UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

SR-6J

MEMORANDUM

SUBJECT: *"Letter Report Pettibone Creek Investigation; North Chicago, Lake County, Illinois; Dated June 21, 2001."*

FROM: John J. O'Grady
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Remedial Response Section #4

TO: See List Below

DATE: June 27, 2001

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I am enclosing a one copy each to the above-listed individuals of the following report: *"Letter Report Pettibone Creek Investigation; North Chicago, Lake County, Illinois; dated June 21, 2001."*

If you have any questions, please contact me at your earliest convenience.

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EPA Region 5 Records Ctr.
229970

Letter Report
Pettibone Creek Investigation
North Chicago, Lake County, Illinois
June 21, 2001

Prepared for:
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1.0 INTRODUCTION

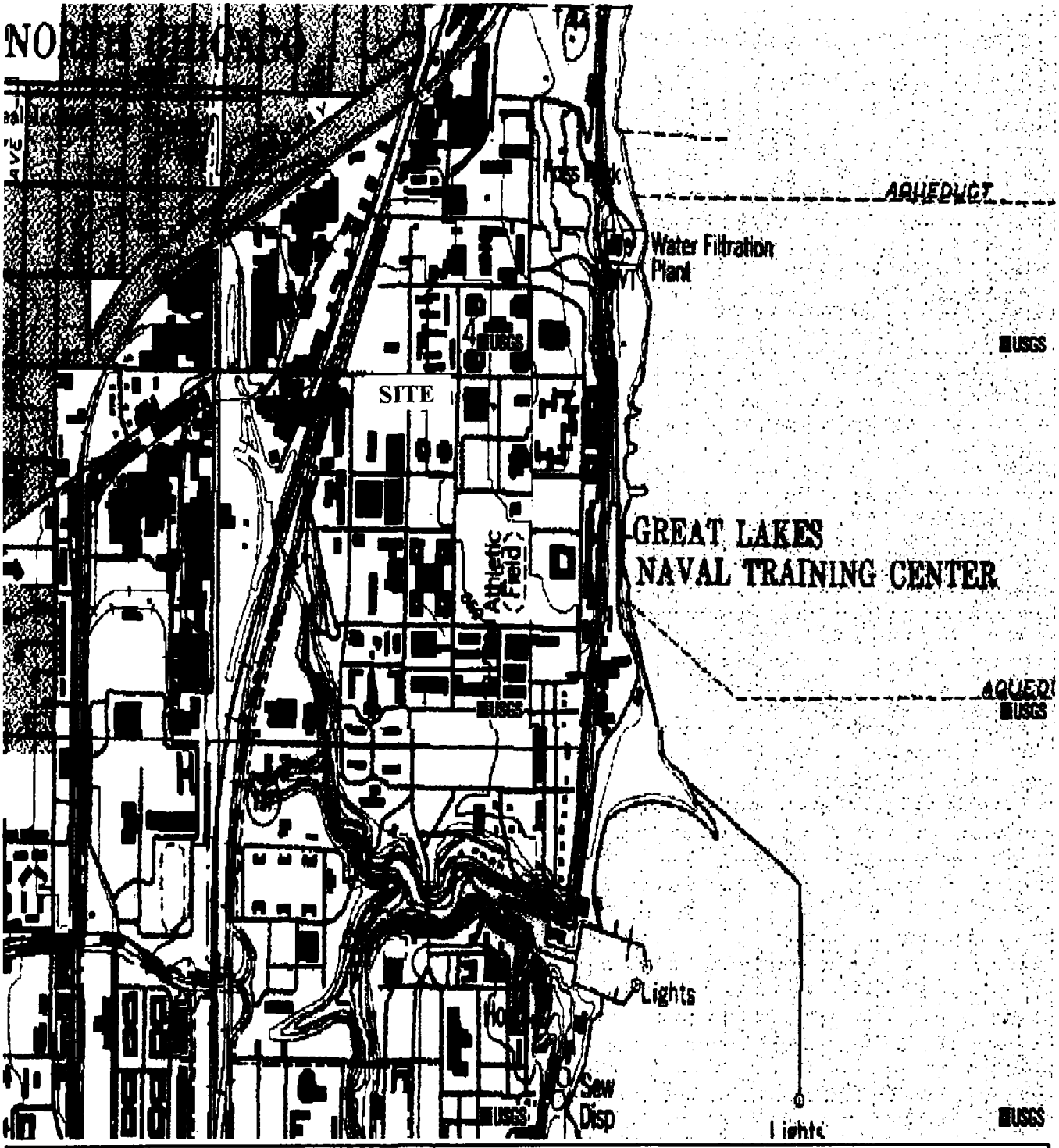
T N & Associates, Inc. (TN&A) was tasked by the United States Environmental Protection Agency (U.S. EPA), Region 5 Remedial Response Branch under Order No. 05-2207-4TWW, to investigate the contamination in a section of the Pettibone Creek, located in North Chicago, Lake County, Illinois. This investigation included a review of historical sampling events, preparation of a sampling and analysis plan, collection of investigative samples from the creek, and preparation of this Letter Report, detailing the findings of the investigation. The Pettibone Creek is located in an industrial area of North Chicago, Illinois. This investigation is focused on the section of the Pettibone Creek located between 22nd Street and Sheridan Road and the section of the Elgin Joliet & Eastern (EJ & E) railroad ditch, located at the origin of Pettibone Creek.

2.0 SITE BACKGROUND

2.1 SITE DESCRIPTION

The purpose of this sampling event was to investigate and characterize the Pettibone Creek, an intermittent creek located in an industrial area of North Chicago, Lake County, Illinois (Figure 1). The Pettibone Creek coordinates are 42° 18' 31"North and 87° 49' 58"West. An industrial property bordering the creek, known as the Vacant Lot site, was characterized as a Superfund hazardous waste site in 1989. The Pettibone Creek runs approximately 1.2 miles, originating in the northwest corner of the Vacant Lot site, at the corner of Commonwealth and 22nd Street (Martin Luther King Jr. Drive), then flowing south and east, through the Great Lakes Naval Training Center (GLNTC) until discharging into Lake Michigan. At the origin of Pettibone Creek is the Vacant Lot site, the EJ & E elevated railroad tracks, Commonwealth Road and 22nd Street. The creek flows south from its origin, through the Vacant Lot site, runs underground after exiting Vacant Lot at 22nd Street and then resurfaces to flow southeast under Sheridan Road. After passing under Sheridan Road, the creek turns east and flows through GLNTC, and discharges into Lake Michigan. An unnamed tributary, sometimes referred to as the South Branch of Pettibone Creek, flows north from a golf course pond, and joins the Creek. The source of water for this pond is an unnamed creek that originates from a pond in Lake Bluff. Another tributary, the Small Branch of Pettibone Creek flows east from Sheridan Road and empties into Pettibone Creek before the GLNTC.

The primary flow of water in the Pettibone Creek starts with two discharges into the creek at its origin. The City of North Chicago discharges storm water into the creek. A railroad ditch, running along the northern side of EJ& E railroad tracks, also drains into the creek. In addition, surface drainage from the Vacant Lot Superfund site also flows into the creek. Several other industrial facilities have storm water discharges along the creek. Fansteel, a former manufacturing company located east of the Vacant Lot site, had at least two storm water discharges into the section of the Pettibone Creek located on the Vacant Lot site. EMCO Chemical Distributors, Inc. (EMCO), located to the west of Commonwealth Avenue, has one storm water discharge into the section of the Pettibone Creek on the Vacant Lot site. North Chicago Refiners and Smelters (NCRS), a scrap smelting and refining company, has a storm water discharge downstream of the creek's origin, just northwest of Sheridan Road.



LEGEND	T N & Associates, Inc. Engineering and Science	
Scale: 1: 24,000	**Title:** Site Location Map	**Figure No.:** 1
North	**Site:** Pettibone Creek Investigation	**Project No.:** 2000128
	City: North Chicago **State:** IL	**Date:** 4/2/01
	Source: USGS Waukegan 7.5" Quadrangle	**Revised:** n/a

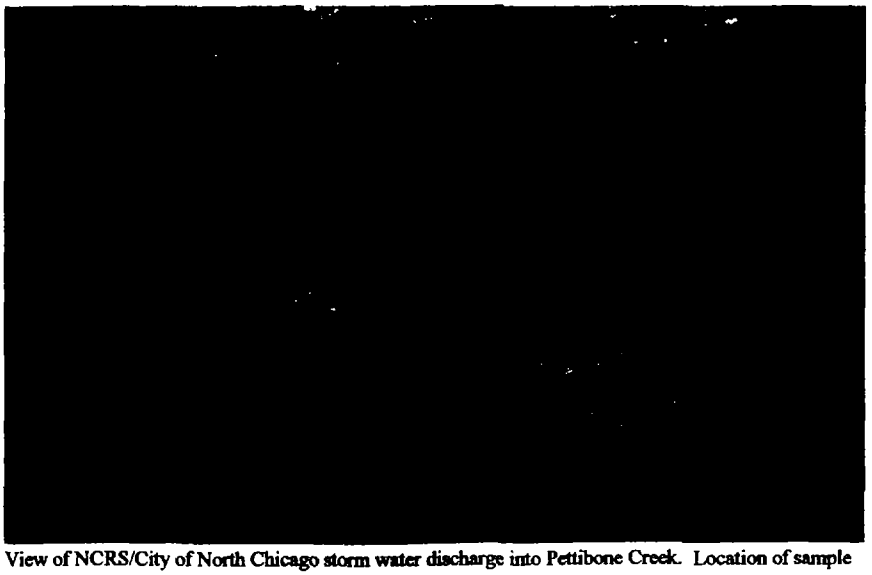
Pettibone Creek. Samples were taken from locations at the origin of the creek and from the EJ & E railroad ditch. The sediment samples collected from the creek revealed organic and inorganic contaminants. Maximum contaminant levels included beryllium at 3 mg/kg, lead at 1,500 mg/kg, benzo(a)anthracene at 18 mg/kg, benzo(b)fluoranthene at 33 mg/kg, benzo(a)pyrene at 25 mg/kg, indeno(1,2,3-cd)pyrene at 9.7 mg/kg, and dibenzo(a,h)anthracene at 2 mg/kg. Contamination was present from depths of 0 to 5 feet below the creek bed. The sediment sample collected from the railroad ditch showed only organic contamination.

In 2000, additional sediment samples were collected from Pettibone Creek as part of a Site Investigation, completed by a contractor for Fansteel, Inc., at the request of the U.S. EPA. During the Site Investigation, 3 sediment samples were collected from Pettibone Creek at two varying depths, 0 to 6 inches and 6 to 12 inches. These samples were collected in the portion of Pettibone Creek located south of 22nd Street. One additional sediment sample was collected at the same depths (0 to 6 inches and 6 to 12 inches) from the drainage ditch, located on the north side of the EJ & E railroad tracks. Analytical results from the creek sediment samples indicated tetrachloroethene, vinyl chloride, benzo(a)anthracene, benzo(a)pyrene, dibenzo(a,h)anthracene, arsenic, selenium, and Synthetic Precipitate Leaching Procedure (SPLP) lead contamination in one or more of the samples at concentrations above the IEPA Tiered Approach to Corrective Action Objectives (TACO) soil remediation objectives. Total lead was detected above the soil remediation objective in each sediment sample. In addition, PCB-1260 was detected in four of the creek sediment samples and the ditch sediment samples, but not at levels above the soil remediation objectives.

3.0 SITE INVESTIGATION ACTIVITIES

On October 24, 2000, Raghu Nagam and Stephanie Wenning of TN&A, mobilized to the Pettibone Creek to conduct sampling activities based upon the Sampling and Analysis Plan (SAP) submitted to the U.S. EPA on October 4, 2000. The SAP called for the collection of approximately 10 sediment samples from a section of the Pettibone Creek, located between 22nd Street and Sheridan Road, and from the EJ & E railroad ditch, north of the Fansteel site. A storm water discharge pipe from the NCRS and the City of North Chicago is located along the section of the creek to be sampled. This section of Pettibone Creek is downstream from the Fansteel site and upstream from the GLNTC. The EJ & E railroad ditch, running along the northern side of the EJ & E railroad tracks, empties into Pettibone Creek at its origin. Following a review of the site health and safety plan, TN&A initiated sample collection at the southern end of the creek, under the Sheridan Road overpass. A sediment sample was collected at the entrance of a culvert, approximately 10 feet in diameter, located underneath the highway. Refer to Table 1 for a detailed description of each sample location, depth, and time.

The desired sample collection depth was approximately 0 to 6 inches. Concrete was encountered in the southern end of the creek bed, near the culvert, making sediment sample collection from a depth of 0 to 6 inches inaccessible. Therefore, sample SED 1001was collected from the surface of the concrete creek bed at the entrance of the culvert. In addition, portions of the creek were covered with large rocks, restricting access to the creek bed. Samples SED 1002, SED 1004, and SED 1004Dup were collected at the surface



View of NCRS/City of North Chicago storm water discharge into Pettibone Creek. Location of sample SED 1003.

due to these rock impediments.

Following the collection of seven sediment samples from the creek bed, two additional sediment samples were collected from the EJ & E railroad ditch. A total of nine samples were collected, including eight samples, an matrix spike/matrix spike duplicate (MS/MSD) and a duplicate sample (Figure 2). At each sediment sample location, a dedicated trowel was used to collect the sediment sample from the creek bed and the sampler donned new Nitrile gloves for the collection of each sample. Each sample required collection of two 4-ounce jars and two 8-ounce jars for analysis. The samples were preserved with ice, packaged and shipped to U.S. EPA Contract Laboratories Program (CLP) laboratories, Liberty Analytical and Chemtech, for Target Analyte List (TAL) and Target Compound List (TCL) analysis. A 21-day turnaround time was requested for the analytical results.

