	17-109
	Phenol	5680	0	1995	35	1504	26	21	35	26-90
	2-Chlorophenol	5680	0	2200	39	1600	28	23	50	25-102
	4-Chloro-3-Methylphenol	5680	0	2160	38	1580	28	21	33	26-103
	4-Nitrophenol	5680	0	2200	39	1680	30	18	50	11-114
PEST SMO SAMPLE NO. EN498	Lindane	5.1	0	3.8	75	4.5	88	16	50	46-127
	Heptachlor	5.1	0	6.5	128	5.5	108	17	31	35-130
	Aldrin	5.1	0	5.7	112	5.1	100	11	43	34-132
	Dieldrin	12.7	0	13.2	104	11.1	87	18	38	31-134
	Endrin	12.7	0	7.1	56	5.4	42	29	45	42-139
	4,4'-DDT	12.7	0	13.7	108	11.3	89	9	50	23-134

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

RPD: VOAs 1 out of 5 ; outside QC limits
B/N 1 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 4 out of 12 ; outside QC limits
ACID 0 out of 10 ; outside QC limits
PEST 0 out of 12 ; outside QC limits

Comments:

FORM III

8/85

METHOD BLANK SUMMARY

Case No. 7632 Region 5 Contractor S-CUBED Contract No. 68-01-7261

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	CONC. LEVEL	INST. ID	CAS NUMBER	COMPOUND (HSL, TIC OR UNKNOWN)	CONC.	UNITS	CRDL
LAB BLANK	7-27-87	PEST	SOIL	LOW	HPSYROTI	NA	NONE	NA	NA	NA
22YV1071	7-22-87	VOA			VG1	NA	NOTHING FOUND	NA	NA	NA
23YV1021 (4)	7-23-87	VOA			VG1	75-09-2	methylene chloride	2	ug/kg	5
LB720 (1)	8-5-87	BNA			HP1	84-74-2	di n butyl phthalate	450		330
↓						117-84-0	bis(2-ethyl hexyl) phthalate	58		330
LB720						872-50-4	2pyrolidinone, 1-methyl	920		NR
LB723 (2)	↓					84-74-2	di-n-butyl phthalate	400		330
LB723	8-5-87					872-50-4	2pyrolidinone, 1-methyl	1200		NR
LB813 (3)	8-20-87					84-66-2	diethyl phthalate	16		330
						84-74-2	di-n-butyl phthalate	400		300

Comments:
(1) extracted 7/20/87
(2) extracted 7/23/87
(3) extracted 8/13/87; reextraction
(4) also case holding blank

87FH12565

Sample Number:
EN075

ORGANICS ANALYSIS DATA SHEET
(Page 1)

Laboratory Name: S-CUBED
Lab Sample ID No: 22YV1C81 (VOA)
Sample Matrix: SOIL
Data Release Authorized By: ___

Case No: 7632
QC Report No: N.R
Contract No: 68-01-7261
Date Sample Received: 07-17-87

VOLATILE COMPOUNDS

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 07-22-87
Date Analyzed: 07-22-87
Conc/Dil Factor: 0.82 pH: 7.0
Percent Moisture (Not Decanted): 19.5

CAS Number		ug/l or ug/kg (Circle One)	CAS Number		ug/l or ug/kg (Circle One)
74-87-3	CHLOROMETHANE	15 U	78-87-5	1,2-DICHLOROPROPANE	8 U
74-83-9	BROMOMETHANE	15 U	10061-02-6	TRANS-1,3-DICHLOROPROPENE	8 U
75-01-4	VINYL CHLORIDE	15 U	79-01-6	TRICHLOROETHENE	8 U
75-00-3	CHLOROETHANE	15 U	124-48-1	DIBROMOCHLOROMETHANE	8 U
75-09-2	METHYLENE CHLORIDE	3 J	79-00-5	1,1,2-TRICHLOROETHANE	8 U
67-64-1	ACETONE	15 U	71-43-2	BENZENE	8 U
75-15-0	CARBON DISULFIDE	8 U	10061-01-5	CIS-1,3-DICHLOROPROPENE	8 U
75-35-4	1,1-DICHLOROETHENE	8 U	110-75-8	2-CHLOROETHYLVINYLETHER	15 U
75-34-3	1,1-DICHLOROETHANE	8 U	75-25-2	BROMOFORM	8 U
156-60-5	TRANS-1,2-DICHLOROETHENE	8 U	591-78-6	2-HEXANONE	15 U
67-66-3	CHLOROFORM	8 U	108-10-1	4-METHYL-2-PENTANONE	15 U
107-06-2	1,2-DICHLOROETHANE	8 U	127-18-4	TETRACHLOROETHENE	8 U
78-93-3	2-BUTANONE	15 U	79-34-5	1,1,2,2-TETRACHLOROETHANE	8 U
71-55-6	1,1,1-TRICHLOROETHANE	8 U	108-88-3	TOLUENE	8 U
56-23-5	CARBON TETRACHLORIDE	8 U	108-90-7	CHLOROBENZENE	8 U
108-05-4	VINYL ACETATE	15 U	100-41-4	ETHYLBENZENE	8 U
75-27-4	BROMODICHLOROMETHANE	8 U	100-42-5	STYRENE	8 U
				TOTAL XYLENES	~~7 J~~ 8 U mJ

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifier are used. Additional flags or footnotes explaning 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 (eg. 10U) based on necessary concentration/dilution action. (this is not necessarily the instrument detection limit.) The footnotes 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 (eg 10J). If limit of detection is 10 ug/L and a concentration of 3ug/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 > or = 10 ng/ul in the final extract should be confirmed by GC/MS.

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

S Matrix spiked compound.

87FH12565

Lab Name : S - CUBED
Case No : 7632

Sample Number
EN 075

ORGANICS ANALYSIS DATA SHEET
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted: 7-20-87
Date Analyzed: 8/05/87 19:55
Conc/Dil Factor: 1.50
Percent Moisture (Decanted) N.A.

GPC Cleanup ✓ Yes __ No
Separatory Funnel Extraction __ Yes
Continuous Liquid-Liquid Extraction __ Yes

C.A.S. Number		ug/L or ug/Kg (Circle One)	
108-95-2	Phenol	620.	U
111-44-4	bis(-2-Chloroethyl)Ether	620.	U
95-57-8	2-Chlorophenol	620.	U
541-73-1	1,3-Dichlorobenzene	620.	U
106-46-7	1,4-Dichlorobenzene	620.	U
100-51-6	Benzyl Alcohol	620.	U
95-50-1	1,2-Dichlorobenzene	620.	U
95-48-7	2-Methylphenol	620.	U
39638-32-9	bis(2-chloroisopropyl)Ether	620.	U
106-44-5	4-Methylphenol	620.	U
621-64-7	N-Nitroso-Di-n-propylamine	620.	U
67-72-1	Hexachloroethane	620.	U
98-95-3	Nitrobenzene	620.	U
78-59-1	Isophorone	620.	U
88-75-5	2-Nitrophenol	620.	U
105-67-9	2,4-Dimethylphenol	620.	U
65-85-0	Benzoic Acid	3100.	U
111-91-1	bis(-2-Chloroethoxy)Methane	620.	U
120-83-2	2,4-Dichlorophenol	620.	U
120-82-1	1,2,4-Trichlorobenzene	620.	U
91-20-3	Naphthalene	620.	U
106-47-8	4-Chloroaniline	620.	U
87-68-3	Hexachlorobutadiene	620.	U
59-50-7	4-Chloro-3-methylphenol	620.	U
91-57-6	2-Methylnaphthalene	620.	U
77-47-4	Hexachlorocyclopentadiene	620.	U
88-06-2	2,4,6-Trichlorophenol	620.	U
95-95-4	2,4,5-Trichlorophenol	3100.	U
91-58-7	2-Chloronaphthalene	620.	U
88-74-4	2-Nitroaniline	3100.	U
131-11-3	Dimethyl Phthalate	620.	U
208-96-8	Acenaphthylene	97.	J
99-09-2	3-Nitroaniline	3100.	U

C.A.S. Number		ug/L or ug/Kg (Circle One)	
83-32-9	Acenaphthene	48.	J
51-28-5	2,4-Dinitrophenol	3100.	U
100-02-7	4-Nitrophenol	3100.	U
132-64-9	Dibenzofuran	56.	J
121-14-2	2,4-Dinitrotoluene	620.	U
606-20-2	2,6-Dinitrotoluene	620.	U
84-66-2	Diethylphthalate	620.	U
7005-72-3	4-Chlorophenyl-phenylether	620.	U
86-73-7	Fluorene	98.	J
100-01-6	4-Nitroaniline	620.	U
534-52-1	4,6-Dinitro-2-methylphenol	3100.	U
86-30-6	N-Nitrososdiphenylamine (1)	620.	U
101-55-3	4-Bromophenyl-phenylether	620.	U
118-74-1	Hexachlorobenzene	620.	U
87-86-5	Pentachlorophenol	3100.	U
85-01-8	Phenanthrene	1200.	
120-12-7	Anthracene	280.	J
84-74-2	Di-n-Butylphthalate	22.	J B
206-44-0	Fluoranthene	2500.	
129-00-0	Pyrene	2000.	
85-68-7	Butylbenzylphthalate	620.	U
91-94-1	3,3'-Dichlorobenzidine	1200.	U
56-55-3	Benzo(a)Anthracene	1200.	
117-81-7	bis(2-Ethylhexyl)Phthalate	54.	J B
218-01-9	Chrysene	1300.	
117-84-0	Di-n-Octyl Phthalate	~~1200ug. J~~	
205-99-2	Benzo(b)Fluoranthene	1400.	
207-08-9	Benzo(k)Fluoranthene	770.	
50-32-8	Benzo(a)Pyrene	980.	
193-39-5	Indeno(1,2,3-cd)Pyrene	800.	
53-70-3	Dibenzo(a,h)Anthracene	220.	J
191-24-2	Benzo(g,h,i)Perylene	730.	

(1)-Cannot be separated from diphenylamine

87FH12565

Laboratory Name: S-Cubed
Case No.: 7032

Sample Number
EN 075

ORGANICS ANALYSIS DATA
(Page 3)

Pesticide/PCBs

Concentration: LOW
Date Extracted/Prepared: 7-23-87
Date Analyzed: 7-29-87
Conc/Dil Factor: 1.00

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	9.9 u	
319-85-7	BETA-BHC	9.9 u	
319-86-8	DELTA-BHC	9.9 u	
58-89-9	GAMMA-BHC (LINDANE)	9.9 u	
76-44-8	HEPTACHLOR	9.9 u	
309-00-2	ALDRIN	9.9 u	
1024-57-3	HEPTACHLOR EPOXIDE	9.9 u	
959-98-8	ENDOSULFAN I	9.9 u	
60-57-1	DIELDRIN	20 u	
72-55-9	4,4'-DDE	17 J	**
72-20-8	ENDRIN	20 u	
33213-65-9	ENDOSULFAN II	20 u	
72-54-8	4,4'-DDD	20 u	
7421-93-4	ENDRIN ALDEHYDE	20 u	
1031-07-8	ENDOSULFAN SULFATE	20 u	
50-29-3	4,4'-DDT	20 u	
72-43-5	METHOXYCHLOR	99 u	
53494-70-5	ENDRIN KETONE	20 u	
57-74-9	CHLORDANE	99 u	
8001-35-2	TOXAPHENE	200 u	
12674-11-2	AROCLOR-1016	99 u	
11104-28-2	AROCLOR-1221	99 u	
11141-16-5	AROCLOR-1232	99 u	
53469-21-9	AROCLOR-1242	99 u	
12672-29-6	AROCLOR-1248	99 u	
11097-69-1	AROCLOR-1254	200 u	
11096-82-5	AROCLOR-1260	200 u	

Volume of water extracted (ml): N.A.
Weight of sample extracted (g): 30.0
Volume of total extract (ml): 10.00
Volume of extract injected (ul): 1.00

Form I 7/85 REV.

** CONFIRMED BY GC DUAL COLUMN CONFIRMATION

87FH12560

Sample Number:
EN496

ORGANICS ANALYSIS DATA SHEET
(Page 1)

Laboratory Name: S-CUBED
Lab Sample ID No: 22YV1091(VOA)
Sample Matrix: SOIL
Data Release Authorized By: _____

Case No: 7632
QC Report No: N.R
Contract No: 68-01-7261
Date Sample Received: 07-17-87

VOLATILE COMPOUNDS

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 07-22-87
Date Analyzed: 07-22-87
Conc/Dil Factor: 1.01 pH: 7.1
Percent Moisture (Not Decanted): 12.5

CAS Number		ug/l or ug/kg (Circle One)	CAS Number		ug/l or ug/kg (Circle One)
74-87-3	CHLOROMETHANE	11 U	78-87-5	1,2-DICHLOROPROPANE	6 U
74-83-9	BROMOMETHANE	11 U	10061-02-6	TRANS-1,3-DICHLOROPROPENE	6 U
75-01-4	VINYL CHLORIDE	11 U	79-01-6	TRICHLOROETHENE	6 U
75-00-3	CHLOROETHANE	11 U	124-48-1	DIBROMOCHLOROMETHANE	6 U
75-09-2	METHYLENE CHLORIDE	6 U	79-00-5	1,1,2-TRICHLOROETHANE	6 U
67-64-1	ACETONE	11 U	71-43-2	BENZENE	6 U
75-15-0	CARBON DISULFIDE	6 U	10061-01-5	CIS-1,3-DICHLOROPROPENE	6 U
75-35-4	1,1-DICHLOROETHENE	6 U	110-75-8	2-CHLOROETHYLVINYLETHER	11 U
75-34-3	1,1-DICHLOROETHANE	6 U	75-25-2	BROMOFORM	6 U
156-60-5	TRANS-1,2-DICHLOROETHENE	6 U	591-78-6	2-HEXANONE	11 U
67-66-3	CHLOROFORM	6 U	108-10-1	4-METHYL-2-PENTANONE	11 U
107-06-2	1,2-DICHLOROETHANE	6 U	127-18-4	TETRACHLOROETHENE	6 U
78-93-3	2-BUTANONE	11 U	79-34-5	1,1,2,2-TETRACHLOROETHANE	6 U
71-55-6	1,1,1-TRICHLOROETHANE	6 U	108-88-3	TOLUENE	6 U
56-23-5	CARBON TETRACHLORIDE	6 U	108-90-7	CHLOROBENZENE	6 U
108-05-4	VINYL ACETATE	11 U	100-41-4	ETHYLBENZENE	6 U
75-27-4	BROMODICHLOROMETHANE	6 U	100-42-5	STYRENE	6 U
				TOTAL XYLENES	6 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifier are used. Additional flags or footnotes explaning 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 (eg.10U) based on necessary concentration/dilution action.(this is not necessarily the instrument detection limit.)The footnotes 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 (eg 10J) .If limit of detection is 10 ug/L and a concentration of 3ug/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 > or = 10 ng/ul in the final extract should be confirmed by GC/MS.

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

S Matrix spiked compound.

87F1H12SC0

Sample Number
EN 496

Lab Name : S - CUBED
Case No : 7632

ORGANICS ANALYSIS DATA SHEET
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted: 7-20-87
Date Analyzed: 8/06/87 0:00
Conc/Dil Factor: 1.50
Percent Moisture (Decanted) N.A.

GPC Cleanup ✓ Yes __ No
Separatory Funnel Extraction __ Yes
Continuous Liquid-Liquid Extraction __ Yes

C.A.S. Number		ug/L or ug/Kg (Circle One)	
108-95-2	Phenol	570.	U
111-44-4	bis(-2-Chloroethyl)Ether	570.	U
95-57-8	2-Chlorophenol	570.	U
541-73-1	1,3-Dichlorobenzene	570.	U
106-46-7	1,4-Dichlorobenzene	570.	U
100-51-6	Benzyl Alcohol	570.	U
95-50-1	1,2-Dichlorobenzene	570.	U
95-48-7	2-Methylphenol	570.	U
39638-32-9	bis(2-chloroisopropyl)Ether	570.	U
106-44-5	4-Methylphenol	570.	U
621-64-7	N-Nitroso-Di-n-propylamine	570.	U
67-72-1	Hexachloroethane	570.	U
98-95-3	Nitrobenzene	570.	U
78-59-1	Isophorone	570.	U
88-75-5	2-Nitrophenol	570.	U
105-67-9	2,4-Dimethylphenol	570.	U
65-85-0	Benzoic Acid	2900.	U
111-91-1	bis(-2-Chloroethoxy)Methane	570.	U
120-83-2	2,4-Dichlorophenol	570.	U
120-82-1	1,2,4-Trichlorobenzene	570.	U
91-20-3	Naphthalene	47.	J
106-47-8	4-Chloroaniline	570.	U
87-68-3	Hexachlorobutadiene	570.	U
59-50-7	4-Chloro-3-methylphenol	570.	U
91-57-6	2-Methylnaphthalene	22.	J
77-47-4	Hexachlorocyclopentadiene	570.	U
88-06-2	2,4,6-Trichlorophenol	570.	U
95-95-4	2,4,5-Trichlorophenol	2900.	U
91-58-7	2-Chloronaphthalene	570.	U
88-74-4	2-Nitroaniline	2900.	U
131-11-3	Dimethyl Phthalate	570.	U
208-96-8	Acenaphthylene	570.	U
99-09-2	3-Nitroaniline	2900.	U

C.A.S. Number		ug/L or ug/Kg (Circle One)		
83-32-9	Acenaphthene	280.	J	
51-28-5	2,4-Dinitrophenol	2900.	U	
100-02-7	4-Nitrophenol	2900.	U	
132-64-9	Dibenzofuran	110.	J	
121-14-2	2,4-Dinitrotoluene	570.	U	
606-20-2	2,6-Dinitrotoluene	570.	U	
84-66-2	Diethylphthalate	570.	U	
7005-72-3	4-Chlorophenyl-phenylether	570.	U	
86-73-7	Fluorene	230.	J	
100-01-6	4-Nitroaniline	570.	U	
534-52-1	4,6-Dinitro-2-methylphenol	2900.	U	
86-30-6	N-Nitrosodiphenylamine (1)	570.	U	
101-55-3	4-Bromophenyl-phenylether	570.	U	
118-74-1	Hexachlorobenzene	570.	U	
87-86-5	Pentachlorophenol	2900.	U	
85-01-8	Phenanthrene	1900.		
120-12-7	Anthracene	520.	J	
84-74-2	Di-n-Butylphthalate	120.	J	B
206-44-0	Fluoranthene	3500.		
129-00-0	Pyrene	2500.		
85-68-7	Butylbenzylphthalate	570.	U	
91-94-1	3,3'-Dichlorobenzidine	1100.	U	
56-55-3	Benzo(a)Anthracene	1600.		
117-81-7	bis(2-Ethylhexyl)Phthalate	170.	J	B
218-01-9	Chrysene	1700.		
117-84-0	Di-n-Octyl Phthalate	570.	U	
205-99-2	Benzo(b)Fluoranthene	2100.		
207-08-9	Benzo(k)Fluoranthene	1200.		
50-32-8	Benzo(a)Pyrene	1500.		
193-39-5	Indeno(1,2,3-cd)Pyrene	1200.		
53-70-3	Dibenzo(a,h)Anthracene	500.	J	
191-24-2	Benzo(g,h,i)Perylene	1100.		