Table 1

Sample Description Table
Pettibone Creek Investigation
North Chicago, Lake County, Illinois

Date	Sample ID	CLP Sample Number	Depth	Location	Comments
10/24/00	*SED1001*	E0354, *ME0515*	*Surface*	At the entrance to Sheridan *Road culvert*	At this location, the creek has a *concrete bed*
10/24/00	SED1002	E0355, ME0516	Surface	Midway between NCRS discharge and sample SED1001	Large rocks in creek bed
10/24/00	SED1003	E0356, ME0517	0-6"	At NCRS discharge	Sandy material MS/MSD sample collected
10/24/00	SED 1004	E0357, ME0518	Surface	15' North of SED1003	Large rocks in the creek bed
10/24/00	SED 1004 DUP	E0358, ME0519	Surface	15' North of SED1003	Duplicate sample
10/24/00	SED 1005	E0359, ME0520	0-2"	Between SED1004 and the Federal Chicago fence	Sandy material and rocks
10/24/00	SED 1006	E0360, ME0521	0-2"	At the Federal Chicago fence just after 22nd Street culvert	Sandy material and rocks
10/24/00	SED 1007	E0361, ME0522	0-6"	North side of EJ&E railroad, at Fansteel and NCRS boundary	Sandy material and rocks Background sample from ditch, behind apartment complex
10/24/00	SED 1008	E0362, ME0523	0-6"	East of storm water pipe, in the EJ& E railroad ditch	Sandy material, rocks, debris and glass

Key:

MS/MSD = Matix Spike/Matrix Spike Duplicate
" = Inches

4.0 ANALYTICAL RESULTS

All nine sediment samples collected were analyzed for TAL and TCL parameters. Several organic and inorganic compounds were detected in the creek bed sediment samples. The IEPA TACO regulations do not include remediation objectives for sediment samples. The sediment samples were therefore compared to alternative objectives.

Sediment sample SED 1007, the background sediment sample obtained from the railroad ditch behind the apartment complex, was used as a comparison value for inorganic compounds. The inorganic compounds detected in sample SED 1007 established a baseline value for native soil contamination. For the remainder of the sediment samples, inorganic contamination was defined as being five times the value detected in the background sample. Refer to Tables 2 and 3 for analytical results from the samples collected in Pettibone Creek. Table 2 details inorganic compound contamination detected above five times the background level while Table 3 lists all inorganic concentrations detected in sediment samples.

Table 2

Inorganic Compound Contamination
Pettibone Creek Investigation
North Chicago, Lake County, Illinois

Units = mg/kg

Sample Number	SED 1007 BKG	Five Times BKG	SED 1001	SED 1002	SED 1003	SED 1004	SED 1004DUP	SED 1005	SED 1008
Parameter									
Beryllium	0.62 J	3.1	3.1 J	3.5 J	ND	4.0 J	4.2 J	6.0 J	ND
Cadmium	0.61 J	3.05	ND	10.9	ND	ND	ND	ND	4.3
Copper	73.4	367	452	430	ND	514	378	790	406
Lead	47.3	236.5	ND	ND	283	ND	ND	570	393
Mercury	0.070 J	0.35	ND	ND	1.5 J	ND	ND	ND	0.68 J
Sodium	228 J	1,140	1,680	1,740	ND	2,190	1,770	2,700	ND
Zinc	462	2,310	2,930	6,180	2,870	4,160	3,710	5,760	2,470

Key:
J = Estimated value
ND = Not detected

Table 3

Summary of Inorganic Analytical Results
Pettibone Creek Investigations
North Chicago, Lake County, Illinois

Units = mg/kg

Sample Number:	ME0515	ME0516	ME0517	ME0518	ME0519	ME0520	ME0521	ME0522	ME0523	Five Times Background Levels
Sampling Location:	SED1001	SED1002	SED1003	SED1004	SED1004DUP	SED1005	SED1006	SED1007 BKG	SED1008	
Date Sampled	10/24/00	10/24/00	10/24/00	10/24/00	10/24/00	10/24/00	10/24/00	10/24/00	10/24/00	
Inorganic Compound										
Aluminum	2,500	2,790	2,430	3,630	3,630	3,190	2,480	8,050	4,450	40,250
Antimony	ND	ND	ND	ND	ND	ND	ND	0.95 J	1.9 J	4.75
Arsenic	4.5	3.2	5.3	19.7	15.0	8.4	5.0	13.2	34.9	66
Barium	31.5	26.9	116	39.9	31.9	45.0	38.0	221	85.1	1,105
Beryllium	3.1 J	[illegible] J	1.3 J	[illegible] J	[illegible] J	[illegible] J	1.5 J	0.62 J	0.81 J	3.10
Cadmium	0.58 J	[illegible]	1.1 J	0.32 J	0.51 J	0.66 J	0.57 J	0.61 J	[illegible]	3.05
Calcium	106,000	71,200	98,200	94,500	95,900	95,500	88,200	48,700	50,900	243,500
Chromium	12.4	19.3	11.7	10.9	8.9	14.2	7.3	16.4	16.2	82
Cobalt	3.2	3.7	4.3	6.0	5.3	3.9	5.5	14.6	10.0	73
Copper	[illegible]	[illegible]	319	[illegible]	[illegible]	[illegible]	288	73.4	[illegible]	367
Iron	10,800	12,200	12,500	21,200	19,600	25,500	10,800	26,600	15,300	133,000
Lead	168	211	[illegible]	233	234	[illegible]	171	47.3	[illegible]	236.5
Magnesium	60,700	39,400	52,800	56,300	56,900	52,800	45,700	26,500	24,500	132,500
Manganese	693 J	532 J	613 J	988 J	584 J	674 J	496 J	2,410 J	666 J	12,050
Mercury	0.25 J	0.23 J	[illegible] J	0.10 J	0.10 J	ND	0.17 J	0.070 J	[illegible] J	[illegible]
Nickel	23.8 J	27.7 J	21.9 J	35.7 J	32.9 J	46.3 J	18.1 J	32.6 J	30.7 J	163
Potassium	415 J	353 J	421 J	676 J	627 J	469 J	356 J	1,520 J	1,180 J	7,600
Selenium	ND	ND	ND	ND	ND	[illegible]	ND	ND	[illegible]	ND
Silver	0.80 J	0.92 J	1.2 J	0.66 J	0.57 J	1.6 J	0.52 J	0.47 J	1.3 J	2.35
Sodium	[illegible] J	[illegible] J	946 J	[illegible] J	[illegible] J	[illegible] J	1,000 J	228 J	317 J	1,140
Vanadium	6.0	5.6	7.6	9.3	7.8	5.8	6.5	21.8	13.2	109
Zinc	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2,260	462	[illegible]	2,310

Note: Highlighted analytical results are values which exceed the fives times background level criteria.

Key:

mg/kg = Milligrams per kilogram
J = Estimated value
ND = Not detected
DUP = Duplicate
BKG = Background sample

and LEL guidelines. Naphthalene and 2-methylnaphthalene concentrations are above their respective ERL guidelines. Sediment samples SED 1001 and SED 1002 contain pyrene, phenanthrene, benzo(a)anthracene, and dibenzo(a,h) anthracene concentrations above the ERM and LEL guidelines. Sediment sample SED 1006 contains phenanthrene concentration above the ERM and LEL guideline. Several other sediment samples contain fluorene, anthracene, pyrene, chrysene, phenanthrene, benzo(a)anthracene, benzo(a)pyrene, dibenzo(a,h)anthracene, and/or fluoranthene concentrations above the ERL but below the ERM guidelines. Table 4 lists organic contamination based on ERL, ERM, LEL, and SEL guidelines. Various VOCs and pesticides were detected at low levels in the sediment samples and include methylene chloride, trichloroethene, tetrachloroethene, and endosulfan sulfate. NSTP approach and Ontario guidelines are not available for these detected compounds. Beta-BHC, heptachlor epoxide, dieldrin, 4,4'-DDE, and endrin concentrations in some sediment samples are above their respective LELs.

Some of the highest levels of SVOC contamination are present in sample SED 1003. This sample was collected at the NCRS/City of North Chicago discharge into Pettibone Creek. SVOC's detected in sample SED 1003 include fluorene (3,200 µg/kg), anthracene (3,700 µg/kg), pyrene (13,000 µg/kg), ancenaphthene (2,800 µg/kg), phenanthrene (15,000 µg/kg), benzo(k)fluoranthene (8,100 µg/kg), indeno(1,2,3-cd)pyrene (3,200 µg/kg), benzo(g,h,i)perylene (3,000 µg/kg) chrysene (5,800 µg/kg), dibenzofuran (1,700 µg/kg), fluoranthene (13,000 µg/kg), benzo(a)anthracene (5,900 µg/kg), bis(2-Ethylhexyl)phthalate (1,700 µg/kg), benzo(b)fluoranthene (7,200 µg/kg), benzo(a)pyrene (4,900 µg/kg) and dibenzo(a,h)anthracene (1,100 µg/kg). Many of these compounds were detected above the ERM concentration in SED 1003. SVOC contamination is also present in samples SED 1001 and SED 1002, collected downstream from sample SED 1003. Samples SED 1004, SED 1005 and SED 1006, collected upstream from sample SED 1003 location, contain lower levels of SVOC contamination in comparison to SED 1003 location. Sample SED 1007, the background sample, also contains SVOCs contamination, consistent with the samples collected upstream of the NCRS/North Chicago storm water discharge. Sample SED 1008, collected from the railroad ditch, east of the storm water pipe, also contained high levels of SVOCs including fluorene (1,100 µg/kg), pyrene (9,100 µg/kg), benzo(k)fluoranthene (8,100 µg/kg), indeno(1,2,3-cd)pyrene (3,200 µg/kg), benzo(g,h,i)perylene (2,800 µg/kg), phenanthrene (8,100 µg/kg), fluoranthene (10,000 µg/kg), benzo(a)anthracene (4,700 µg/kg), chrysene (5,900 µg/kg),

indeno(1,2,3-cd)pyrene (3,200 µg/kg), anthracene (2,300 µg/kg), benzo(b)fluoranthene (7,200 µg/kg), benzo(a)pyrene (4,500 µg/kg), and dibenzo(a,h)anthracene (1,100 µg/kg).

Table 4

Comparison of Organic Data with ERL, ERM, LEL, and SEL Criteria
Pettibone Creek Investigation
North Chicago, Lake County, Illinois

Units = µg/kg

SVOC	ERL	ERM	LEL	SEL	SED 1001	SED 1002	SED 1003	SED 1004	SED 1004 Dup	SED 1005	SED 1006	SED 1008
2-methylnaphthalene	70	670	NA	NA	ND	ND	250 J	ND	ND	ND	73 J	270 J
Fluorene	35	640	190	160,000	530 J	320 J	**3,200**	110 J	59 J	ND	190 J	**1,100 J**
Anthracene	85.3	1,100	220	370,000	780 J	590 J	**3,700**	400	83 J	95 J	510	**2,300**
Pyrene	665	2,600	490	850,000	**4,300**	3,300	**13,000 J**	1,400	430	600	2,100	**9,100**
Acenaphthene	150	650	NA	NA	410 J	220 J	**2,800 J**	49 J	50 J	ND	150 J	**980 J**
Chrysene	400	2,800	340	460,000	2,400	1,900	**5,800**	740	220 J	320 J	1,200	**5,900**
Naphthalene	340	2,100	NA	NA	ND	ND	480 J	ND	ND	ND	58 J	360 J
Phenanthrene	240	1,500	560	950,000	**4,000**	**2,800**	**15,000**	1100	410	460	**2,500**	**8,100**
Benzo(a)anthracene	261	1,600	320	1,480,000	**1,900**	**1,600**	**5,900**	700	160 J	250 J	1,000	**4,700**
Benzo(a)pyrene	430	2,500	370	1,440,000	2,000	1,500	**4,900 J**	630	180 J	260 J	720	**4,500**
Dibenzo(a,h)anthracene	63.4	260	60	130,000	**430 J**	**400 J**	**1,100**	180 J	ND	57 J	200 J	**1,100 J**
Fluoranthene	600	5,100	750	1,020,000	4,900	3,500	**13,000**	1,600	460	670	2,100	**10,000**

Note:
Bolded analytical results are values which exceed the ERM value.

Key:
µg/kg = Micrograms per kilogram.
ERL = Effects Range-Low.
ERM = Effects Range-Medium.
LEL = Lowest Effect Level.
SEL = Severe Effect Level.
ND = Not detected.
J = Estimated value.

Historical analytical results of sediment samples collected from the Pettibone Creek have indicated contamination in the creek sediment. The contamination has included organic and inorganic compounds. Due to the uncertainty of locating exact historical sample points, historical sample locations have been classified into 4 Sections: Section 1-North of the railroad tracks, Section 2-Between Section 1 and north of 22nd Street, Section 3-Between Section 2 and north of Sheridan Road, and Section 4-South of Section 3 up to Pettibone creek's discharge into Lake Michigan. Evaluation of historical results with respect to NSTP approach and Ontario guidelines indicate that Section 1 has SVOC contamination. Historical SVOC contamination in Section 1 does not exceed ERM guidelines but does exceed ERL guidelines. Section 3 has similar historical SVOC contamination exceeding the ERL and LEL guidelines. Section 4 has SVOC contamination consistent with the results of Section 3. Section 4 SVOC contamination exceeds the ERL and LEL guidelines. Refer to Table 5 for historical data.