(1)-Cannot be separated from diphenylamine

87FH12560

Laboratory Name: S-Cubed
Case No.: 7632

Sample Number
EN 496

ORGANICS ANALYSIS DATA
(Page 3)

Pesticide/PCBs

Concentration: LOW
Date Extracted/Prepared: 7-23-87
Date Analyzed: 7-29-87
Conc/Dil Factor: 1.00

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	9.1 u
319-85-7	BETA-BHC	9.1 u
319-86-8	DELTA-BHC	9.1 u
58-89-9	GAMMA-BHC (LINDANE)	9.1 u
76-44-8	HEPTACHLOR	9.1 u
309-00-2	ALDRIN	9.1 u
1024-57-3	HEPTACHLOR EPOXIDE	9.1 u
959-98-8	ENDOSULFAN I	9.1 u
60-57-1	DIELDRIN	18 u
72-55-9	4,4'-DDE	18 u
72-20-8	ENDRIN	18 u
33213-65-9	ENDOSULFAN II	18 u
72-54-8	4,4'-DDD	18 u
7421-93-4	ENDRIN ALDEHYDE	18 u
1031-07-8	ENDOSULFAN SULFATE	18 u
50-29-3	4,4'-DDT	18 u
72-43-5	METHOXYCHLOR	91 u
53494-70-5	ENDRIN KETONE	18 u
57-74-9	CHLORDANE	91 u
8001-35-2	TOXAPHENE	180 u
12674-11-2	AROCLOR-1016	91 u
11104-28-2	AROCLOR-1221	91 u
11141-16-5	AROCLOR-1232	91 u
53469-21-9	AROCLOR-1242	91 u
12672-29-6	AROCLOR-1248	91 u
11097-69-1	AROCLOR-1254	180 u
11096-82-5	AROCLOR-1260	180 u

Volume of water extracted (ml): N.A.
Weight of sample extracted (g): 30.0
Volume of total extract (ml): 10.00
Volume of extract injected (ul): 1.00

++ CONFIRMED BY GC DUAL COLUMN CONFIRMATION

87FH12561

Sample Number:
EN497

ORGANICS ANALYSIS DATA SHEET
(Page 1)

Laboratory Name: S-CUBED
Lab Sample ID No: 22YV1101 (VOA)
Sample Matrix: SOIL
Data Release Authorized By: ___

Case No: 7632
QC Report No: N.R
Contract No: 68-01-7261
Date Sample Received: 07-17-87

VOLATILE COMPOUNDS

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 07-22-87
Date Analyzed: 07-22-87
Conc/Dil Factor: 1.01 pH: 6.9
Percent Moisture (Not Decanted): 22.2

CAS Number		ug/l or ug/kg (Circle One)	CAS Number		ug/l or ug/kg (Circle One)
74-87-3	CHLOROMETHANE	13 U	78-87-5	1,2-DICHLOROPROPANE	6 U
74-83-9	BROMOMETHANE	13 U	10061-02-6	TRANS-1,3-DICHLOROPROPENE	6 U
75-01-4	VINYL CHLORIDE	13 U	79-01-6	TRICHLOROETHENE	6 U
75-00-3	CHLOROETHANE	13 U	124-48-1	DIBROMOCHLOROMETHANE	6 U
75-09-2	METHYLENE CHLORIDE	6 U	79-00-5	1,1,2-TRICHLOROETHANE	6 U
67-64-1	ACETONE	13 U	71-43-2	BENZENE	6 U
75-15-0	CARBON DISULFIDE	6 U	10061-01-5	CIS-1,3-DICHLOROPROPENE	6 U
75-35-4	1,1-DICHLOROETHENE	6 U	110-75-8	2-CHLOROETHYLVINYLETHER	13 U
75-34-3	1,1-DICHLOROETHANE	6 U	75-25-2	BROMOFORM	6 U
156-60-5	TRANS-1,2-DICHLOROETHENE	6 U	591-78-6	2-HEXANONE	13 U
67-66-3	CHLOROFORM	6 U	108-10-1	4-METHYL-2-PENTANONE	13 U
107-06-2	1,2-DICHLOROETHANE	6 U	127-18-4	TETRACHLOROETHENE	6 U
78-93-3	2-BUTANONE	13 U	79-34-5	1,1,2,2-TETRACHLOROETHANE	6 U
71-55-6	1,1,1-TRICHLOROETHANE	6 U	108-88-3	TOLUENE	6 U
56-23-5	CARBON TETRACHLORIDE	6 U	108-90-7	CHLOROBENZENE	6 U
108-05-4	VINYL ACETATE	13 U	100-41-4	ETHYLBENZENE	6u ~~2J~~ JW
75-27-4	BROMODICHLOROMETHANE	6 U	100-42-5	STYRENE	6 U
				TOTAL XYLENES	6 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifier are used. Additional flags or footnotes explaning 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 (eg.10U) based on necessary concentration/dilution action.(this is not necessarily the instrument detection limit.)The footnotes 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 (eg 10J) .If limit of detection is 10 ug/L and a concentration of 3ug/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 > or = 10 ng/ul in the final extract should be confirmed by GC/MS.

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

S Matrix spiked compound.

87FH12561

Lab Name : S - CUBED
Case No : 7632

Sample Number
EN 497

ORGANICS ANALYSIS DATA SHEET
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted: 7-20-87
Date Analyzed: 8/05/87 22:59
Conc/Dil Factor: 1.50
Percent Moisture (Decanted) N.A.

GPC Cleanup ✓ Yes __ No
Separatory Funnel Extraction __ Yes
Continuous Liquid-Liquid Extraction __ Yes

C.A.S. Number		ug/L or ug/Kg (Circle One)	
108-95-2	Phenol	640.	U
111-44-4	bis(-2-Chloroethyl)Ether	640.	U
95-57-8	2-Chlorophenol	640.	U
541-73-1	1,3-Dichlorobenzene	640.	U
106-46-7	1,4-Dichlorobenzene	640.	U
100-51-6	Benzyl Alcohol	640.	U
95-50-1	1,2-Dichlorobenzene	640.	U
95-48-7	2-Methylphenol	640.	U
39638-32-9	bis(2-chloroisopropyl)Ether	640.	U
106-44-5	4-Methylphenol	640.	U
621-64-7	N-Nitroso-Di-n-propylamine	640.	U
67-72-1	Hexachloroethane	640.	U
98-95-3	Nitrobenzene	640.	U
78-59-1	Isophorone	640u ~~100.~~	~~J~~ pu
88-75-5	2-Nitrophenol	640.	U
105-67-9	2,4-Dimethylphenol	640.	U
65-85-0	Benzoic Acid	3200.	U
111-91-1	bis(-2-Chloroethoxy)Methane	640.	U
120-83-2	2,4-Dichlorophenol	640.	U
120-82-1	1,2,4-Trichlorobenzene	640.	U
91-20-3	Naphthalene	140.	J
106-47-8	4-Chloroaniline	640.	U
87-68-3	Hexachlorobutadiene	640.	U
59-50-7	4-Chloro-3-methylphenol	640.	U
91-57-6	2-Methylnaphthalene	41.	J
77-47-4	Hexachlorocyclopentadiene	640.	U
88-06-2	2,4,6-Trichlorophenol	640.	U
95-95-4	2,4,5-Trichlorophenol	3200.	U
91-58-7	2-Chloronaphthalene	640.	U
88-74-4	2-Nitroaniline	3200.	U
131-11-3	Dimethyl Phthalate	640.	U
208-96-8	Acenaphthylene	33.	J
99-09-2	3-Nitroaniline	3200.	U