Table 6

Summary of Historical Analytical Results
Pettibone Creek Investigation
North Chicago, Lake County, Illinois

Sample ID	Ditch-1A	Ditch-1B	SED 1-1	SED 1-2	SED1007	SED1008	X210	SED 2-1	SED 3-1	SED 3-2	SED 3C-1	SED 3C-2
Depth	0" - 6"	6" - 12"	0" - 12"	12" - 24"	0" - 6"	0" - 6"	0" - 6"	0" - 12"	0" - 12"	12" - 24"	0" - 12"	12" - 24"
Date	6/7/2000	6/7/2000	Jan-97	Jan-97	10/24/2000	10/24/2000	4/26/1994	Jan-97	Jan-97	Jan-97	Jan-97	Jan-97
Source	Carlson	Carlson	VL EE/CA	VL EE/CA	TN&A	TN&A	IEPA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA
Parameter	**Section 1**						**Section 2**					
VOLATILES (units = µg/kg)												
Chloromethane	ND	ND	15 U	13 U	17 U	13 U	12 U	13 U	12 U	12 U	NA	14 U
Bromomethane	ND	ND	15 U	13 U	17 U	13 U	12 U	13 U	12 U	12 U	NA	14 U
Vinyl Chloride	ND	ND	15 U	13 U	17 U	13 U	670.0 D	13 U	12 U	12 U	NA	14 U
Chloroethane	ND	ND	15 U	13 U	17 U	13 U	12 U	13 U	12 U	12 U	NA	14 U
Methylene Chloride	27.8 G	36.7 G	15 U	13 U	4 J	4 J	12 U	13 U	16 U	18 U	NA	14 U
Acetone	ND	ND	15 UJ	13 UJ	17 U	13 U	12 UJ	9 J	12 UJ	12 UJ	NA	32 U
Carbon Disulfide	ND	ND	15 U	13 U	17 UJ	13 UJ	12 U	13 U	12 U	12 U	NA	14 U
1,1-Dichloroethene	ND	ND	15 U	13 U	17 U	13 U	8.0 J	13 U	12 UJ	12 U	NA	14 U
1,1-Dichloroethane	ND	ND	15 U	13 U	17 U	13 U	12 J	13 U	12 U	12 U	NA	14 U
1,2-Dichloroethene (total)	NA	NA	15 U	13 U	NR	NR	700.0 D	13 U	5 J	12 U	NA	14 U
cis-1,2-Dichloroethene	6.86	ND	NR	NR	17 U	13 U	NR	NR	NR	NR	NA	NR
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ND	NA	NA	3 J	2 J	NA	NA	NA	NA	NA	NA
Chloroform	ND	ND	15 U	13 U	17 U	13 U	12 U	13 U	12 U	12 U	NA	14 U
1,2-Dichloroethane	ND	ND	15 U	13 U	17 U	13 U	12 UJ	13 U	12 U	12 U	NA	14 U
2-Butanone	ND	ND	15 U	13 U	17 U	13 U	12 U	13 U	12 U	12 U	NA	14 U
1,1,1-Trichloroethane	ND	ND	15 U	13 U	17 U	13 U	12 U	13 U	12 U	12 UJ	NA	14 U
Carbon tetrachloride	ND	ND	15 U	13 U	17 U	13 U	12 U	13 U	12 U	12 UJ	NA	14 U
Bromodichloromethane	ND	ND	15 U	13 U	17 U	13 U	12 U	13 U	12 U	12 UJ	NA	14 U
1,2-Dichloropropane	ND	ND	15 U	13 U	17 U	13 U	12 U	13 U	12 U	12 UJ	NA	14 U
Cis-1,3-dichloropropane	NR	NR	15 U	13 U	NR	NR	NR	13 U	12 U	12 UJ	NA	14 U
Trichloroethene	ND	ND	15 U	13 U	17 U	13 U	4 J	13 U	54	170 J	NA	14 U
Dibromochloromethane	ND	ND	15 U	13 U	17 U	13 U	12 U	13 U	12 U	12 UJ	NA	14 U
1,1,2-Trichloroethane	ND	ND	15 U	13 U	17 U	13 U	12 U	13 U	12 U	12 UJ	NA	14 U
Benzene	ND	ND	15 U	13 U	17 U	13 U	12 U	13 U	12 UJ	6 J	NA	14 U
Trans-1,3-dichloropropane	NR	NR	15 U	13 U	17 U	13 U	12 U	13 U	12 U	12 UJ	NA	14 U
Bromoform	ND	ND	15 U	13 U	17 U	13 U	12 U	13 U	12 U	12 UJ	NA	14 U
4-Methyl-2-Pentanone	ND	ND	15 U	13 U	17 U	13 U	12 UJ	13 U	12 U	12 UJ	NA	14 U
2-Hexanone	ND	ND	15 U	13 U	17 U	13 U	12 U	13 U	12 U	12 UJ	NA	14 U
Tetrachloroethane	NA	NA	15 U	13 U	17 U	5 J	NA	13 U	12 U	12 UJ	NA	14 U
Tetrachloroethene	ND	ND	NA	NA	NA	NA	12 U	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	ND	ND	15 U	13 U	17 U	13 U	12 U	13 U	12 U	12 UJ	NA	14 U
Toluene	ND	ND	6 J	4 J	17 U	13 U	12 U	13 U	16	30 J	NA	14 U

Table 6

Summary of Historical Analytical Results
Pettibone Creek Investigation
North Chicago, Lake County, Illinois

Sample ID	Ditch-1A	Ditch-1B	SED 1-1	SED 1-2	SED1007	SED1008	X210	SED 2-1	SED 3-1	SED 3-2	SED 3C-1	SED 3C-2
Depth	0" - 6"	6" - 12"	0" - 12"	12" - 24"	0" - 6"	0" - 6"	0" - 6"	0" - 12"	0" - 12"	12" - 24"	0" - 12"	12" - 24"
Date	6/7/2000	6/7/2000	Jan-97	Jan-97	10/24/2000	10/24/2000	4/26/1994	Jan-97	Jan-97	Jan-97	Jan-97	Jan-97
Source	Carlson	Carlson	VL EE/CA	VL EE/CA	TN&A	TN&A	IEPA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA
Parameter	**Section 1**						**Section 2**					
Chlorobenzene	ND	ND	15 U	13 U	17 U	13 U	12 U	13 U	12 UJ	12 UJ	NA	14 U
Ethylbenzene	ND	ND	15 U	13 U	17 U	13 U	12 U	13 U	12 U	12 UJ	NA	14 U
Styrene	ND	ND	15 U	13 U	17 U	13 U	12 U	13 U	12 U	4 J	NA	14 U
Xylene (total)	ND	ND	15 U	13 U	17 U	13 U	12 U	13 U	12 U	12 UJ	NA	14 U
SEMIVOLATILES (units = µg/kg)												
Phenol	NA	NA	480 U	430 U	560 U	2,100 U	400 U	430 U	410 U	400 U	520 U	470 U
Bis(2-chloroethyl)ether	NA	NA	480 U	430 U	560 U	2,100 U	400 U	430 U	410 U	400 U	520 U	470 U
2-Chlorophenol	NA	NA	480 U	430 U	560 U	2,100 U	400 U	430 U	410 U	400 U	520 U	470 U
1,3-Dichlorobenzene	NA	NA	480 U	430 U	NA	NA	400 U	430 U	410 U	400 U	520 U	470 U
1,4-Dichlorobenzene	NA	NA	480 U	430 U	NA	NA	400 U	430 U	410 U	400 U	520 U	470 U
1,2-Dichlorobenzene	NA	NA	480 U	430 U	NA	NA	400 U	430 U	410 U	400 U	520 U	470 U
2-Methylphenol	NA	NA	480 U	430 U	560 U	2,100 U	400 U	430 U	410 U	400 U	520 U	470 U
2,2'-Oxybis(1-chloropropane)	NA	NA	480 U	430 U	560 U	2,100 U	400 U	430 U	410 U	400 U	520 U	470 U
4-Methylphenol	NA	NA	480 U	430 U	560 U	2,100 U	400 U	95 J	410 U	400 U	520 U	470 U
N-nitroso-di-n-propylamine	NA	NA	480 U	430 U	560 U	2,100 U	400 U	430 U	470	400 U	520 U	470 U
Hexachloroethane	NA	NA	480 U	430 U	560 U	2,100 U	400 U	430 U	410 U	400 U	520 U	470 U
Nitrobenzene	NA	NA	480 U	430 U	560 U	2,100 U	400 U	430 U	410 U	400 U	520 U	470 U
Isophorone	NA	NA	480 U	430 U	560 U	2,100 U	400 U	430 U	410 U	400 U	520 U	470 U
2-Nitrophenol	NA	NA	480 U	430 U	560 U	2,100 U	400 U	430 U	410 U	400 U	520 U	470 U
2,4-Dimethylphenol	NA	NA	480 U	430 U	560 U	2,100 U	400 U	430 U	410 U	400 U	520 U	470 U
Bis(2-chloroethoxy)methane	NA	NA	480 U	430 U	560 U	2,100 U	400 U	430 U	410 U	400 U	520 U	470 U
2,4-Dichlorophenol	NA	NA	480 U	430 U	560 U	2,100 U	400 U	430 U	410 U	400 U	520 U	470 U
1,2,4-Trichlorobenzene	NA	NA	480 U	430 U	NA	NA	400 U	430 U	410 U	400 U	520 U	470 U
Naphthalene	9.77	ND	140 J	220 J	560 U	360 J	400 U	1,100	570	1,100	520 U	470 U
4-Chloroaniline	NA	NA	480 U	430 U	560 U	2,100 U	400 U	430 U	410 U	400 U	520 U	470 U
Hexachlorobutadiene	NA	NA	480 U	430 U	560 U	2,100 U	400 U	430 U	410 U	400 U	520 U	470 U
4-Chloro-3-methylphenol	NA	NA	480 U	430 U	560 U	2,100 U	400 U	430 U	410 U	400 U	520 U	470 U
2-Methylnaphthalene	NA	NA	130 J	170 J	560 UJ	270 J	400 U	330 J	300 J	500	520 U	470 U
Hexachlorocyclopentadiene	NA	NA	480 UJ	430 UJ	560 U	2,100 U	400 U	430 UJ	410 UJ	400 UJ	520 U	470 U
2,4,6-Trichlorophenol	NA	NA	480 U	430 UJ	560 U	2,100 U	400 U	430 UJ	410 UJ	400 UJ	520 U	470 U
2,4,5-Trichlorophenol	NA	NA	1,200 U	1,000 UJ	1,400 U	5,300 U	970 U	1,000 UJ	990 UJ	960 UJ	1,300 U	1,100 U
2-Chloronaphthalene	NA	NA	480 U	430 UJ	560 U	2,100 U	400 U	430 UJ	410 UJ	400 UJ	520 U	470 U
2-Nitroaniline	NA	NA	1,200 U	1,000 UJ	1,400 U	5,300 U	970 U	1,000 UJ	990 UJ	960 UJ	1,300 U	1,100 U
Dimethylphthalate	NA	NA	480 U	430 UJ	560 U	2,100 U	400 U	430 UJ	410 UJ	400 UJ	520 U	470 U

Table 6

Summary of Historical Analytical Results
Pettibone Creek Investigation
North Chicago, Lake County, Illinois

Sample ID	Ditch-1A	Ditch-1B	SED 1-1	SED 1-2	SED1007	SED1008	X210	SED 2-1	SED 3-1	SED 3-2	SED 3C-1	SED 3C-2
Depth	0" - 6"	6" - 12"	0" - 12"	12" - 24"	0" - 6"	0" - 6"	0" - 6"	0" - 12"	0" - 12"	12" - 24"	0" - 12"	12" - 24"
Date	6/7/2000	6/7/2000	Jan-97	Jan-97	10/24/2000	10/24/2000	4/26/1994	Jan-97	Jan-97	Jan-97	Jan-97	Jan-97
Source	Carlson	Carlson	VL EE/CA	VL EE/CA	TN&A	TN&A	IEPA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA
Parameter	Section 1						Section 2					
Acenaphthylene	ND	332	260 J	210 J	560 U	470 J	400 U	150 J	170 J	260 J	520 U	470 U
2,6-Dinitrotoluene	NA	NA	480 U	430 UJ	560 U	2,100 U	400 U	430 UJ	410 UJ	400 UJ	520 U	470 U
3-Nitroaniline	NA	NA	1,200 U	1,000 UJ	1,400 U	5,300 U	970 U	1,000 UJ	990 UJ	960 UJ	1,300 U	1,100 U
Acenaphthene	339	180	140 J	340 J	560 U	980 J	400 U	4,400 J	2,500 J	1,400 J	520 U	470 U
2,4-Dinitrophenol	NA	NA	1,200 U	1,000 UJ	1,400 U	5,300 U	970 U	1,000 UJ	990 UJ	960 UJ	1,300 U	1,100 UJ
4-Nitrophenol	NA	NA	1,200 U	1,000 UJ	1,400 UJ	5,300 UJ	970 UJ	1,000 UJ	990 UJ	960 UJ	1,300 U	1,100 U
Dibenzofuran	NA	NA	130 J	210 J	560 U	590 J	400 U	2,300 J	1,100 J	770 J	520 U	470 U
2,4-Dinitrotoluene	NA	NA	480 U	430 UJ	560 U	2,100 U	400 U	430 UJ	410 UJ	400 UJ	520 U	470 U
Diethylphthalate	NA	NA	480 U	430 UJ	560 U	2,100 U	400 U	430 UJ	410 UJ	400 UJ	520 U	470 U
4-Chlorophenyl-phenylether	NA	NA	480 U	430 UJ	560 U	2,100 U	400 U	430 UJ	410 UJ	400 UJ	520 U	470 U
Fluorene	33.9	47.1	170 J	350 J	560 U	1,100 J	400 U	4,600 J	2,100 J	1,200 J	520 U	470 U
4-Nitroaniline	NA	NA	1,200 U	1,000 UJ	1,400 UJ	5,300 UJ	970 UJ	1,000 UJ	990 UJ	960 UJ	1,300 U	1,100 U
4,6-Dinitro-2-methylphenol	NA	NA	1,200 U	1,000 UJ	1,400 U	5,300 U	970 U	1,000 UJ	990 UJ	960 UJ	1,300 U	1,100 U
N-nitrosodiphenylamine	NA	NA	480 U	430 UJ	560 U	2,100 U	400 U	430 UJ	410 UJ	400 UJ	520 U	470 U
4-Bromophenyl-phenylether	NA	NA	480 U	430 UJ	560 U	2,100 U	400 U	430 UJ	410 UJ	400 UJ	520 U	470 U
Hexachlorobenzene	NA	NA	480 U	430 UJ	560 U	2,100 U	400 U	430 UJ	410 UJ	400 UJ	520 U	470 U
Pentachlorophenol	NA	NA	1,200 U	1,000 UJ	1,400 U	5,300 U	970 U	1,000 UJ	990 UJ	960 UJ	1,300 U	1,100 U
Phenanthrene	356	300	2,700	4,500 J	330 J	8,100	420.0	57,000 J	34,000 J	16,000 J	310 J	470 U
Anthracene	28.6	ND	720	970 J	61 J	2,300	400 U	9,700 J	5,000 J	2,300 J	520 U	470 U
Carbazole	NA	NA	310 J	450 J	61 J	1,300 J	400 U	5,600 J	3,400 J	1,500 J	520 U	470 U
Di-n-Butylphthalate	NA	NA	480 U	430 UJ	560 U	2,100 U	530 U	1,200 J	410 UJ	2,000 UJ	520 U	470 U
Fluoranthrene	470	382	4,100	5,700 J	440 J	10,000	750	70,000 J	39,000 J	20,000 J	700	470 U
Pyrene	366	285	5,000 J	4,700 J	460 J	9,100	730	26,000	21,000 J	11,000 J	550	470 U
Butylbenzylphthalate	NA	NA	1,200 J	62 J	82 J	240 J	400 U	290 J	77 J	400 UJ	520 U	470 U
3,3'-Dichlorobenzidine	NA	NA	480 UJ	430 UJ	560 UJ	2,100 UJ	400 U	430 UJ	410 UJ	400 UJ	520 U	470 U
Benzo(a)anthracene	202	34.8	3,500 J	2,700 J	210 J	4,700	410	18,000	11,000 J	6,200 J	300 J	470 U
Chrysene	271	235	7,700 J	4,000 J	370 J	5,900	490	21,000	16,000 J	8,700 J	360 J	470 U
bis(2-Ethylhexyl)phthalate	NA	NA	2,200 J	730 J	460 J	870 J	440	2,400	1,600 J	0.730 J	170 J	53 J
Di-n-Octylphthalate	NA	NA	480 U	430 U	560 U	2,100 U	400 U	160 J	410 UJ	400 UJ	520 U	470 U
Benzo(b)fluoranthene	243	198	10,000	2,400	510 J	7,200	400 U	33,000	15,000 J	8,300 J	610 X	470 U
Benzo(k)fluoranthene	108	ND	3,500	3,000	580	8,100	400 U	7,600	6,400 J	4,900 J	520 XJ	470 U
Benzo(a)pyrene	246	128	5,800	2,900	260 J	4,500	400 UJ	25,000	12,000 J	6,600 J	360 J	470 U
Indeno(1,2,3-cd)pyrene	128	101	650	2,100	280 J	3,200	400 U	9,700	4,900 J	2,400 J	220 J	470 U
Dibenzo(a,h)anthracene	44.1	145	480 U	430 U	87 J	1,100 J	400 U	430 U	410 UJ	2,000 UJ	520 U	470 U

Table 6

Summary of Historical Analytical Results
Pettibone Creek Investigation
North Chicago, Lake County, Illinois

Sample ID	Ditch-1A	Ditch-1B	SED 1-1	SED 1-2	SED1007	SED1008	X210	SED 2-1	SED 3-1	SED 3-2	SED 3C-1	SED 3C-2
Depth	0" - 6"	6" - 12"	0" - 12"	12" - 24"	0" - 6"	0" - 6"	0" - 6"	0" - 12"	0" - 12"	12" - 24"	0" - 12"	12" - 24"
Date	6/7/2000	6/7/2000	Jan-97	Jan-97	10/24/2000	10/24/2000	4/26/1994	Jan-97	Jan-97	Jan-97	Jan-97	Jan-97
Source	Carlson	Carlson	VL EE/CA	VL EE/CA	TN&A	TN&A	IEPA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA
Parameter	**Section 1**						**Section 2**					
Benzo(g,h,i)perylene	187	135	4,400	2,200	300 J	2,800	400 U	9,600	4,900 J	2,400 J	190 J	470 U
PESTICIDES/PCBs (units = µg/kg)												
alpha-BHC	NA	NA	12 U	11 U	2.9 U	3.4 J	2.1 U	11 U	10 U	10 U	0.27 U	2.4 U
beta-BHC	NA	NA	12 U	11 U	0.94 J	4.0 J	2.1 U	11 U	10 U	10 U	0.27 U	2.4 U
delta-BHC	NA	NA	12 U	11 U	2.9 UJ	4.2 J	2.1 U	11 U	10 U	10 U	0.19 JP	2.4 U
gamma-BHC (Lindane)	NA	NA	12 U	11 U	2.9 U	2.2 U	2.1 U	11 U	10 R	10 U	0.27 U	0.09 J
Heptachlor	NA	NA	12 U	11 U	2.9 U	2.2 U	2.1 U	11 U	10 R	10 U	0.27 U	0.22 J
Aldrin	NA	NA	12 U	11 U	2.9 U	2.2 U	2.1 U	11 U	10 R	10 U	0.14 JP	2.4 U
Heptachlor epoxide	NA	NA	12 U	11 U	7.3 J	2.4 J	2.1 U	11 U	10 U	10 U	0.29 JP	2.4 U
Endosulfan I	NA	NA	79 U	11 U	2.9 U	0.59 J	2.1 U	230	10 U	170	270 U	2.4 U
Dieldrin	NA	NA	24 U	22 U	5.6 U	5.2 J	0.6 JP	22 U	20 R	20 U	8.1 P	0.57 J
4,4'-DDE	NA	NA	82	52	11 J	11 J	4.1 U	220 U	150	150	13 P	4.7 U
Endrin	NA	NA	24 U	22 U	5.6 U	4.3 U	6.0 P	22 U	20 R	20 U	5.2 U	4.7 U
Endosulfan II	NA	NA	28	24 U	5.6 U	4.3 U	4.1 U	220 U	26	45	5.2 U	4.7 U
4,4'-DDD	NA	NA	51	37 U	3.6 J	7.2 J	5.7 P	35	130	130	5.2 U	4.7 U
Endosulfan sulfate	NA	NA	24 U	22 U	5.6 U	9.0 J	4.1 U	22 U	20 U	20 U	1.3 JP	4.7 U
4,4'-DDT	NA	NA	180	110	9.3 J	28 J	4.1 U	68	930	490	32 PB	4.7 U
Methoxychlor	NA	NA	120 U	110 U	29	53 J	21 U	110 U	100 U	100 U	4.6 JP	24 U
Endrin ketone	NA	NA	72	22 U	5.6 U	14 J	4.1 U	220 U	20	20 U	5.2 U	6.6
Endrin aldehyde	NA	NA	62	42	5.6 U	6.4 J	6.1 P	220	80	190	5.2 U	4.7 U
alpha-Chlordane	NA	NA	12 U	11 U	43 J	3.9 J	2.4	11 U	10 U	10 U	270 U	2.4 U
gamma-Chlordane	NA	NA	21	11 U	24	5.2 J	1.7 JP	14	10 U	10 U	4.9 P	2.4 U
Toxaphene	NA	NA	1,200 U	1,100 U	290 U	220 U	210 U	1,100 U	1,000 U	1,000 U	270 U	240 U
Aroclor-1016	ND	ND	24 U	22 U	56 U	43 U	41 U	220 U	200 U	200 U	52 U	47 U
Aroclor-1221	ND	ND	490 U	440 U	110 U	87 U	82 U	440 U	410 U	400 U	52 U	96 U
Aroclor-1232	ND	ND	24 U	22 U	56 U	43 U	41 U	220 U	200 U	200 U	52 U	47 U
Aroclor-1242	ND	ND	24 U	22 U	56 U	43 U	41 U	220 U	200 U	200 U	52 U	47 U
Aroclor-1248	ND	ND	24 U	22 U	56 U	43 U	41 U	220 U	200 U	200 U	52 U	47 U
Aroclor-1254	ND	ND	24 U	22 U	56 U	43 U	69.0	2,200 U	2,000 U	200 U	52 U	47 U
Aroclor-1260	36.5	42.6	590	300	56 U	43 U	41 U	120 J	1,100	2,000	180	47 U
INORGANICS (units = mg/kg)												
Aluminum	6610 G	6410 G	8,420	7,000	8,050	4,450	10,100	3,050	6,250	7,820	9,180	14,200
Antimony	ND	ND	1.6 J	1.5 J	0.95 J	1.9 J	ND	0.65 J	2.4 J	7.0 J	6.1 B	1.5 B
Arsenic	15.1	11.3	22.4	38	13.2	34.9	8.5 J	2.5	15.8	14	18.6	9.9

Table 6

Summary of Historical Analytical Results
Pettibone Creek Investigation
North Chicago, Lake County, Illinois

Sample ID	Ditch-1A	Ditch-1B	SED 1-1	SED 1-2	SED1007	SED1008	X210	SED 2-1	SED 3-1	SED 3-2	SED 3C-1	SED 3C-2
Depth	0" - 6"	6" - 12"	0" - 12"	12" - 24"	0" - 6"	0" - 6"	0" - 6"	0" - 12"	0" - 12"	12" - 24"	0" - 12"	12" - 24"
Date	6/7/2000	6/7/2000	Jan-97	Jan-97	10/24/2000	10/24/2000	4/26/1994	Jan-97	Jan-97	Jan-97	Jan-97	Jan-97
Source	Carlson	Carlson	VL EE/CA	VL EE/CA	TN&A	TN&A	IEPA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA
Parameter	**Section 1**						**Section 2**					
Barium	46	49.9	56.6	55.4	221	85.1	96.1	39.7	78.3	78.3198	120	58.4
Beryllium	ND	1.96	1	0.77	0.62 J	0.81 J	0.9 B	2.2	1.1	0.87	1.5	0.62
Cadmium	2.24	1.76	3.8	4	0.61 J	4.3	ND	1.7	2.6	8.4	6.6	23.1
Calcium	24,500 G	32,900 G	41,100 J	37,400 J	48,700	50,900	83,800	58,300	34,600	29,500 J	36,000	43,400
Chromium	17.1 B	22.9 B	21.3	16	16.4	16.2	17.0	40.1	27.7	27.8	28.4	21
Cobalt	9.39	9.08	9.6	10	14.6	10.0	8.1 B	5.4	9.7	11.1	9.2 B	9.7 B
Copper	322 G	1070 G	534	388	73.4	406	69.8	247	538	688	3,100	72
Iron	18,400 G	18,600 G	19,900	19,000	26,600	15,300	19,300	12,900	17,100	18,800	19,400	22,500
Lead	399 G	684 G	544	431	47.3	393	48.2	259	522	730	1,550	204
Magnesium	14,700 G	18,700 G	24,200	22,000	26,500	24,500	44,300	27,000	19,300	16,600	19,600	21,800
Manganese	385 G	439 G	433	502	2,410 J	666 J	616.0	351	564	554	1,520	403
Mercury	NA	NA	1.3	1.6	0.070 J	0.68 J	ND	0.07	1.2	4.3	4.5	0.14 U
Nickel	24.3	41.8	31.6 J	25.9 J	32.6 J	30.7 J	26.1	22.2 J	44.9 J	51.1 J	50.6	23.9
Potassium	1760 G	1,500 G	1,140 J	1,120 J	1,520 J	1,180 J	2,880	427 J	1,020 J	952 J	2,080	3,370
Selenium	2.14 G	1.95 G	1.1	1.2	0.93 U	3.8	ND	0.57 U	1.4	3.7 J	1.4 U	1.9
Silver	ND	ND	0.97	0.81	0.47 J	1.3 J	ND	0.22 U	2.1	4.9	2.0 B	0.55 U
Sodium	133 G	278 G	244	206	228 J	317 J	658.0 B	1,240	334	293	407	426 B
Thallium	ND	ND	0.98 U	0.86 U	1.9 U	2.3 U	0.3 B	0.86 U	0.82 U	0.83 U	2.9 U	2.8 U
Vanadium	22.3	21	20.9	17.9	21.8	13.2	21.2	9.2	17.1	20.7	25.4	34.5
Zinc	1690	3,810 G	2,200	1,700	462	2,470	820.0	2,070	1,640	1,650	4,910	6,890
Cyanide	0.621 B	5.53 B	NA	NA	0.49 U	0.58 U	ND	NA	NA	NA	NA	NA

Table 6

Summary of Historical Analytical Results
Pettibone Creek Investigation
North Chicago, Lake County, Illinois

Sample ID	SED3C-3	SED 4-1	SED 4-2	SED 4-3	SED 5-1	SED6-1	SED 7-1	SED 7-2	SED-7-3	SED 7-4	SED 7-5
Depth	42" - 48"	0" - 12"	12" - 24"	42" - 48"	0" - 12"	0" - 12"	0" - 12"	12" - 24"	24" - 48"	48" - 72"	48" - 72"
Date	Apr-97	Jan-97	Jan-97	Apr-97	Jan-97	Jan-97	Jan-97	Jan-97	Apr-97	Apr-97	Apr-97
Source	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA
Parameter	Section 2 (cont.)										
VOLATILES (units = µg/kg)											
Chloromethane	NA	14 U	12 U	NA	18 U	14 U	55 U	NA	NA	NA	NA
Bromomethane	NA	14 U	12 U	NA	18 U	14 U	55 U	NA	NA	NA	NA
Vinyl Chloride	NA	14 U	12 U	NA	18 U	14 U	55 U	NA	NA	NA	NA
Chloroethane	NA	19	38	NA	18 U	14 U	55 U	NA	NA	NA	NA
Methylene Chloride	NA	14 U	12 UJ	NA	4 J	14 U	55 U	NA	NA	NA	NA
Acetone	NA	10 J	12 UJ	NA	100 BU	14 U	55 U	NA	NA	NA	NA
Carbon Disulfide	NA	14 U	12 U	NA	18 U	14 U	55 U	NA	NA	NA	NA
1,1-Dichloroethene	NA	14 U	12 U	NA	18 U	14 U	55 U	NA	NA	NA	NA
1,1-Dichloroethane	NA	14 U	51	NA	18 U	14 U	55 U	NA	NA	NA	NA
1,2-Dichloroethene (total)	NA	14 U	12 U	NA	4 J	10 U	71	NA	NA	NA	NA
cis-1,2-Dichloroethene	NA	NR	NR	NA	NR	NR	NR	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	NA	14 U	12 U	NA	18 U	14 U	55 U	NA	NA	NA	NA
1,2-Dichloroethane	NA	14 U	12 U	NA	18 U	14 U	55 U	NA	NA	NA	NA
2-Butanone	NA	14 U	12 U	NA	18 U	14 U	55 U	NA	NA	NA	NA
1,1,1-Trichloroethane	NA	14 U	29 U	NA	18 U	14 U	55 U	NA	NA	NA	NA
Carbon tetrachloride	NA	14 U	12 U	NA	18 U	14 U	55 U	NA	NA	NA	NA
Bromodichloromethane	NA	14 U	12 U	NA	18 U	14 U	55 U	NA	NA	NA	NA
1,2-Dichloropropane	NA	14 U	12 U	NA	18 U	14 U	55 U	NA	NA	NA	NA
Cis-1,3-dichloropropane	NA	14 U	12 U	NA	18 U	14 U	55 U	NA	NA	NA	NA
Trichloroethene	NA	14 U	12 U	NA	2 J	9 J	55 U	NA	NA	NA	NA
Dibromochloromethane	NA	14 U	12 U	NA	18 U	14 U	55 U	NA	NA	NA	NA
1,1,2-Trichloroethane	NA	14 U	12 U	NA	18 U	14 U	55 U	NA	NA	NA	NA
Benzene	NA	6 J	16	NA	18 U	14 U	55 U	NA	NA	NA	NA
Trans-1,3-dichloropropane	NA	14 U	12 U	NA	18 U	14 U	55 U	NA	NA	NA	NA
Bromoform	NA	14 U	12 U	NA	18 U	14 U	55 U	NA	NA	NA	NA
4-Methyl-2-Pentanone	NA	14 U	12 U	NA	18 U	14 U	55 U	NA	NA	NA	NA
2-Hexanone	NA	14 U	12 U	NA	18 U	14 U	55 U	NA	NA	NA	NA
Tetrachloroethane	NA	14 U	12 U	NA	18 U	14 U	55 U	NA	NA	NA	NA
Tetrachloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	NA	14 U	12 U	NA	18 U	14 U	55 U	NA	NA	NA	NA
Toluene	NA	6 J	12	NA	18 U	14 U	55 U	NA	NA	NA	NA