C.A.S. Number		ug/L or ug/Kg (Circle One)	
83-32-9	Acenaphthene	180.	J
51-28-5	2,4-Dinitrophenol	3200.	U
100-02-7	4-Nitrophenol	3200.	U
132-64-9	Dibenzofuran	99.	J
121-14-2	2,4-Dinitrotoluene	640.	U
606-20-2	2,6-Dinitrotoluene	640.	U
84-66-2	Diethylphthalate	640.	U
7005-72-3	4-Chlorophenyl-phenylether	640.	U
86-73-7	Fluorene	140.	J
100-01-6	4-Nitroaniline	640.	U
534-52-1	4,6-Dinitro-2-methylphenol	3200.	U
86-30-6	N-Nitrosodiphenylamine (1)	640.	U
101-55-3	4-Bromophenyl-phenylether	640.	U
118-74-1	Hexachlorobenzene	640.	U
87-86-5	Pentachlorophenol	3200.	U
85-01-8	Phenanthrene	1300.	
120-12-7	Anthracene	320.	J
84-74-2	Di-n-Butylphthalate	160.	J B
206-44-0	Fluoranthene	2500.	
129-00-0	Pyrene	1900.	
85-68-7	Butylbenzylphthalate	59.	J
91-94-1	3,3'-Dichlorobenzidine	1300.	U
56-55-3	Benzo(a)Anthracene	1300.	
117-81-7	bis(2-Ethylhexyl)Phthalate	990.	B
218-01-9	Chrysene	1400.	
117-84-0	Di-n-Octyl Phthalate	pu ~~4. J~~ 640u	
205-99-2	Benzo(b)Fluoranthene	2000.	
207-08-9	Benzo(k)Fluoranthene	1200.	
50-32-8	Benzo(a)Pyrene	1500.	
193-39-5	Indeno(1,2,3-cd)Pyrene	1200.	
53-70-3	Dibenzo(a,h)Anthracene	400.	J
191-24-2	Benzo(g,h,i)Perylene	1100.	

(1)-Cannot be separated from diphenylamine

87FH12561

Laboratory Name: S-Cubed
Case No.: 7a32

Sample Number
EN 497

ORGANICS ANALYSIS DATA
(Page 3)

Pesticide/PCBs

Concentration: LOW
Date Extracted/Prepared: 7-23-87
Date Analyzed: 7-29-87
Conc/Dil Factor: 1.00

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	10 u	
319-85-7	BETA-BHC	10 u	
319-86-8	DELTA-BHC	10 u	
58-89-9	GAMMA-BHC (LINDANE)	10 u	
76-44-8	HEPTACHLOR	10 u	
309-00-2	ALDRIN	10 u	
1024-57-3	HEPTACHLOR EPOXIDE	10 u	
959-98-8	ENDOSULFAN I	10 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	350	**
7421-93-4	ENDRIN ALDEHYDE	21 u	
1031-07-8	ENDOSULFAN SULFATE	21 u	
50-29-3	4,4'-DDT	21 u	
72-43-5	METHOXYCHLOR	100 u	
53494-70-5	ENDRIN KETONE	21 u	
57-74-9	CHLORDANE	100 u	
8001-35-2	TOXAPHENE	210 u	
12674-11-2	AROCLOR-1016	100 u	
11104-28-2	AROCLOR-1221	100 u	
11141-16-5	AROCLOR-1232	100 u	
53469-21-9	AROCLOR-1242	100 u	
12672-29-6	AROCLOR-1248	100 u	
11097-69-1	AROCLOR-1254	210 u	
11096-82-5	AROCLOR-1260	210 u	

Volume of water extracted (ml): N.A.
Weight of sample extracted (g): 30.0
Volume of total extract (ml): 10.00
Volume of extract injected (ul): 1.00

Form I 7/85 REV.

** CONFIRMED BY GC DUAL COLUMN CONFIRMATION

87FH12562

Sample Number:
EN498

ORGANICS ANALYSIS DATA SHEET
(Page 1)

Laboratory Name: S-CUBED
Lab Sample ID No: 22YV1111 (VOA)
Sample Matrix: SOIL
Data Release Authorized By: _____

Case No: 7632
QC Report No: N.R
Contract No: 68-01-7261
Date Sample Received: 07-17-87

VOLATILE COMPOUNDS

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 07-22-87
Date Analyzed: 07-22-87
Conc/Dil Factor: 1.01 pH: 7.2
Percent Moisture (Not Decanted): 34.5

CAS Number		ug/l or ug/kg (Circle One)	CAS Number		ug/l or ug/kg (Circle One)
74-87-3	CHLOROMETHANE	15 U	78-87-5	1,2-DICHLOROPROPANE	8 U
74-83-9	BROMOMETHANE	15 U	10061-02-6	TRANS-1,3-DICHLOROPROPENE	8 U
75-01-4	VINYL CHLORIDE	15 U	79-01-6	TRICHLOROETHENE	8 U
75-00-3	CHLOROETHANE	15 U	124-48-1	DIBROMOCHLOROMETHANE	8 U
75-09-2	METHYLENE CHLORIDE	8 ~~U~~ J	79-00-5	1,1,2-TRICHLOROETHANE	8 U
67-64-1	ACETONE	15 U	71-43-2	BENZENE	8 U
75-15-0	CARBON DISULFIDE	8 U	10061-01-5	CIS-1,3-DICHLOROPROPENE	8 U
75-35-4	1,1-DICHLOROETHENE	8 U	110-75-8	2-CHLOROETHYLVINYLETHER	15 U
75-34-3	1,1-DICHLOROETHANE	8 U	75-25-2	BROMOFORM	8 U
156-60-5	TRANS-1,2-DICHLOROETHENE	8 U	591-78-6	2-HEXANONE	15 U
67-66-3	CHLOROFORM	8 U	108-10-1	4-METHYL-2-PENTANONE	15 U
107-06-2	1,2-DICHLOROETHANE	8 U	127-18-4	TETRACHLOROETHENE	8 U
78-93-3	2-BUTANONE	15 U	79-34-5	1,1,2,2-TETRACHLOROETHANE	8 U
71-55-6	1,1,1-TRICHLOROETHANE	8 U	108-88-3	TOLUENE	8 U
56-23-5	CARBON TETRACHLORIDE	8 U	108-90-7	CHLOROBENZENE	8 U
108-05-4	VINYL ACETATE	15 U	100-41-4	ETHYLBENZENE	8 U
75-27-4	BROMODICHLOROMETHANE	8 U	100-42-5	STYRENE	8 U
				TOTAL XYLENES	8 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifier are used. Additional flags or footnotes explaning 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 (eg.10U) based on necessary concentration/dilution action.(this is not necessarily the instrument detection limit.)The footnotes 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 (eg 10J) .If limit of detection is 10 ug/L and a concentration of 3ug/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 > or = 10 ng/ul in the final extract should be confirmed by GC/MS.

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

S Matrix spiked compound.

87FH12562

Lab Name : S - CUBED
Case No : 7632

Sample Number
EN 498

ORGANICS ANALYSIS DATA SHEET
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted: 7-20-87
Date Analyzed: 8/12/87 16:50
Conc/Dil Factor: 1.58
Percent Moisture (Decanted) N.A.

GPC Cleanup ✓ Yes __ No
Separatory Funnel Extraction __ Yes
Continuous Liquid-Liquid Extraction __ Yes

C.A.S. Number		ug/L or (ug/Kg) (Circle One)			C.A.S. Number		ug/L or (ug/Kg) (Circle One)		
108-95-2	Phenol	770.	U		83-32-9	Acenaphthene	770.	U	
111-44-4	bis(-2-Chloroethyl)Ether	770.	U		51-28-5	2,4-Dinitrophenol	3800.	U	
95-57-8	2-Chlorophenol	770.	U		100-02-7	4-Nitrophenol	3800.	U	
541-73-1	1,3-Dichlorobenzene	770.	U		132-64-9	Dibenzofuran	770.	U	
106-46-7	1,4-Dichlorobenzene	770.	U		121-14-2	2,4-Dinitrotoluene	770.	U	
100-51-6	Benzyl Alcohol	770.	U		606-20-2	2,6-Dinitrotoluene	770.	U	
95-50-1	1,2-Dichlorobenzene	770.	U		84-66-2	Diethylphthalate	770.	U	
95-48-7	2-Methylphenol	770.	U		7005-72-3	4-Chlorophenyl-phenylether	770.	U	
39638-32-9	bis(2-chloroisopropyl)Ether	770.	U		86-73-7	Fluorene	15.	J	
106-44-5	4-Methylphenol	770.	U		100-01-6	4-Nitroaniline	770.	U	
621-64-7	N-Nitroso-Di-n-propylamine	770.	U		534-52-1	4,6-Dinitro-2-methylphenol	3800.	U	
67-72-1	Hexachloroethane	770.	U		86-30-6	N-Nitrosodiphenylamine (1)	770.	U	
98-95-3	Nitrobenzene	770.	U		101-55-3	4-Bromophenyl-phenylether	770.	U	
78-59-1	Isophorone	770.	U		118-74-1	Hexachlorobenzene	770.	U	
88-75-5	2-Nitrophenol	770.	U		87-86-5	Pentachlorophenol	3800.	U	
105-67-9	2,4-Dimethylphenol	770.	U		85-01-8	Phenanthrene	160.	J	
65-85-0	Benzoic Acid	3800.	U		120-12-7	Anthracene	27.	J	
111-91-1	bis(-2-Chloroethoxy)Methane	770.	U		84-74-2	Di-n-Butylphthalate	45.	J	B
120-83-2	2,4-Dichlorophenol	770.	U		206-44-0	Fluoranthene	380.	J	
120-82-1	1,2,4-Trichlorobenzene	770.	U		129-00-0	Pyrene	280.	J	
91-20-3	Naphthalene	770.	U		85-68-7	Butylbenzylphthalate	360.	J	
106-47-8	4-Chloroaniline	770.	U		91-94-1	3,3'-Dichlorobenzidine	1500.	U	
87-68-3	Hexachlorobutadiene	770.	U		56-55-3	Benzo(a)Anthracene	140.	J	
59-50-7	4-Chloro-3-methylphenol	770.	U		117-81-7	bis(2-Ethylhexyl)Phthalate	400.	J	B
91-57-6	2-Methylnaphthalene	770.	U		218-01-9	Chrysene	220.	J	
77-47-4	Hexachlorocyclopentadiene	770.	U		117-84-0	Di-n-Octyl Phthalate	20.	J	
88-06-2	2,4,6-Trichlorophenol	770.	U		205-99-2	Benzo(b)Fluoranthene	320.	J	
95-95-4	2,4,5-Trichlorophenol	3800.	U		207-08-9	Benzo(k)Fluoranthene	210.	J	
91-58-7	2-Chloronaphthalene	770.	U		50-32-8	Benzo(a)Pyrene	170.	J	
88-74-4	2-Nitroaniline	3800.	U		193-39-5	Indeno(1,2,3-cd)Pyrene	770.	U	
131-11-3	Dimethyl Phthalate	770.	U		53-70-3	Dibenzo(a,h)Anthracene	52.	J	
208-96-8	Acenaphthylene	770.	U		191-24-2	Benzo(g,h,i)Perylene	250.	J	
99-09-2	3-Nitroaniline	3800.	U						