Table 6

Summary of Historical Analytical Results
Pettibone Creek Investigation
North Chicago, Lake County, Illinois

Sample ID	SED3C-3	SED 4-1	SED 4-2	SED 4-3	SED 5-1	SED6-1	SED 7-1	SED 7-2	SED-7-3	SED 7-4	SED 7-5
Depth	42" - 48"	0" - 12"	12" - 24"	42" - 48"	0" - 12"	0" - 12"	0" - 12"	12" - 24"	24" - 48"	48" - 72"	48" - 72"
Date	Apr-97	Jan-97	Jan-97	Apr-97	Jan-97	Jan-97	Jan-97	Jan-97	Apr-97	Apr-97	Apr-97
Source	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA
Parameter	Section 2 (cont.)										
Chlorobenzene	NA	14 U	12 U	NA	18 U	14 U	55 U	NA	NA	NA	NA
Ethylbenzene	NA	14 U	12 U	NA	18 U	14 U	55 U	NA	NA	NA	NA
Styrene	NA	14 U	7 J	NA	18 U	14 U	55 U	NA	NA	NA	NA
Xylene (total)	NA	14 U	12 U	NA	18 U	14	55 U	NA	NA	NA	NA
SEMIVOLATILES (units = µg/kg)											
Phenol	BAL	440 U	400 U	BAL	610 U	12,000 U	540 UJ	490 U	BAL	BAL	BAL
Bis(2-chloroethyl)ether	BAL	440 U	400 U	BAL	610 U	12,000 U	540 UJ	490 U	BAL	BAL	BAL
2-Chlorophenol	BAL	440 U	400 U	BAL	610 U	12,000 U	540 UJ	490 U	BAL	BAL	BAL
1,3-Dichlorobenzene	BAL	440 U	400 U	BAL	610 U	12,000 U	540 UJ	490 U	BAL	BAL	BAL
1,4-Dichlorobenzene	BAL	440 U	400 U	BAL	610 U	12,000 U	540 UJ	490 U	BAL	BAL	BAL
1,2-Dichlorobenzene	BAL	440 U	400 U	BAL	610 U	12,000 U	540 UJ	490 U	BAL	BAL	BAL
2-Methylphenol	BAL	440 U	400 U	BAL	610 U	12,000 U	540 UJ	490 U	BAL	BAL	BAL
2,2'-Oxybis(1-chloropropane)	BAL	440 U	400 U	BAL	610 U	12,000 U	540 UJ	490 U	BAL	BAL	BAL
4-Methylphenol	BAL	160 J	400 U	BAL	250 J	12,000 U	540 UJ	490 U	BAL	BAL	BAL
N-nitroso-di-n-propylamine	BAL	440 U	400 U	BAL	610 U	12,000 U	540 UJ	490 U	BAL	BAL	BAL
Hexachloroethane	BAL	440 U	400 U	BAL	610 U	12,000 U	540 UJ	490 U	BAL	BAL	BAL
Nitrobenzene	BAL	440 UJ	400 U	BAL	610 U	12,000 U	540 UJ	490 U	BAL	BAL	BAL
Isophorone	BAL	440 UJ	400 U	BAL	610 U	12,000 U	540 UJ	490 U	BAL	BAL	BAL
2-Nitrophenol	BAL	440 UJ	400 U	BAL	610 U	12,000 U	540 UJ	490 U	BAL	BAL	BAL
2,4-Dimethylphenol	BAL	440 UJ	400 U	BAL	610 U	12,000 U	540 UJ	490 U	BAL	BAL	BAL
Bis(2-chloroethoxy)methane	BAL	440 UJ	400 U	BAL	610 U	12,000 U	540 UJ	490 U	BAL	BAL	BAL
2,4-Dichlorophenol	BAL	440 UJ	400 U	BAL	610 U	12,000 U	540 UJ	490 U	BAL	BAL	BAL
1,2,4-Trichlorobenzene	BAL	440 UJ	400 U	BAL	610 U	12,000 U	540 UJ	490 U	BAL	BAL	BAL
Naphthalene	BAL	230 J	120 J	BAL	110 J	12,000 U	110 J	99 J	BAL	BAL	BAL
4-Chloroaniline	BAL	440 UJ	400 UJ	BAL	610 U	12,000 U	540 UJ	490 U	BAL	BAL	BAL
Hexachlorobutadiene	BAL	440 UJ	400 UJ	BAL	610 U	12,000 U	540 UJ	490 U	BAL	BAL	BAL
4-Chloro-3-methylphenol	BAL	440 UJ	400 UJ	BAL	610 U	12,000 U	540 UJ	490 U	BAL	BAL	BAL
2-Methylnaphthalene	BAL	140 J	77 J	BAL	72 J	12,000 U	61 J	490 U	BAL	BAL	BAL
Hexachlorocyclopentadiene	BAL	440 UJ	400 UJ	BAL	610 U	12,000 U	540 UJ	490 U	BAL	BAL	BAL
2,4,6-Trichlorophenol	BAL	440 UJ	400 UJ	BAL	610 U	12,000 U	540 UJ	490 U	BAL	BAL	BAL
2,4,5-Trichlorophenol	BAL	1,100 UJ	960 UJ	BAL	1,500 U	31,000 U	1,300 UJ	1,200 U	BAL	BAL	BAL
2-Chloronaphthalene	BAL	440 UJ	400 UJ	BAL	610 U	12,000 U	540 UJ	490 U	BAL	BAL	BAL
2-Nitroaniline	BAL	1,100 UJ	960 UJ	BAL	1,500 U	31,000 U	1,300 UJ	1,200 U	BAL	BAL	BAL
Dimethylphthalate	BAL	440 UJ	400 UJ	BAL	610 U	12,000 U	540 UJ	490 U	BAL	BAL	BAL

Table 6

Summary of Historical Analytical Results
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Sample ID	SED3C-3	SED 4-1	SED 4-2	SED 4-3	SED 5-1	SED6-1	SED 7-1	SED 7-2	SED-7-3	SED 7-4	SED 7-5
Depth	42" - 48"	0" - 12"	12" - 24"	42" - 48"	0" - 12"	0" - 12"	0" - 12"	12" - 24"	24" - 48"	48" - 72"	48" - 72"
Date	Apr-97	Jan-97	Jan-97	Apr-97	Jan-97	Jan-97	Jan-97	Jan-97	Apr-97	Apr-97	Apr-97
Source	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA
Parameter	**Section 2 (cont.)**										
Acenaphthylene	BAL	130 J	98 J	BAL	610 U	12,000 U	540 UJ	490 U	BAL	BAL	BAL
2,6-Dinitrotoluene	BAL	440 UJ	400 UJ	BAL	610 U	12,000 U	540 UJ	490 U	BAL	BAL	BAL
3-Nitroaniline	BAL	1,100 UJ	960 UJ	BAL	1,500 U	31,000 U	1,300 UJ	1,200 U	BAL	BAL	BAL
Acenaphthene	BAL	230 J	210 J	BAL	230 J	12,000 U	310 J	490 U	BAL	BAL	BAL
2,4-Dinitrophenol	BAL	1,100 UJ	960 UJ	BAL	1,500 U	31,000 U	1,300 UJ	1,200 U	BAL	BAL	BAL
4-Nitrophenol	BAL	1,100 UJ	960 UJ	BAL	1,500 U	31,000 U	1,300 UJ	1,200 U	BAL	BAL	BAL
Dibenzofuran	BAL	440 UJ	140 J	BAL	130 J	12,000 U	260 J	140 J	BAL	BAL	BAL
2,4-Dinitrotoluene	BAL	440 UJ	400 UJ	BAL	610 U	12,000 U	540 UJ	490 U	BAL	BAL	BAL
Diethylphthalate	BAL	440 UJ	400 UJ	BAL	610 U	12,000 U	540 UJ	490 U	BAL	BAL	BAL
4-Chlorophenyl-phenylether	BAL	440 UJ	400 UJ	BAL	610 U	12.000 U	540 UJ	490 U	BAL	BAL	BAL
Fluorene	BAL	420 J	410 J	BAL	200 J	12,000 U	560 J	260 J	BAL	BAL	BAL
4-Nitroaniline	BAL	1,100 UJ	960 UJ	BAL	1,500 U	31,000 U	1,300 UJ	1,200 U	BAL	BAL	BAL
4,6-Dinitro-2-methylphenol	BAL	1,100 UJ	960 UJ	BAL	1,500 U	31,000 U	1,300 UJ	1,200 U	BAL	BAL	BAL
N-nitrosodiphenylamine	BAL	440 UJ	400 UJ	BAL	610 U	12,000 U	540 UJ	490 U	BAL	BAL	BAL
4-Bromophenyl-phenylether	BAL	440 UJ	400 UJ	BAL	610 U	12,000 U	540 UJ	490 U	BAL	BAL	BAL
Hexachlorobenzene	BAL	440 UJ	400 UJ	BAL	610 U	12,000 U	540 UJ	490 U	BAL	BAL	BAL
Pentachlorophenol	BAL	1,100 UJ	960 UJ	BAL	1,500 U	31,000 U	1,300 UJ	1,200 U	BAL	BAL	BAL
Phenanthrene	BAL	2,200 J	4,000 J	BAL	2,000	12,000 U	2,500 J	3,900	BAL	BAL	BAL
Anthracene	BAL	470 J	740 J	BAL	320 J	12,000 U	510 J	580	BAL	BAL	BAL
Carbazole	BAL	320 J	450 J	BAL	280 J	12,000 U	420 J	380 J	BAL	BAL	BAL
Di-n-Butylphthalate	BAL	440 UJ	400 UJ	BAL	120 J	12,000 U	57 J	490 U	BAL	BAL	BAL
Fluoranthrene	BAL	4,500 J	6,800 J	BAL	2,600	1,400 J	3,600 J	6,200 E	BAL	BAL	BAL
Pyrene	BAL	3,400 J	4,900 J	BAL	2,800	1,100 J	610 J	4,200 E	BAL	BAL	BAL
Butylbenzylphthalate	BAL	440 UJ	400 UJ	BAL	610 U	12,000 U	230 J	51 J	BAL	BAL	BAL
3,3'-Dichlorobenzidine	BAL	440 UJ	400 UJ	BAL	610 U	12,000 U	540 UJ	490 U	BAL	BAL	BAL
Benzo(a)anthracene	1,000	1,300 J	2,100 J	2,200	1,200	12,000 U	1,500 J	1,900	1,300	1,100	940
Chrysene	BAL	2,200 J	2,900 J	BAL	1,700	12,000 U	1,100 J	2,400	BAL	BAL	BAL
bis(2-Ethylhexyl)phthalate	BAL	11,000 J	3,600 J	BAL	3,800 B	38,000	1,100 J	480 J	BAL	BAL	BAL
Di-n-Octylphthalate	BAL	440 U	400 U	BAL	610 U	12,000 U	540 UJ	490 U	BAL	BAL	BAL
Benzo(b)fluoranthene	1,800	1,600	1,900	2,700	2,000 X	1,100 JX	1,100 J	3,500 X	1,600	1,200	1,300
Benzo(k)fluoranthene	BAL	1,400	1,800	BAL	1,900 X	1,100 JX	620 J	3,000 X	BAL	BAL	BAL
Benzo(a)pyrene	1,200	1,400	2,000	1,900	1,100	12,000 U	120 J	2,000	1,200	980	960
Indeno(1,2,3-cd)pyrene	980	530	990	1,500	770	12,000 U	88 J	930	BAL	BAL	BAL
Dibenzo(a,h)anthracene	180 J	2,200 UJ	400 U	300 J	190 J	12,000 U	140 J	150 J	BAL	BAL	BAL

Table 6

Summary of Historical Analytical Results
Pettibone Creek Investigation
North Chicago, Lake County, Illinois

Sample ID	SED3C-3	SED 4-1	SED 4-2	SED 4-3	SED 5-1	SED6-1	SED 7-1	SED 7-2	SED-7-3	SED 7-4	SED 7-5
Depth	42" - 48"	0" - 12"	12" - 24"	42" - 48"	0" - 12"	0" - 12"	0" - 12"	12" - 24"	24" - 48"	48" - 72"	48" - 72"
Date	Apr-97	Jan-97	Jan-97	Apr-97	Jan-97	Jan-97	Jan-97	Jan-97	Apr-97	Apr-97	Apr-97
Source	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA
Parameter	Section 2 (cont.)										
Benzo(g,h,i)perylene	BAL	550	1,000	BAL	870	12,000 U	540 UJ	710	BAL	BAL	BAL
PESTICIDES/PCBs (units = µg/kg)											
alpha-BHC	NA	11 U	10 U	NA	3.1 U	2.3 U	2.8 U	2.5 U	NA	NA	NA
beta-BHC	NA	11 U	10 U	NA	3.1 U	2.3 U	2.8 U	2.5 U	NA	NA	NA
delta-BHC	NA	11 U	10 U	NA	3.1 U	2.3 U	2.8 UJ	1.1 JP	NA	NA	NA
gamma-BHC (Lindane)	NA	11 U	10 U	NA	3.1 U	2.3 U	2.8 UJ	2.5 U	NA	NA	NA
Heptachlor	NA	11 U	10 U	NA	3.1 U	2.3 U	4.2	3.1	NA	NA	NA
Aldrin	NA	11 U	10 U	NA	3.1 U	0.64 JP	2.3 J	2.5 U	NA	NA	NA
Heptachlor epoxide	NA	34	14	NA	0.69 JP	2.3 U	2.8 U	1.5 JP	NA	NA	NA
Endosulfan I	NA	14	10 U	NA	3.1 U	2.3 U	2.8 U	2.5 U	NA	NA	NA
Dieldrin	NA	22 U	20 U	NA	6.1 U	0.78 JP	26 J	18 P	NA	NA	NA
4,4'-DDE	NA	22 U	20 U	NA	1.9 JP	4.4 U	8.1	9.8	NA	NA	NA
Endrin	NA	22 U	20 U	NA	6.1 U	5.9 P	5.4 U	4.9 U	NA	NA	NA
Endosulfan II	NA	22 U	20 U	NA	6.1 U	5.4 P	5.4 U	4.9 U	NA	NA	NA
4,4'-DDD	NA	33	20 U	NA	6.1 U	4.4 U	9.1	4.9 U	NA	NA	NA
Endosulfan sulfate	NA	22 U	20 U	NA	6.1 U	4.4 U	4.4 U	4.9 U	NA	NA	NA
4,4'-DDT	NA	22 U	20 U	NA	6.1 U	1.8 JP	12	4.9 U	NA	NA	NA
Methoxychlor	NA	110 U	100 U	NA	72 P	18 JP	12 J	5.8 JP	NA	NA	NA
Endrin ketone	NA	22 U	20 U	NA	6.1 U	0.64 JP	11	4.9 U	NA	NA	NA
Endrin aldehyde	NA	35	20 U	NA	0.30 JP	6.1 P	2.2 J	4.9 U	NA	NA	NA
alpha-Chlordane	NA	11 U	10 U	NA	12	2.1 JP	12 U	0.017	NA	NA	NA
gamma-Chlordane	NA	11 U	10 U	NA	3.1 U	1.8 JP	2.8 U	22 P	NA	NA	NA
Toxaphene	NA	1,100 U	1,000 U	NA	310 U	230 U	280 U	250 U	NA	NA	NA
Aroclor-1016	NA	220 U	200 U	NA	61 U	44 U	54 U	49 U	NA	NA	NA
Aroclor-1221	NA	450 U	400 U	NA	120 U	90 U	110 U	100 U	NA	NA	NA
Aroclor-1232	NA	220 U	200 U	NA	61 U	44 U	54 U	49 U	NA	NA	NA
Aroclor-1242	NA	220 U	200 U	NA	61 U	44 U	54 U	49 U	NA	NA	NA
Aroclor-1248	NA	220 U	200 U	NA	61 U	44 U	54 U	49 U	NA	NA	NA
Aroclor-1254	NA	2,000	860	NA	840 Y	44 U	54 U	49 U	NA	NA	NA
Aroclor-1260	NA	220 U	200 U	NA	61 U	44 U	54 U	150	NA	NA	NA
INORGANICS (units = mg/kg)											
Aluminum	NA	4,300	5,180	NA	9,420	6,210	8,790	8,760	NA	NA	NA
Antimony	NA	4.4 J	3.4 J	NA	1.7 U	3.9	2.2	1.5 U	NA	NA	NA
Arsenic	NA	8.7	9.4	NA	12	6.6 J	12.4 J	11.2 J	NA	NA	NA

Table 6

Summary of Historical Analytical Results
Pettibone Creek Investigation
North Chicago, Lake County, Illinois

Sample ID	SED3C-3	SED 4-1	SED 4-2	SED 4-3	SED 5-1	SED6-1	SED 7-1	SED 7-2	SED-7-3	SED 7-4	SED 7-5
Depth	42" - 48"	0" - 12"	12" - 24"	42" - 48"	0" - 12"	0" - 12"	0" - 12"	12" - 24"	24" - 48"	48" - 72"	48" - 72"
Date	Apr-97	Jan-97	Jan-97	Apr-97	Jan-97	Jan-97	Jan-97	Jan-97	Apr-97	Apr-97	Apr-97
Source	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA	VL EE/CA
Parameter	Section 2 (cont.)										
Barium	NA	48.1	46.4	NA	202	120	85.6	80.4	NA	NA	NA
Beryllium	NA	0.38	0.35	NA	2.2	0.6	0.84	3	NA	NA	NA
Cadmium	NA	3.2	1.6	NA	4.8	2.3	1.3	0.37 U	NA	NA	NA
Calcium	NA	26,200	63,800 J	NA	46,700	68,900	52,100	42,800	NA	NA	NA
Chromium	NA	13.6	13.1	NA	39.7	24.3	47.5	20	NA	NA	NA
Cobalt	NA	6.8	6.9	NA	10.3 B	8.9	7.8	7.7	NA	NA	NA
Copper	NA	970	707	NA	1.65	1,420	378	554	NA	NA	NA
Iron	NA	12,500	17,000		25,100	20,400	20,000	19,000	NA	NA	NA
Lead	BAL	683	784	BAL	1,040	1,040	854	506	BAL	BAL	BAL
Magnesium	NA	15,000	23,000	NA	25,550	36,600	28,100	22,000	NA	NA	NA
Manganese	NA	221	348	NA	426	379 J	310 J	408	NA	NA	NA
Mercury	NA	6.5	4.4	NA	1.3	0.54	0.4	0.26	NA	NA	NA
Nickel	NA	23.3 J	20.0 J	NA	74.1	31	31.1	36.1	NA	NA	NA
Potassium	NA	658 J	888 J	NA	1,840 B	946	1,580 J	1,180 J	NA	NA	NA
Selenium	NA	0.74	0.59 U	NA	2.2 U	1.5 U	1.6 U	1.8 U	NA	NA	NA
Silver	NA	3.3	0.44	NA	2.7 B	0.98	0.921	0.73 U	NA	NA	NA
Sodium	NA	402	499	NA	2,670	1,090	914	2,110	NA	NA	NA
Thallium	NA	0.90 U	0.90 U	NA	4.3 U	3	3.2 U	3.7 U	NA	NA	NA
Vanadium	NA	12.8	14.7	NA	22.8	15.2	23.9	16.1	NA	NA	NA
Zinc	NA	2,200	2,540	NA	5,270	4,890	1,230	4,270 J	NA	NA	NA
Cyanide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 6

Summary of Historical Analytical Results
Pettibone Creek Investigation
North Chicago, Lake County, Illinois

Sample ID	X208	X209	SED-300A	SED-300B	SED-600A	SED-600B	SED-900A	SED-900B	SED1001	SED1002	SED1003
Depth	0" - 6"	8" - 9"	0" - 6"	6" - 12"	0" - 6"	6" - 12"	0" - 6"	6" - 12"	Surface	Surface	0" - 6"
Date	4/26/1994	4/26/1994	6/7/2000	6/7/2000	6/7/2000	6/7/2000	6/7/2000	6/7/2000	10/24/2000	10/24/2000	10/24/2000
Source	IEPA	IEPA	Carlson	Carlson	Carlson	Carlson	Carlson	Carlson	TN&A	TN&A	TN&A
Parameter	Section 3										
VOLATILES (units = µg/kg)											
Chloromethane	13 U	12 U	ND	ND	ND	ND	ND	ND	12 U	14 U	12 U
Bromomethane	13 U	12 U	ND	ND	ND	ND	ND	ND	12 U	14 U	12 U
Vinyl Chloride	13 U	30	88.2	92	5.26	34.7	ND	ND	12 U	14 U	12 U
Chloroethane	13 U	12 U	ND	ND	ND	ND	ND	ND	12 U	14 U	12 U
Methylene Chloride	13 U	12 U	23.2 G	17.4 G	88.7 G	190 G	30.5 G	169 G	2 J	2 J	2 J
Acetone	5.0 J	5 J	ND	ND	ND	ND	ND	ND	12 U	14 U	12 U
Carbon Disulfide	13 U	12 U	5.7 G	ND	10.2 G	27.2 G	ND	ND	12 UJ	14 UJ	12 UJ
1,1-Dichloroethene	13 U	12 U	ND	ND	ND	ND	ND	ND	12 U	14 U	12 U
1,1-Dichloroethane	13 U	12 U	ND	ND	ND	ND	ND	ND	12 U	14 U	12 U
1,2-Dichloroethene (total)	25.0	25	NA	NA	NA	NA	NA	NA	NR	NR	NR
cis-1,2-Dichloroethene	NR	NR	184	80.4	30.6	ND	ND	70.5	12 U	14 U	2 J
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	NA	ND	ND	ND	ND	ND	ND	12 U	14 U	12 U
Chloroform	13 U	12 U	ND	ND	ND	ND	ND	ND	12 U	14 U	12 U
1,2-Dichloroethane	13 U	12 U	ND	ND	ND	ND	ND	ND	12 U	14 U	12 U
2-Butanone	13 UJ	12 UJ	ND	ND	ND	ND	ND	ND	12 U	14 U	12 U
1,1,1-Trichloroethane	13 U	12 U	ND	ND	ND	ND	ND	ND	12 U	14 U	12 U
Carbon tetrachloride	13 U	12 U	ND	ND	ND	ND	ND	ND	12 U	14 U	12 U
Bromodichloromethane	13 U	12 U	ND	ND	ND	ND	ND	ND	12 U	14 U	12 U
1,2-Dichloropropane	13 U	12 U	ND	ND	ND	ND	ND	ND	12 U	14 U	12 U
Cis-1,3-dichloropropane	13 U	12 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
Trichloroethene	8.0 J	12 U	5.58	ND	14.3	7.69	ND	24.7	2 J	2 J	6 J
Dibromochloromethane	13 U	12 U	ND	ND	ND	ND	ND	ND	12 U	14 U	12 U
1,1,2-Trichloroethane	13 U	12 U	ND	ND	ND	ND	ND	ND	12 U	14 U	12 U
Benzene	13 U	12 U	ND	ND	ND	ND	ND	ND	12 U	14 U	12 U
Trans-1,3-dichloropropane	13 U	12 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
Bromoform	13 U	12 U	ND	ND	ND	ND	ND	ND	12 U	14 U	12 U
4-Methyl-2-Pentanone	13 U	12 U	ND	ND	ND	ND	ND	ND	12 U	14 U	12 U
2-Hexanone	13 UJ	12 UJ	ND	ND	ND	ND	ND	ND	12 U	14 U	12 U
Tetrachloroethane	NA	NA	NA	NA	NA	NA	NA	NA	12 U	14 U	12 U
Tetrachloroethene	13 U	12 U	336	47.6	25.8	18.4	106	ND	NA	NA	NA
1,1,2,2-Tetrachloroethane	13 U	12 U	ND	ND	ND	ND	ND	ND	12 U	14 U	12 U
Toluene	13 U	12 U	ND	ND	ND	ND	ND	ND	12 U	14 U	12 U

Table 6

Summary of Historical Analytical Results
Pettibone Creek Investigation
North Chicago, Lake County, Illinois

Sample ID	X208	X209	SED-300A	SED-300B	SED-600A	SED-600B	SED-900A	SED-900B	SED1001	SED1002	SED1003
Depth	0" - 6"	8" - 9"	0" - 6"	6" - 12"	0" - 6"	6" - 12"	0" - 6"	6" - 12"	Surface	Surface	0" - 6"
Date	4/26/1994	4/26/1994	6/7/2000	6/7/2000	6/7/2000	6/7/2000	6/7/2000	6/7/2000	10/24/2000	10/24/2000	10/24/2000
Source	IEPA	IEPA	Carlson	Carlson	Carlson	Carlson	Carlson	Carlson	TN&A	TN&A	TN&A
Parameter	Section 3										
Chlorobenzene	13 U	12 U	ND	ND	ND	ND	ND	ND	12 U	14 U	12 U
Ethylbenzene	13 U	12 U	ND	ND	ND	ND	ND	ND	12 U	14 U	12 U
Styrene	13 U	12 U	ND	ND	ND	ND	ND	ND	12 U	14 U	12 U
Xylene (total)	13 U	12 U	ND	ND	ND	ND	ND	ND	12 U	14 U	12 U
SEMIVOLATILES (units = µg/kg)											
Phenol	410 U	390 U	NA	NA	NA	NA	NA	NA	810 U	900 U	800 U
Bis(2-chloroethyl)ether	410 U	390 U	NA	NA	NA	NA	NA	NA	810 U	900 U	800 U
2-Chlorophenol	410 U	390 U	NA	NA	NA	NA	NA	NA	810 U	900 U	800 U
1,3-Dichlorobenzene	410 U	390 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	410 U	390 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	410 U	390 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	410 U	390 U	NA	NA	NA	NA	NA	NA	810 U	900 U	800 U
2,2'-Oxybis(1-chloropropane)	410 U	390 U	NA	NA	NA	NA	NA	NA	810 U	900 U	800 U
4-Methylphenol	410 U	390 U	NA	NA	NA	NA	NA	NA	810 U	900 U	800 U
N-nitroso-di-n-propylamine	410 U	390 U	NA	NA	NA	NA	NA	NA	810 U	900 U	800 U
Hexachloroethane	410 U	390 U	NA	NA	NA	NA	NA	NA	810 U	900 U	800 U
Nitrobenzene	410 U	390 U	NA	NA	NA	NA	NA	NA	810 U	900 U	800 U
Isophorone	410 U	390 U	NA	NA	NA	NA	NA	NA	810 U	900 U	800 U
2-Nitrophenol	410 U	390 U	NA	NA	NA	NA	NA	NA	810 U	900 U	800 U
2,4-Dimethylphenol	410 U	390 U	NA	NA	NA	NA	NA	NA	810 U	900 U	800 U
Bis(2-chloroethoxy)methane	410 U	390 U	NA	NA	NA	NA	NA	NA	810 U	900 U	800 U
2,4-Dichlorophenol	410 U	390 U	NA	NA	NA	NA	NA	NA	810 U	900 U	800 U
1,2,4-Trichlorobenzene	410 U	390 U	ND	ND	ND	ND	ND	5.12 G	NA	NA	NA
Naphthalene	410 U	390 U	ND	500	ND	ND	ND	ND	810 U	900 U	480 J
4-Chloroaniline	410 UJ	390 UJ	NA	NA	NA	NA	NA	NA	810 U	900 U	800 U
Hexachlorobutadiene	410 U	390 U	NA	NA	NA	NA	NA	NA	810 U	900 U	800 U
4-Chloro-3-methylphenol	410 U	390 U	NA	NA	NA	NA	NA	NA	810 U	900 U	800 U
2-Methylnaphthalene	410 U	93 J	NA	NA	NA	NA	NA	NA	810 UJ	900 UJ	250 J
Hexachlorocyclopentadiene	410 U	390 U	NA	NA	NA	NA	NA	NA	810 U	900 U	800 U
2,4,6-Trichlorophenol	410 U	390 U	NA	NA	NA	NA	NA	NA	810 U	900 U	800 U
2,4,5-Trichlorophenol	1000 U	960 U	NA	NA	NA	NA	NA	NA	2,000 U	2,300 U	2,000 U
2-Chloronaphthalene	410 U	390 U	NA	NA	NA	NA	NA	NA	810 U	900 U	800 U
2-Nitroaniline	1000 U	960 U	NA	NA	NA	NA	NA	NA	2,000 U	2,300 U	2,000 U
Dimethylphthalate	410 U	390 U	NA	NA	NA	NA	NA	NA	810 U	900 U	800 U