(1)-Cannot be separated from diphenylamine

Lab Name : S - CUBED
Case No : 7632

Sample Number
EN 498 RE

ORGANICS ANALYSIS DATA SHEET
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted: 8-13-87
Date Analyzed: 8/19/87 17:30
Conc/Dil Factor: 1.50
Percent Moisture (Decanted) N.A.

GPC Cleanup ✓ Yes __ No
Separatory Funnel Extraction __ Yes
Continuous Liquid-Liquid Extraction __ Yes

C.A.S. Number		ug/L or ug/Kg (Circle One)	
108-95-2	Phenol	770.	U
111-44-4	bis(-2-Chloroethyl)Ether	770.	U
95-57-8	2-Chlorophenol	770.	U
541-73-1	1,3-Dichlorobenzene	770.	U
106-46-7	1,4-Dichlorobenzene	770.	U
100-51-6	Benzyl Alcohol	770.	U
95-50-1	1,2-Dichlorobenzene	770.	U
95-48-7	2-Methylphenol	770.	U
39638-32-9	bis(2-chloroisopropyl)Ether	770.	U
106-44-5	4-Methylphenol	770.	U
621-64-7	N-Nitroso-Di-n-propylamine	770.	U
67-72-1	Hexachloroethane	770.	U
98-95-3	Nitrobenzene	770.	U
78-59-1	Isophorone	770.	U
88-75-5	2-Nitrophenol	770.	U
105-67-9	2,4-Dimethylphenol	770.	U
65-85-0	Benzoic Acid	3800.	U
111-91-1	bis(-2-Chloroethoxy)Methane	770.	U
120-83-2	2,4-Dichlorophenol	770.	U
120-82-1	1,2,4-Trichlorobenzene	770.	U
91-20-3	Naphthalene	770.	U
106-47-8	4-Chloroaniline	770.	U
87-68-3	Hexachlorobutadiene	770.	U
59-50-7	4-Chloro-3-methylphenol	770.	U
91-57-6	2-Methylnaphthalene	770.	U
77-47-4	Hexachlorocyclopentadiene	770.	U
88-06-2	2,4,6-Trichlorophenol	770.	U
95-95-4	2,4,5-Trichlorophenol	3800.	U
91-58-7	2-Chloronaphthalene	770.	U
88-74-4	2-Nitroaniline	3800.	U
131-11-3	Dimethyl Phthalate	770.	U
208-96-8	Acenaphthylene	770.	U
99-09-2	3-Nitroaniline	3800.	U

C.A.S. Number		ug/L or ug/Kg (Circle One)	
83-32-9	Acenaphthene	~~11. J~~ 6 J xw	
51-28-5	2,4-Dinitrophenol	3800.	U
100-02-7	4-Nitrophenol	3800.	U
132-64-9	Dibenzofuran	~~8. J~~ 4 J xw	
121-14-2	2,4-Dinitrotoluene	770.	U
606-20-2	2,6-Dinitrotoluene	770.	U
84-66-2	Diethylphthalate	770.	U
7005-72-3	4-Chlorophenyl-phenylether	770.	U
86-73-7	Fluorene	~~11. J~~ 6 J xw	
100-01-6	4-Nitroaniline	770.	U
534-52-1	4,6-Dinitro-2-methylphenol	3800.	U
86-30-6	N-Nitrosodiphenylamine (1)	~~11. J~~ 6 J xw	
101-55-3	4-Bromophenyl-phenylether	770.	U
118-74-1	Hexachlorobenzene	770.	U
87-86-5	Pentachlorophenol	3800.	U
85-01-8	Phenanthrene	~~99. J~~ ~~33~~ 50 J xw	
120-12-7	Anthracene	~~21. J~~ 11 J xw	
84-74-2	Di-n-Butylphthalate	~~57.29~~ J B	
206-44-0	Fluoranthene	~~240. J~~ 120 J xw	
129-00-0	Pyrene	~~180. J~~ ~~110~~ ~~90~~ J xw 90 J	
85-68-7	Butylbenzylphthalate	~~45. J~~ 23 J xw	
91-94-1	3,3'-Dichlorobenzidine	1500.	U
56-55-3	Benzo(a)Anthracene	~~95. J~~ 48 J xw	
117-81-7	bis(2-Ethylhexyl)Phthalate	~~250. J~~ 125 J xw	
218-01-9	Chrysene	~~130. J~~ 115 J xw	
117-84-0	~~Di-n-Octyl Phthalate~~	~~7. J~~ ~~4 J xw~~ 770 U	
205-99-2	Benzo(b)Fluoranthene	~~160. J~~ 80 J xw	
207-08-9	Benzo(k)Fluoranthene	~~120. J~~ 60 J xw	
50-32-8	Benzo(a)Pyrene	~~140. J~~ 70 J xw	
193-39-5	Indeno(1,2,3-cd)Pyrene	770.	U
53-70-3	Dibenzo(a,h)Anthracene	~~35. J~~ 18 J xw	
191-24-2	Benzo(g,h,i)Perylene	~~160. J~~ 80 J xw	

(1)-Cannot be separated from diphenylamine

87FH12562

Laboratory Name: S-Cubed
Case No.: 7632

Sample Number
EN 498

ORGANICS ANALYSIS DATA
(Page 3)

Pesticide/PCBs

Concentration: LOW
Date Extracted/Prepared: 7-23-87
Date Analyzed: 7-29-87
Conc/Dil Factor: 1.00

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	12 u
319-65-7	BETA-BHC	12 u
319-86-8	DELTA-BHC	12 u
58-89-9	GAMMA-BHC (LINDANE)	12 u
76-44-8	HEPTACHLOR	12 u
309-00-2	ALDRIN	12 u
1024-57-3	HEPTACHLOR EPOXIDE	12 u
959-98-8	ENDOSULFAN I	12 u
60-57-1	DIELDRIN	24 u
72-55-9	4,4'-DDE	24 u
72-20-8	ENDRIN	24 u
33213-65-9	ENDOSULFAN II	24 u
72-54-8	4,4'-DDD	24 u
7421-93-4	ENDRIN ALDEHYDE	24 u
1031-07-8	ENDOSULFAN SULFATE	24 u
50-29-3	4,4'-DDT	24 u
72-43-5	METHOXYCHLOR	120 u
53494-70-5	ENDRIN KETONE	24 u
57-74-9	CHLORDANE	120 u
8001-35-2	TOXAPHENE	240 u
12674-11-2	AROCLOR-1016	120 u
11104-28-2	AROCLOR-1221	120 u
11141-16-5	AROCLOR-1232	120 u
53469-21-9	AROCLOR-1242	120 u
12672-29-6	AROCLOR-1248	120 u
11097-69-1	AROCLOR-1254	240 u
11096-82-5	AROCLOR-1260	240 u

Volume of water extracted (ml): N.A.
Weight of sample extracted (g): 30.0
Volume of total extract (ml): 10.00
Volume of extract injected (ul): 1.00

Form I 7/85 REV.