Table 6

Summary of Historical Analytical Results
Pettibone Creek Investigation
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Sample ID	X208	X209	SED-300A	SED-300B	SED-600A	SED-600B	SED-900A	SED-900B	SED1001	SED1002	SED1003
Depth	0" - 6"	8" - 9"	0" - 6"	6" - 12"	0" - 6"	6" - 12"	0" - 6"	6" - 12"	Surface	Surface	0" - 6"
Date	4/26/1994	4/26/1994	6/7/2000	6/7/2000	6/7/2000	6/7/2000	6/7/2000	6/7/2000	10/24/2000	10/24/2000	10/24/2000
Source	IEPA	IEPA	Carlson	Carlson	Carlson	Carlson	Carlson	Carlson	TN&A	TN&A	TN&A
Parameter	Section 3										
Acenaphthylene	410 U	390 U	ND	1140	ND	ND	ND	ND	810 U	900 U	800 U
2,6-Dinitrotoluene	410 U	390 U	NA	NA	NA	NA	NA	NA	810 U	900 U	800 U
3-Nitroaniline	1000 UJ	960 UJ	NA	NA	NA	NA	NA	NA	2,000 U	2,300 U	2,000 U
Acenaphthene	410 U	390 U	2060	8780	1140	656	ND	3170	410 J	220 J	2,800 J
2,4-Dinitrophenol	1000 U	960 U	NA	NA	NA	NA	NA	NA	2,000 U	2,300 U	2,000 U
4-Nitrophenol	1000 U	960 U	NA	NA	NA	NA	NA	NA	2,000 UJ	2,300 UJ	2,000 UJ
Dibenzofuran	410 U	390 U	NA	NA	NA	NA	NA	NA	230 J	120 J	1,700
2,4-Dinitrotoluene	410 U	390 U	NA	NA	NA	NA	NA	NA	810 U	900 U	800 U
Diethylphthalate	410 U	390 U	NA	NA	NA	NA	NA	NA	810 U	900 U	800 U
4-Chlorophenyl-phenylether	410 U	390 U	NA	NA	NA	NA	NA	NA	810 U	900 U	800 U
Fluorene	410 U	390 U	356	2000	168	72.2	ND	594	530 J	320 J	3,200
4-Nitroaniline	1000 UJ	960 UJ	NA	NA	NA	NA	NA	NA	2,000 UJ	2,300 UJ	2,000 UJ
4,6-Dinitro-2-methylphenol	1000 U	960 U	NA	NA	NA	NA	NA	NA	2,000 U	2,300 U	2,000 U
N-nitrosodiphenylamine	410 U	390 U	NA	NA	NA	NA	NA	NA	810 U	900 U	800 U
4-Bromophenyl-phenylether	410 U	390 U	NA	NA	NA	NA	NA	NA	810 U	900 U	800 U
Hexachlorobenzene	410 U	390 U	NA	NA	NA	NA	NA	NA	810 U	900 U	800 U
Pentachlorophenol	1000 U	960 U	NA	NA	NA	NA	NA	NA	2,000 U	2,300 U	2,000 U
Phenanthrene	410 U	130 J	2930	12300	1270	597	ND	3900	4,000	2,800	15,000
Anthracene	410 U	390 U	451	1410	157	55.2	ND	478	780 J	590 J	3,700
Carbazole	410 U	390 U	NA	NA	NA	NA	NA	NA	610 J	420 J	2,600 J
Di-n-Butylphthalate	410 U	390 U	NA	NA	NA	NA	NA	NA	810 U	900 U	800 U
Fluoranthrene	410 U	390 U	3240	10100	1540	971	ND	4220	4,900	3,500	13,000
Pyrene	410 U	390 U	2300	6860	1150	679	ND	2870	4,300	3,300	13,000 J
Butylbenzylphthalate	410 U	390 U	NA	NA	NA	NA	NA	NA	500 J	900 U	800 U
3,3'-Dichlorobenzidine	410 U	390 U	NA	NA	NA	NA	NA	NA	810 UJ	900 UJ	800 UJ
Benzo(a)anthracene	410 U	390 U	1240	3760	594	355	ND	1560	1,900	1,600	5,900
Chrysene	410 U	390 U	1440	5020	855	483	ND	2110	2,400	1,900	5,800
bis(2-Ethylhexyl)phthalate	410 U	390 U	NA	NA	NA	NA	NA	NA	1,000	740 J	1700
Di-n-Octylphthalate	410 U	390 U	NA	NA	NA	NA	NA	NA	810 U	900 U	800 U
Benzo(b)fluoranthene	410 U	390 U	1070	3870	613	372	ND	1660	3,100	2,400	7,200
Benzo(k)fluoranthene	410 U	390 U	500	1720	266	162	ND	730	3,500	2,800	8,100
Benzo(a)pyrene	410 U	390 U	1130	3760	594	350	ND	1670	2,000	1,500	4,900
Indeno(1,2,3-cd)pyrene	410 U	390 U	498	1600	272	173	ND	911	1,400	1,000	180 J
Dibenzo(a,h)anthracene	410 U	390 U	187	900	107	70.3	ND	380	430 J	400 J	1,100

Table 6

Summary of Historical Analytical Results
Pettibone Creek Investigation
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Sample ID	X208	X209	SED-300A	SED-300B	SED-600A	SED-600B	SED-900A	SED-900B	SED1001	SED1002	SED1003
Depth	0" - 6"	8" - 9"	0" - 6"	6" - 12"	0" - 6"	6" - 12"	0" - 6"	6" - 12"	Surface	Surface	0" - 6"
Date	4/26/1994	4/26/1994	6/7/2000	6/7/2000	6/7/2000	6/7/2000	6/7/2000	6/7/2000	10/24/2000	10/24/2000	10/24/2000
Source	IEPA	IEPA	Carlson	Carlson	Carlson	Carlson	Carlson	Carlson	TN&A	TN&A	TN&A
Parameter	Section 3										
Benzo(g,h,i)perylene	410 U	390 U	757	2520	423	271	ND	1200	1,300	1,000	3,000
PESTICIDES/PCBs (units = µg/kg)											
alpha-BHC	2.1 U	2.1 U	ND	ND	ND	ND	ND	ND	2.1U	2.3 U	2.0 U
beta-BHC	2.1 U	2.1 U	ND	ND	ND	ND	ND	ND	8.1 J	4.3 J	10 J
delta-BHC	2.1 U	2.1 U	ND	ND	ND	ND	ND	ND	0.86 J	2.3 UJ	2.0 UJ
gamma-BHC (Lindane)	2.1 U	2.1 U	ND	ND	ND	ND	ND	ND	2.1 U	2.3 U	2.0 U
Heptachlor	2.1 U	2.1 U	ND	ND	ND	ND	ND	ND	2.1 U	2.3 U	2.0 U
Aldrin	2.1 U	2.1 U	ND	ND	ND	ND	ND	ND	2.1 U	2.3 U	2.0 U
Heptachlor epoxide	2.1 U	2.1 U	ND	ND	ND	ND	ND	ND	0.70 J	2.3 U	4.2 J
Endosulfan I	2.1 U	2.1 U	ND	ND	ND	ND	ND	ND	2.1 U	2.3 U	2.0 U
Dieldrin	4.2 U	4.1 U	ND	ND	ND	ND	ND	ND	2.2 J	2.1 J	8.1 J
4,4'-DDE	4.2 U	4.1 U	ND	ND	ND	ND	ND	ND	3.7 J	2.7 J	8.6 J
Endrin	0.4 JP	0.7 JP	ND	ND	ND	ND	ND	ND	11 J	4.5 U	50 J
Endosulfan II	4.2 U	4.1 U	ND	ND	ND	ND	ND	ND	4.1 U	4.5 U	4.0 U
4,4'-DDD	4.2 U	4.1 U	ND	ND	ND	ND	ND	ND	2.2 J	1.6 J	5.2 J
Endosulfan sulfate	4.2 U	4.1 U	ND	ND	ND	ND	ND	ND	9.0 J	3.8 J	40 J
4,4'-DDT	0.5 JP	0.7 JP	ND	ND	ND	ND	ND	ND	4.1 UJ	4.5 UJ	4.0 UJ
Methoxychlor	21 U	21 U	ND	ND	ND	ND	ND	ND	21 U	23 U	42 J
Endrin ketone	4.2 U	4.1 U	NA	NA	NA	NA	NA	NA	7.3 J	2.9 J	33 J
Endrin aldehyde	0.2 JP	4.1 U	ND	ND	ND	ND	ND	ND	2.3 J	4.5 U	8.2 J
alpha-Chlordane	2.1 U	2.1 U	NR	NR	NR	NR	NR	NR	2.1 U	2.3 U	2.0 U
gamma-Chlordane	2.1 U	2.1 U	NR	NR	NR	NR	NR	NR	1.1 J	1.3 J	2.3 J
Toxaphene	210 U	210 U	ND	ND	ND	ND	ND	ND	210 U	230 U	200 U
Aroclor-1016	42 U	12 J	ND	ND	ND	ND	ND	ND	41 U	45 U	40 U
Aroclor-1221	85 U	82 U	ND	ND	ND	ND	ND	ND	83 U	92 U	80 U
Aroclor-1232	42 U	41 U	ND	ND	ND	ND	ND	ND	41 U	45 U	40 U
Aroclor-1242	42 U	41 U	ND	ND	ND	ND	ND	ND	41 U	45 U	40 U
Aroclor-1248	42 U	41 U	ND	ND	ND	ND	ND	ND	41 U	45 U	40 U
Aroclor-1254	42 U	41 U	ND	ND	ND	ND	ND	ND	41 U	45 U	40 U
Aroclor-1260	10 J	11 J	53.1	44.4	54.9	46.9	ND	ND	41 U	45 U	40 U
INORGANICS (units = mg/kg)											
Aluminum	12,800	16,000	6,080 G	6,910 G	5,220 G	7,860 G	1,620 G	2,880 G	2,500	2,790	2,430
Antimony	ND	ND	ND	ND	ND	ND	ND	ND	0.83 U	0.75 U	0.83 U
Arsenic	17.5 J	7.1 J	ND	3.82	ND	ND	ND	ND	4.5	3.2	5.3

Table 6

Summary of Historical Analytical Results
Pettibone Creek Investigation
North Chicago, Lake County, Illinois

Sample ID	X208	X209	SED-300A	SED-300B	SED-600A	SED-600B	SED-900A	SED-900B	SED1001	SED1002	SED1003
Depth	0" - 6"	8" - 9"	0" - 6"	6" - 12"	0" - 6"	6" - 12"	0" - 6"	6" - 12"	Surface	Surface	0" - 6"
Date	4/26/1994	4/26/1994	6/7/2000	6/7/2000	6/7/2000	6/7/2000	6/7/2000	6/7/2000	10/24/2000	10/24/2000	10/24/2000
Source	IEPA	IEPA	Carlson	Carlson	Carlson	Carlson	Carlson	Carlson	TN&A	TN&A	TN&A
Parameter	Section 3										
Barium	104	68.6	42.1	52.2	31	ND	34.3	ND	31.5	26.9	116
Beryllium	11.2	1.3	ND	ND	ND	ND	ND	0.578	3.1 J	3.5 J	1.3 J
Cadmium	1.5	ND	0.773	0.663	0.65	1.74	ND	ND	0.58 J	10.9	1.1 J
Calcium	85,700	76,000	160,000 G	243,000 G	144,000 G	61,300 G	38,100 G	72,500 G	106,000	71,200	98,200
Chromium	42.2	25.3	10.6 B	16.4 B	20.4 B	18.8 B	13.6 B	33.8 B	12.4	19.3	11.7
Cobalt	13.5	11.5	6.89	19.1	6.38	11.2	8.22	6.44	3.2	3.7	4.3
Copper	2,530	106	426 G	174 G	254 G	353 G	18.6 G	238 G	452	430	319
Iron	36,700	23,700	29,100 G	21,100 G	28,200 G	15,900 G	5,760 G	10,800 G	10,800	12,200	12,500
Lead	1,840	46.9	517	202 G	234 G	298 G	9.96 G	229 G	168	211	283
Magnesium	38,500	39,500	86,100 G	118,000 G	78,300 G	31,700 G	19,300 G	36,600 G	60,700	39,400	52,800
Manganese	1,110	541	556 G	276 G	501 G	308 G	397 G	415 G	693 J	532 J	613 J
Mercury	0.2	1.1	NA	NA	NA	NA	NA	NA	0.25 J	0.23 J	1.5 J
Nickel	107.0	36.1	21.2 G	22.9	22.1	28.6	19.4	20.8	23.8 J	27.7 J	21.9 J
Potassium	1,680	4,700	404 G	406 G	434 G	397 G	837 G	482 G	415 J	353 J	421 J
Selenium	2.2 J	ND	2.45 G	0.928 G	0.865 G	1.11 G	0.685 G	0.639 G	0.90 U	0.81 U	0.90 U
Silver	ND	ND	ND	ND	ND	2.68 G	ND	ND	0.80 J	0.92 J	1.2 J
Sodium	5,540	700 B	491 G	210 G	438 G	258 G	209 G	503 G	1,680 J	1,740 J	946 J
Thallium	0.2 B	0.5 B	ND	ND	ND	ND	ND	ND	1.8 U	1.7 U	1.8 U
Vanadium	22.4	29.7	12.8	12.9	17.8	11.2	19.4	11.4	6.0	5.6	7.6
Zinc	17,000	614	1,870 G	607 G	1,560	1,100	73.6	1,320	2,930	6,180	2,870
Cyanide	ND	ND	0.427 B	0.427 B	0.433 B	0.573 B	0.447 B	0.387 B	0.47 U	0.43 U	0.48 U