** CONFIRMED BY GC DUAL COLUMN CONFIRMATION

87FH12563

Sample Number: EN499

ORGANICS ANALYSIS DATA SHEET
(Page 1)

Laboratory Name: S-CUBED
Lab Sample ID No: 23YV1031 (VOA)
Sample Matrix: SOIL
Data Release Authorized By: _____

Case No: 7632
QC Report No: N.R
Contract No: 68-01-7261
Date Sample Received: 07-17-87

VOLATILE COMPOUNDS

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 07-23-87
Date Analyzed: 07-23-87
Conc/Dil Factor: 1.01 pH: 4.9
Percent Moisture (Not Decanted): 18.6

CAS Number		ug/l or ug/kg (Circle One)	CAS Number		ug/l or ug/kg (Circle One)
74-87-3	CHLOROMETHANE	12 U	78-87-5	1,2-DICHLOROPROPANE	6 U
74-83-9	BROMOMETHANE	12 U	10061-02-6	TRANS-1,3-DICHLOROPROPENE	6 U
75-01-4	VINYL CHLORIDE	12 U	79-01-6	TRICHLOROETHENE	6 U
75-00-3	CHLOROETHANE	12 U	124-48-1	DIBROMOCHLOROMETHANE	6 U
75-09-2	METHYLENE CHLORIDE	6u ~~3 J B~~	79-00-5	1,1,2-TRICHLOROETHANE	6 U
67-64-1	ACETONE	12 U	71-43-2	BENZENE	6 U
75-15-0	CARBON DISULFIDE	6 U	10061-01-5	CIS-1,3-DICHLOROPROPENE	6 U
75-35-4	1,1-DICHLOROETHENE	6 U	110-75-8	2-CHLOROETHYLVINYLETHER	12 U
75-34-3	1,1-DICHLOROETHANE	6 U	75-25-2	BROMOFORM	6 U
156-60-5	TRANS-1,2-DICHLOROETHENE	6 U	591-78-6	2-HEXANONE	12 U
67-66-3	CHLOROFORM	6 U	108-10-1	4-METHYL-2-PENTANONE	12 U
107-06-2	1,2-DICHLOROETHANE	6 U	127-18-4	TETRACHLOROETHENE	6 U
78-93-3	2-BUTANONE	12 U	79-34-5	1,1,2,2-TETRACHLOROETHANE	6 U
71-55-6	1,1,1-TRICHLOROETHANE	6 U	108-88-3	TOLUENE	6 U
56-23-5	CARBON TETRACHLORIDE	6 U	108-90-7	CHLOROBENZENE	6 U
108-05-4	VINYL ACETATE	12 U	100-41-4	ETHYLBENZENE	6 U
75-27-4	BROMODICHLOROMETHANE	6 U	100-42-5	STYRENE	6 U
				TOTAL XYLENES	6 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifier are used. Additional flags or footnotes explaning 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 (eg.10U) *based on necessary concentration/dilution action.*(this is not necessarily the instrument detection limit.)The footnotes 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 (eg 10J) .If limit of detection is 10 ug/L and a concentration of 3ug/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 > or = 10 ng/ul in the final extract should be confirmed by GC/MS.

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

S Matrix spiked compound.

87FH12563

Lab Name : S - CUBED
Case No : 7632

Sample Number
EN 499

ORGANICS ANALYSIS DATA SHEET
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted: 7-20-87
Date Analyzed: 8/05/87 20:56
Conc/Dil Factor: 1.50
Percent Moisture (Decanted) N.A.

GPC Cleanup ✓ Yes __ No
Separatory Funnel Extraction __ Yes
Continuous Liquid-Liquid Extraction __ Yes

C.A.S. Number		ug/L or ug/Kg (Circle One)	
108-95-2	Phenol	620.	U
111-44-4	bis(-2-Chloroethyl)Ether	620.	U
95-57-8	2-Chlorophenol	620.	U
541-73-1	1,3-Dichlorobenzene	620.	U
106-46-7	1,4-Dichlorobenzene	620.	U
100-51-6	Benzyl Alcohol	620.	U
95-50-1	1,2-Dichlorobenzene	620.	U
95-48-7	2-Methylphenol	620.	U
39638-32-9	bis(2-chloroisopropyl)Ether	620.	U
106-44-5	4-Methylphenol	620.	U
621-64-7	N-Nitroso-Di-n-propylamine	620.	U
67-72-1	Hexachloroethane	620.	U
98-95-3	Nitrobenzene	620.	U
78-59-1	Isophorone	620.	U
88-75-5	2-Nitrophenol	620.	U
105-67-9	2,4-Dimethylphenol	620.	U
65-85-0	Benzoic Acid	3100.	U
111-91-1	bis(-2-Chloroethoxy)Methane	620.	U
120-83-2	2,4-Dichlorophenol	620.	U
120-82-1	1,2,4-Trichlorobenzene	620.	U
91-20-3	Naphthalene	620.	U
106-47-8	4-Chloroaniline	620.	U
87-68-3	Hexachlorobutadiene	620.	U
59-50-7	4-Chloro-3-methylphenol	620.	U
91-57-6	2-Methylnaphthalene	620.	U
77-47-4	Hexachlorocyclopentadiene	620.	U
88-06-2	2,4,6-Trichlorophenol	620.	U
95-95-4	2,4,5-Trichlorophenol	3100.	U
91-58-7	2-Chloronaphthalene	620.	U
88-74-4	2-Nitroaniline	3100.	U
131-11-3	Dimethyl Phthalate	620.	U
208-96-8	Acenaphthylene	620.	U
99-09-2	3-Nitroaniline	3100.	U

C.A.S. Number		ug/L or ug/Kg (Circle One)	
83-32-9	Acenaphthene	86.	J
51-28-5	2,4-Dinitrophenol	3100.	U
100-02-7	4-Nitrophenol	3100.	U
132-64-9	Dibenzofuran	37.	J
121-14-2	2,4-Dinitrotoluene	620.	U
606-20-2	2,6-Dinitrotoluene	620.	U
84-66-2	Diethylphthalate	620.	U
7005-72-3	4-Chlorophenyl-phenylether	620.	U
86-73-7	Fluorene	67.	J
100-01-6	4-Nitroaniline	620.	U
534-52-1	4,6-Dinitro-2-methylphenol	3100.	U
86-30-6	N-Nitrosodiphenylamine (1)	620.	U
101-55-3	4-Bromophenyl-phenylether	620.	U
118-74-1	Hexachlorobenzene	620.	U
87-86-5	Pentachlorophenol	3100.	U
85-01-8	Phenanthrene	630.	
120-12-7	Anthracene	130.	J
84-74-2	Di-n-Butylphthalate	120.	J B
206-44-0	Fluoranthene	1000.	
129-00-0	Pyrene	790.	
85-68-7	Butylbenzylphthalate	620.	U
91-94-1	3,3'-Dichlorobenzidine	1200.	U
56-55-3	Benzo(a)Anthracene	460.	J
117-81-7	bis(2-Ethylhexyl)Phthalate	230.	J B
218-01-9	Chrysene	520.	J
117-84-0	Di-n-Octyl Phthalate	13.	J
205-99-2	Benzo(b)Fluoranthene	440.	J
207-08-9	Benzo(k)Fluoranthene	380.	J
50-32-8	Benzo(a)Pyrene	440.	J
193-39-5	Indeno(1,2,3-cd)Pyrene	290.	J
53-70-3	Dibenzo(a,h)Anthracene	91.	J
191-24-2	Benzo(g,h,i)Perylene	300.	J

(1)-Cannot be separated from diphenylamine

Laboratory Name: S-Cubed
Case No.: 7632

Sample Number
EN 499

87FH12563

ORGANICS ANALYSIS DATA
(Page 3)

Pesticide/PCBs

Concentration: LOW
Date Extracted/Prepared: 7-23-87
Date Analyzed: 7-29-87
Conc/Dil Factor: 1.00

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	9.8 u	
319-85-7	BETA-BHC	9.8 u	
319-86-8	DELTA-BHC	9.8 u	
58-89-9	GAMMA-BHC (LINDANE)	9.8 u	
76-44-8	HEPTACHLOR	9.8 u	
309-00-2	ALDRIN	9.8 u	
1024-57-3	HEPTACHLOR EPOXIDE	9.8 u	
959-98-8	ENDOSULFAN I	9.8 u	
60-57-1	DIELDRIN	20 u	
72-55-9	4,4'-DDE	20 u	
72-20-8	ENDRIN	20 u	
33213-65-9	ENDOSULFAN II	20 u	
72-54-8	4,4'-DDD	80	**
7421-93-4	ENDRIN ALDEHYDE	20 u	
1031-07-8	ENDOSULFAN SULFATE	20 u	
50-29-3	4,4'-DDT	20 u	
72-43-5	METHOXYCHLOR	98 u	
53494-70-5	ENDRIN KETONE	20 u	
57-74-9	CHLORDANE	98 u	
8001-35-2	TOXAPHENE	200 u	
12674-11-2	AROCLOR-1016	98 u	
11104-28-2	AROCLOR-1221	98 u	
11141-16-5	AROCLOR-1232	98 u	
53469-21-9	AROCLOR-1242	98 u	
12672-29-6	AROCLOR-1248	98 u	
11097-69-1	AROCLOR-1254	200 u	
11096-02-5	AROCLOR-1260	200 u	

Volume of water extracted (ml): N.A.
Weight of sample extracted (g): 30.0
Volume of total extract (ml): 10.00
Volume of extract injected (ul): 1.00

** CONFIRMED BY GC DUAL COLUMN CONFIRMATION

87F1H12564

Sample Number:
EN500

ORGANICS ANALYSIS DATA SHEET
(Page 1)

Laboratory Name: S-CUBED
Lab Sample ID No: 23YV1041 (VOA)
Sample Matrix: SOIL
Data Release Authorized By: ____

Case No: 7632
QC Report No: N.R
Contract No: 68-01-7261
Date Sample Received: 07-17-87

VOLATILE COMPOUNDS

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 07-23-87
Date Analyzed: 07-23-87
Conc/Dil Factor: 1.01 pH: 7.2
Percent Moisture (Not Decanted): 31.1

CAS Number		ug/l or (ug/kg) (Circle One)	CAS Number		ug/l or (ug/kg) (Circle One)
74-87-3	CHLOROMETHANE	14 U	78-87-5	1,2-DICHLOROPROPANE	7 U
74-83-9	BROMOMETHANE	14 U	10061-02-6	TRANS-1,3-DICHLOROPROPENE	7 U
75-01-4	VINYL CHLORIDE	14 U	79-01-6	TRICHLOROETHENE	7 U
75-00-3	CHLOROETHANE	14 U	124-48-1	DIBROMOCHLOROMETHANE	7 U
75-09-2	METHYLENE CHLORIDE	7 U	79-00-5	1,1,2-TRICHLOROETHANE	7 U
67-64-1	ACETONE	14 U	71-43-2	BENZENE	7 U
75-15-0	CARBON DISULFIDE	7 U	10061-01-5	CIS-1,3-DICHLOROPROPENE	7 U
75-35-4	1,1-DICHLOROETHENE	7 U	110-75-8	2-CHLOROETHYLVINYLETHER	14 U
75-34-3	1,1-DICHLOROETHANE	7 U	75-25-2	BROMOFORM	7 U
156-60-5	TRANS-1,2-DICHLOROETHENE	7 U	591-78-6	2-HEXANONE	14 U
67-66-3	CHLOROFORM	7 U	108-10-1	4-METHYL-2-PENTANONE	14 U
107-06-2	1,2-DICHLOROETHANE	7 U	127-18-4	TETRACHLOROETHENE	7 U
78-93-3	2-BUTANONE	14 U	79-34-5	1,1,2,2-TETRACHLOROETHANE	7 U
71-55-6	1,1,1-TRICHLOROETHANE	7 U	108-88-3	TOLUENE	7 U
56-23-5	CARBON TETRACHLORIDE	7 U	108-90-7	CHLOROBENZENE	7 U
108-05-4	VINYL ACETATE	14 U	100-41-4	ETHYLBENZENE	7 U
75-27-4	BROMODICHLOROMETHANE	7 U	100-42-5	STYRENE	7 U
				TOTAL XYLENES	7 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifier are used. Additional flags or footnotes explaning 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 (eg.10U) based on necessary concentration/dilution action.(this is not necessarily the instrument detection limit.)The footnotes 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 (eg 10J) .If limit of detection is 10 ug/L and a concentration of 3ug/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 > or = 10 ng/ul in the final extract should be confirmed by GC/MS.

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

S Matrix spiked compound.

87FH12564

Lab Name : S - CUBED
Case No : 7632

Sample Number
EN 500

ORGANICS ANALYSIS DATA SHEET
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted: 7-20-87
Date Analyzed: 8/05/87 21:58
Conc/Dil Factor: 1.50
Percent Moisture (Decanted) N.A.

GPC Cleanup ✓ Yes __ No
Separatory Funnel Extraction __ Yes
Continuous Liquid-Liquid Extraction __ Yes

C.A.S. Number		ug/L or ug/Kg (Circle One)	
108-95-2	Phenol	720.	U
111-44-4	bis(-2-Chloroethyl)Ether	720.	U
95-57-8	2-Chlorophenol	720.	U
541-73-1	1,3-Dichlorobenzene	720.	U
106-46-7	1,4-Dichlorobenzene	720.	U
100-51-6	Benzyl Alcohol	720.	U
95-50-1	1,2-Dichlorobenzene	720.	U
95-48-7	2-Methylphenol	720.	U
39638-32-9	bis(2-chloroisopropyl)Ether	720.	U
106-44-5	4-Methylphenol	720.	U
621-64-7	N-Nitroso-Di-n-propylamine	720.	U
67-72-1	Hexachloroethane	720.	U
98-95-3	Nitrobenzene	720.	U
78-59-1	Isophorone	720.	U
88-75-5	2-Nitrophenol	720.	U
105-67-9	2,4-Dimethylphenol	720.	U
65-85-0	Benzoic Acid	3600.	U
111-91-1	bis(-2-Chloroethoxy)Methane	720.	U
120-83-2	2,4-Dichlorophenol	720.	U
120-82-1	1,2,4-Trichlorobenzene	720.	U
91-20-3	Naphthalene	720.	U
106-47-8	4-Chloroaniline	720.	U
87-68-3	Hexachlorobutadiene	720.	U
59-50-7	4-Chloro-3-methylphenol	720.	U
91-57-6	2-Methylnaphthalene	720.	U
77-47-4	Hexachlorocyclopentadiene	720.	U
88-06-2	2,4,6-Trichlorophenol	720.	U
95-95-4	2,4,5-Trichlorophenol	3600.	U
91-58-7	2-Chloronaphthalene	720.	U
88-74-4	2-Nitroaniline	3600.	U
131-11-3	Dimethyl Phthalate	720.	U
208-96-8	Acenaphthylene	720.	U
99-09-2	3-Nitroaniline	3600.	U

C.A.S. Number		ug/L or ug/Kg (Circle One)	
83-32-9	Acenaphthene	120.	J
51-28-5	2,4-Dinitrophenol	3600.	U
100-02-7	4-Nitrophenol	3600.	U
132-64-9	Dibenzofuran	52.	J
121-14-2	2,4-Dinitrotoluene	720.	U
606-20-2	2,6-Dinitrotoluene	720.	U
84-66-2	Diethylphthalate	720.	U
7005-72-3	4-Chlorophenyl-phenylether	720.	U
86-73-7	Fluorene	120.	J
100-01-6	4-Nitroaniline	720.	U
534-52-1	4,6-Dinitro-2-methylphenol	3600.	U
86-30-6	N-Nitrosodiphenylamine (1)	720.	U
101-55-3	4-Bromophenyl-phenylether	720.	U
118-74-1	Hexachlorobenzene	720.	U
87-86-5	Pentachlorophenol	3600.	U
85-01-8	Phenanthrene	1300.	
120-12-7	Anthracene	320.	J
84-74-2	Di-n-Butylphthalate	53.	J B
206-44-0	Fluoranthene	2800.	
129-00-0	Pyrene	2100.	
85-68-7	Butylbenzylphthalate	220.	J
91-94-1	3,3'-Dichlorobenzidine	1400.	U
56-55-3	Benzo(a)Anthracene	1300.	
117-81-7	bis(2-Ethylhexyl)Phthalate	97.	J B
218-01-9	Chrysene	1400.	
117-84-0	Di-n-Octyl Phthalate	720.	U
205-99-2	Benzo(b)Fluoranthene	1300.	
207-08-9	Benzo(k)Fluoranthene	820.	
50-32-8	Benzo(a)Pyrene	1100.	
193-39-5	Indeno(1,2,3-cd)Pyrene	780.	
53-70-3	Dibenzo(a,h)Anthracene	210.	J
191-24-2	Benzo(g,h,i)Perylene	700.	J

(1)-Cannot be separated from diphenylamine

87FH1256 4

Laboratory Name: S-Cubed
Case No.: 7632

Sample Number
EN 500

ORGANICS ANALYSIS DATA
(Page 3)

Pesticide/PCBs

Concentration: LOW
Date Extracted/Prepared: 7-23-87
Date Analyzed: 7-29-87
Conc/Dil Factor: 1.00

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	12 u
319-85-7	BETA-BHC	12 u
319-86-8	DELTA-BHC	12 u
58-89-9	GAMMA-BHC (LINDANE)	12 u
76-44-8	HEPTACHLOR	12 u
309-00-2	ALDRIN	12 u
1024-57-3	HEPTACHLOR EPOXIDE	12 u
959-98-8	ENDOSULFAN I	12 u
60-57-1	DIELDRIN	23 u
72-55-9	4,4'-DDE	23 u
72-20-8	ENDRIN	23 u
33213-65-9	ENDOSULFAN II	23 u
72-54-8	4,4'-DDD	23 u
7421-93-4	ENDRIN ALDEHYDE	23 u
1031-07-8	ENDOSULFAN SULFATE	23 u
50-29-3	4,4'-DDT	23 u
72-43-5	METHOXYCHLOR	120 u
53494-70-5	ENDRIN KETONE	23 u
57-74-9	CHLORDANE	120 u
8001-35-2	TOXAPHENE	230 u
12674-11-2	AROCLOR-1016	120 u
11104-28-2	AROCLOR-1221	120 u
11141-16-5	AROCLOR-1232	120 u
53469-21-9	AROCLOR-1242	120 u
12672-29-6	AROCLOR-1248	120 u
11097-69-1	AROCLOR-1254	230 u
11096-82-5	AROCLOR-1260	230 u

Volume of water extracted (ml): N.A.
Weight of sample extracted (g): 30.0
Volume of total extract (ml): 10.00
Volume of extract injected (ul): 1.00

** CONFIRMED BY GC DUAL COLUMN CONFIRMATION

Laboratory Name S-CUBED

Case No 7632

87FH12565

Sample Number EN075

22YV1081 (VOA)

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. NA	No Tic	VOA	NA	NA
2. 872-50-4	2-pyrrolidinone, 1-methyl	BNA	263	870 J B
3. NA	UNKNOWN, C17 PAH		1227	610 J
4.	UNKNOWN, C20 PAH		1535	1600 J
5.	UNKNOWN		1561	360 J
6.	UNKNOWN C20 PAH		1567	1300 J
7.	UNKNOWN hydrocarbon		1591	2400 J
8.	UNKNOWN hydrocarbon		1682	860 J
9.	UNKNOWN		1695	480 J
10.	UNKNOWN C22 PAH		1707	420 J
11.	UNKNOWN		1758	1000 J
12.	UNKNOWN sterol like		1787	1800 J
13.	UNKNOWN		1796	830 J
14.	UNKNOWN		1805	710 J
15.	UNKNOWN		1816	710 J
16.	UNKNOWN		1830	2400 J
17.	UNKNOWN		1850	360 J
18.	UNKNOWN		1866	770 J
19.	UNKNOWN		1881	290 J
20.	UNKNOWN		1889	1700 J
21.	UNKNOWN		1938	710 J
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87FH12560

Laboratory Name S-CUBED

Case No 7632

Sample Number EN496

22YV1091 (VOA)

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. NA	No Tic	VOA	NA	NA
2. 872504	2-pyrrolidinone, 1-methyl	BNA	266	890 J B
3. NA	UNKNOWN PAH		1039	540 J
4.	UNKNOWN PAH		1174	890 J
5.	UNKNOWN C_{17} PAH		1230	830 J
6.	UNKNOWN C_{17} PAH		1241	550 J
7.	UNKNOWN		1647	580 J
8.	UNKNOWN PAH		1385	580 J
9.	UNKNOWN		1494	450 J
10.	UNKNOWN C_{20} PAH		1546	570 J
11.	UNKNOWN C_{20} PAH		1569	1500 J
12.	UNKNOWN hydrocarbon		1592	1600 J
13.	UNKNOWN PAH		1610	360 J
14.	UNKNOWN hydrocarbon		1682	1300 J
15.	UNKNOWN		1695	390 J
16.	UNKNOWN C_{22} PAH		1709	510 J
17.	UNKNOWN		1786	810 J
18.	UNKNOWN		1860	630 J
19.	UNKNOWN		1890	270 J
20.	UNKNOWN		1911	810 J
21.	UNKNOWN		1983	270 J
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Laboratory Name S-CUBED

Case No 7632

87FH12561

Sample Number EN497

22YV1101(VOA)

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. NA	No Tic	VOA	NA	NA
2.	UNKNOWN	BNA	938	3300 J
3.	UNKNOWN		983	730 J
4.	UNKNOWN		1066	630 J
5.	UNKNOWN		1084	3800 J
6.	UNKNOWN		1196	1200 J
7.	UNKNOWN		1212	6000 J
8.	UNKNOWN		1218	5600 J
9.	UNKNOWN		1245	1700 J
10.	UNKNOWN		1256	880 J
11.	UNKNOWN		1325	960 J
12.	UNKNOWN Hydrocarbon		1496	940 J
13.	UNKNOWN C_{20} PAH		1570	890 J
14.	UNKNOWN hydrocarbon		1593	1200 J
15.	UNKNOWN		1691	6800 J
16.	UNKNOWN		1774	1500 J
17.	UNKNOWN		1788	1700 J
18.	UNKNOWN		1861	430 J
19.	UNKNOWN		1896	2300 J
20.	UNKNOWN		1911	600 J
21.	UNKNOWN		1937	430 J
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Laboratory Name S-CUBED

Case No 7632

87F112562

Sample Number EN498

22YV1111 (VOA)

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. NA	NO TIC	VOA	NA	NA
2. 872504	2-pyrrolidinone, 1-methyl-	BNA	252	1200 J B
3. NA	UNKNOWN		837	450 J
4. 10544000	Sulfur		1099	350 J
5. NA	UNKNOWN		1377	320 J
6.	UNKNOWN hydrocarbon		1482	1000 J
7.	UNKNOWN		1531	390 J
8.	UNKNOWN hydrocarbon		1579	2800 J
9.	UNKNOWN hydrocarbon		1668	2200 J
10.	UNKNOWN		1680	530 J
11.	UNKNOWN		1742	1300 J
12.	UNKNOWN hydrocarbon		1753	630 J
13.	UNKNOWN		1758	530 J
14.	UNKNOWN		1770	3600 J
15.	UNKNOWN		1787	970 J
16.	UNKNOWN		1794	680 J
17.	UNKNOWN		1810	390 J
18.	UNKNOWN PAH		1839	3200 J
19.	UNKNOWN		1854	340 J
20.	UNKNOWN		1861	390 J
21.	UNKNOWN		1886	1700 J
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Laboratory Name S-CUBED

Case No 7632

Sample Number EN498RE

RR498 (BNA)

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. NA	Repeat - No VOA required	NA	NA	NA
2. NA	UNKNOWN	BNA	824	770 J
3. 10544500	sulfur		1082	910 J
4.	phthalate ester		1261	1800 J
5.	UNKNOWN		1359	850 J
6.	UNKNOWN hydrocarbon		1467	1800 J
7.	UNKNOWN hydrocarbon		1515	670 J
8.	UNKNOWN		1530	620 J
9.	UNKNOWN hydrocarbon		1562	5800 J
10.	UNKNOWN hydrocarbon		1652	5500 J
11.	UNKNOWN		1661	1300 J
12.	UNKNOWN PAH		1682	620 J
13.	UNKNOWN		1722	2300 J
14.	UNKNOWN		1739	3300 J
15.	UNKNOWN, sterol-like		1749	7800 J
16.	UNKNOWN		1764	2100 J
17.	UNKNOWN		1773	1800 J
18.	UNKNOWN		1814	4700 J
19.	UNKNOWN		1829	620 J
20.	UNKNOWN		1836	1100 J
21.	UNKNOWN		1858	3100 J
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87F1H12564

Laboratory Name S-CUBED

Case No 7632

Sample Number EN500

23YV1041 (VOA)

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. NA	No Tic	VOA	NA	NA
2. 872504	2-pyrrolidinone, 1-methyl-	BNA	268	3700 JB
3. NA	UNKNOWN hydrocarbon		889	1200 J
4.	UNKNOWN PAH		937	4300 J
5.	UNKNOWN PAH		1175	740 J
6.	UNKNOWN PAH, C_{17}		1231	590 J
7.	UNKNOWN C_{17} PAH		1242	440 J
8.	UNKNOWN PAH		1386	590 J
9.	UNKNOWN hydrocarbon		1498	400 J
10.	UNKNOWN C_{20} PAH		1534	1600 J
11.	UNKNOWN C_{20} PAH		1548	550 J
12.	UNKNOWN C_{20} PAH		1570	1100 J
13.	UNKNOWN hydrocarbon		1594	2000 J
14.	UNKNOWN hydrocarbon		1685	550 J
15.	UNKNOWN		1698	370 J
16.	UNKNOWN		1789	1500 J
17.	UNKNOWN		1808	400 J
18.	UNKNOWN		1832	370 J
19.	UNKNOWN		1862	730 J
20.	UNKNOWN		1894	880 J
21.	UNKNOWN		1908	370 J
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Laboratory Name S-CUBED

Case No 7632

87FH12563

Sample Number EN499

23YV1031 (VOA)

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. NA	No Tic	VOA	NA	NA
2. 872504	2-pyrrolidinone, 1-methyl	BNA	264	910 JB
3. NA	UNKNOWN		931	7000 J
4. 10544500	sulfur		1113	1300 J
5. NA	UNKNOWN		1343	4000 J
6.	UNKNOWN PHTHALATE		1402	400 J
7.	UNKNOWN		1422	650 J
8.	UNKNOWN		1431	300 J
9.	UNKNOWN		1494	330 J
10.	UNKNOWN C_{20} PAH		1530	670 J
11.	UNKNOWN C_{20} PAH		1566	590 J
12.	UNKNOWN hydrocarbon		1591	960 J
13.	UNKNOWN hydrocarbon		1681	370 J
14.	UNKNOWN		1694	290 J
15.	UNKNOWN PAH		1705	260 J
16.	UNKNOWN		1757	480 J
17.	UNKNOWN, sterol-like		1785	920 J
18.	UNKNOWN		1846	850 J
19.	UNKNOWN		1858	410 J
20.	UNKNOWN		1905	290 J
21.	UNKNOWN		1934	260 J
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