Table 6

Summary of Historical Analytical Results
Pettibone Creek Investigation
North Chicago, Lake County, Illinois

Sample ID	SED1004	SED1004DUP	SED1005	SED1006	X201	X202	X203	X204	X205	X206	X207
Depth	Surface	Surface	0" - 2"	0" - 2"	4" - 8"	4" - 6"	6" - 16"	16" - 18"	16" - 18"	4" - 8"	0" - 6"
Date	10/24/2000	10/24/2000	10/24/2000	10/24/2000	4/26/1994	4/26/1994	4/26/1994	4/26/1994	4/26/1994	4/26/1994	4/26/1994
Source	TN&A	TN&A	TN&A	TN&A	IEPA	IEPA	IEPA	IEPA	IEPA	IEPA	IEPA
Parameter	Section 3 (cont.)				Section 4						
VOLATILES (units = µg/kg)											
Chloromethane	12 U	12 U	11 U	12 U	14 U	14 U	13 U	15 U	15 U	13 U	16 U
Bromomethane	12 U	12 U	11 U	12 U	14 U	14 U	13 U	15 U	15 U	13 U	16 U
Vinyl Chloride	12 U	12 U	11 U	12 U	14 U	14 U	13 U	15 U	15 U	13 U	16 U
Chloroethane	12 U	12 U	11 U	12 U	14 U	14 U	13 U	15 U	15 U	13 U	16 U
Methylene Chloride	2 J	2 J	3 J	3 J	14 U	14 U	35 B	15 U	15 U	13 U	16 U
Acetone	12 U	12 U	11 U	12 U	23.0	12 J	26	16	24 J	7 J	46 J
Carbon Disulfide	12 UJ	12 U	11 UJ	12 UJ	4 J	14 U	13 U	15 U	4 J	4 J	4 J
1,1-Dichloroethene	12 U	12 U	11 U	12 U	14 U	14 U	13 U	15 U	15 U	13 U	16 U
1,1-Dichloroethane	12 U	12 U	11 U	12 U	14 U	14 U	13 U	15 U	15 U	13 U	16 U
1,2-Dichloroethene (total)	NR	NR	NR	NR	14 U	14 U	13 U	15 U	15 U	13 U	34
cis-1,2-Dichloroethene	5 J	2 J	11 U	12 U	NR	NR	NR	NR	NR	NR	NR
1,1,2-Trichloro-1,2,2-trifluoroethane	12 U	12 U	2 J	2 J	NA	NA	NA	NA	NA	NA	NA
Chloroform	12 U	12 U	11 U	12 U	14 UJ	14 U	13 U	15 U	15 U	13 U	16 U
1,2-Dichloroethane	12 U	12 U	11 U	12 U	14 U	14 UJ	13 U	15 U	15 U	13 U	16 U
2-Butanone	12 U	12 U	11 U	12 U	13.0 J	5 J	20	7 J	6 J	13 UJ	31 J
1,1,1-Trichloroethane	12 U	12 U	11 U	12 U	14 U	14 U	13	15 U	15 U	13 U	16 U
Carbon tetrachloride	12 U	12 U	11 U	12 U	14 UJ	14 UJ	13 U	15 U	15 U	13 U	16 U
Bromodichloromethane	12 U	12 U	11 U	12 U	14 U	14 U	13 U	15 U	15 U	13 U	16 U
1,2-Dichloropropane	12 U	12 U	11 U	12 U	14 U	14 U	13 U	15 U	15 U	13 U	16 U
Cis-1,3-dichloropropane	NR	NR	NR	NR	14 U	14 U	13 U	15 U	15 U	13 U	16 U
Trichloroethene	5 J	3 J	11 U	12 U	14 U	14 U	13 U	15 U	15 U	13 U	13 J
Dibromochloromethane	12 U	12 U	11 U	12 U	14 U	14 U	13 U	15 U	15 U	13 U	16 U
1,1,2-Trichloroethane	12 U	12 U	11 U	12 U	14 U	14 U	13 U	15 U	15 U	13 U	16 U
Benzene	12 U	12 U	11 U	12 U	14 U	14 U	13 U	15 U	15 U	13 U	16 U
Trans-1,3-dichloropropane	NR	NR	NR	NR	14 U	14 U	13 U	15 U	15 U	13 U	16 U
Bromoform	12 U	12 U	11 U	12 U	14 U	14 U	13 U	15 U	15 U	13 U	16 U
4-Methyl-2-Pentanone	12 U	12 U	11 U	12 U	14 U	14 U	13 U	15 U	15 U	13 U	3 J
2-Hexanone	12 U	12 U	11 U	12 U	14 UJ	14 UJ	13 U	15 U	15 UJ	13 UJ	16 UJ
Tetrachloroethane	1 J	12 U	1 J	12 U	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	NA	NA	NA	NA	14 U	14 U	13 U	15 U	15 U	13 U	21
1,1,2,2-Tetrachloroethane	12 U	12 U	11 U	12 U	14 U	14 U	13 U	15 U	15 U	13 U	4 J
Toluene	12 U	12 U	11 U	12 U	14 U	14 U	4 J	15 U	15 U	13 U	12 J

Table 6

Summary of Historical Analytical Results
Pettibone Creek Investigation
North Chicago, Lake County, Illinois

Sample ID	SED1004	SED1004DUP	SED1005	SED1006	X201	X202	X203	X204	X205	X206	X207
Depth	Surface	Surface	0" - 2"	0" - 2"	4" - 8"	4" - 6"	6" - 16"	16" - 18"	16" - 18"	4" - 8"	0" - 6"
Date	10/24/2000	10/24/2000	10/24/2000	10/24/2000	4/26/1994	4/26/1994	4/26/1994	4/26/1994	4/26/1994	4/26/1994	4/26/1994
Source	TN&A	TN&A	TN&A	TN&A	IEPA	IEPA	IEPA	IEPA	IEPA	IEPA	IEPA
Parameter	Section 3 (cont.)				Section 4						
Chlorobenzene	12 U	12 U	11 U	12 U	14 U	14 U	13 U	15 U	15 U	13 U	16 U
Ethylbenzene	12 U	12 U	11 U	12 U	14 U	14 U	13 U	15 U	15 U	13 U	6 J
Styrene	12 U	12 U	11 U	12 U	14 U	14 U	13 U	15 U	15 U	13 U	3 J
Xylene (total)	12 U	12 U	11 U	12 U	14 U	14 U	6 J	15 U	15 U	13 U	33
SEMIVOLATILES (units = µg/kg)											
Phenol	380 U	390 U	380 U	380 U	450 U	440 U	420 U	1,900 U	2,000 U	420 U	2,100 U
Bis(2-chloroethyl)ether	380 U	390 U	380 U	380 U	450 U	440 U	420 U	1,900 U	2,000 U	420 U	2,100 U
2-Chlorophenol	380 U	390 U	380 U	380 U	450 U	440 U	420 U	1,900 U	2,000 U	420 U	2,100 U
1,3-Dichlorobenzene	NA	NA	NA	NA	450 U	440 U	420 U	1,900 U	2,000 U	420 U	2,100 U
1,4-Dichlorobenzene	NA	NA	NA	NA	450 U	440 U	420 U	1,900 U	2,000 U	420 U	2,100 U
1,2-Dichlorobenzene	NA	NA	NA	NA	450 U	440 U	420 U	1,900 U	2,000 U	420 U	2,100 U
2-Methylphenol	380 U	390 U	380 U	380 U	450 U	440 U	420 U	1,900 U	2,000 U	420 U	2,100 U
2,2'-Oxybis(1-chloropropane)	380 U	390 U	380 U	380 U	450 U	440 U	420 U	1,900 U	2,000 U	420 U	2,100 U
4-Methylphenol	380 U	390 U	380 U	380 U	450 U	440 U	420 U	1,900 U	2,000 U	420 U	820 J
N-nitroso-di-n-propylamine	380 U	390 U	380 U	380 U	450 U	440 U	420 U	1,900 U	2,000 U	420 U	2,100 U
Hexachloroethane	380 U	390 U	380 U	380 U	450 U	440 U	420 U	1,900 U	2,000 U	420 U	2,100 U
Nitrobenzene	380 U	390 U	380 U	380 U	450 U	440 U	420 U	1,900 U	2,000 U	420 U	2,100 U
Isophorone	380 U	390 U	380 U	380 U	450 U	440 U	420 U	1,900 U	2,000 U	420 U	2,100 U
2-Nitrophenol	380 U	390 U	380 U	380 U	450 U	440 U	420 U	1,900 U	2,000 U	420 U	2,100 U
2,4-Dimethylphenol	380 U	390 U	380 U	380 U	450 U	440 U	420 U	1,900 U	2,000 U	420 U	2,100 U
Bis(2-chloroethoxy)methane	380 U	390 U	380 U	380 U	450 U	440 U	420 U	1,900 U	2,000 U	420 U	2,100 U
2,4-Dichlorophenol	380 U	390 U	380 U	380 U	450 U	440 U	420 U	1,900 U	2,000 U	420 U	2,100 U
1,2,4-Trichlorobenzene	NA	NA	NA	NA	450 U	440 U	420 U	1,900 U	2,000 U	420 U	2,100 U
Naphthalene	380 U	390 U	380 U	58 J	130 J	170 J	600	1,900 U	2,000 U	300 J	2,100 U
4-Chloroaniline	380 U	390 U	380 U	380 U	450 U	440 U	420 UJ	1,900 UJ	2,000 UJ	420 U	2,100 U
Hexachlorobutadiene	380 U	390 U	380 U	380 U	450 U	440 U	420 U	1,900 U	2,000 U	420 U	2,100 U
4-Chloro-3-methylphenol	380 U	390 U	380 U	380 U	450 U	440 U	420 U	1,900 U	2,000 U	420 U	2,100 U
2-Methylnaphthalene	380 UJ	390 UJ	380 UJ	73 J	110 J	160 J	310 J	1,900 U	2,000 U	120 J	2,100 U
Hexachlorocyclopentadiene	380 U	390 U	380 U	380 U	450 U	440 U	420 U	1,900 U	2,000 U	420 U	2,100 U
2,4,6-Trichlorophenol	380 U	390 U	380 U	380 U	450 U	440 U	420 U	1,900 U	2,000 U	420 U	2,100 U
2,4,5-Trichlorophenol	960 U	980 U	940 U	970 U	1,100 U	1,100 U	1,000 U	4,700 U	4,900 U	1,000 U	5,000 U
2-Chloronaphthalene	380 U	390 U	380 U	380 U	450 U	440 U	420 U	1,900 U	2,000 U	420 U	2,100 U
2-Nitroaniline	960 U	980 U	940 U	970 U	1,100 U	1,100 U	1,000 U	4,700 U	4,900 U	1,000 U	5,000 U
Dimethylphthalate	380 U	390 U	380 U	380 U	450 U	440 U	420 U	1,900 U	2,000 U	420 U	2,100 U

Table 6

Summary of Historical Analytical Results
Pettibone Creek Investigation
North Chicago, Lake County, Illinois

Sample ID	SED1004	SED1004DUP	SED1005	SED1006	X201	X202	X203	X204	X205	X206	X207
Depth	Surface	Surface	0" - 2"	0" - 2"	4" - 8"	4" - 6"	6" - 16"	16" - 18"	16" - 18"	4" - 8"	0" - 6"
Date	10/24/2000	10/24/2000	10/24/2000	10/24/2000	4/26/1994	4/26/1994	4/26/1994	4/26/1994	4/26/1994	4/26/1994	4/26/1994
Source	TN&A	TN&A	TN&A	TN&A	IEPA	IEPA	IEPA	IEPA	IEPA	IEPA	IEPA
Parameter	Section 3 (cont.)				Section 4						
Acenaphthylene	380 U	390 U	380 U	380 U	450 U	120 J	420 U	1,900 U	2,000 U	420 U	2,100 U
2,6-Dinitrotoluene	380 U	390 U	380 U	380 U	450 U	440 U	420 U	1,900 U	2,000 U	420 U	2,100 U
3-Nitroaniline	960 U	980 U	940 U	970 U	1,100 U	1,100 U	1,000 UJ	4,700 UJ	4,900 UJ	1,000 U	5,000 UJ
Acenaphthene	50 J	50 J	380 U	150 J	730	440 U	850	1,900 U	2,000 U	530	2,100 U
2,4-Dinitrophenol	960 U	980 U	940 U	970 U	1,100 U	1,100 U	1,000 U	4,700 U	4,900 U	1,000 U	5,000 U
4-Nitrophenol	960 UJ	980 UJ	940 UJ	970 UJ	1,100 UJ	1,100 J	1,000 UJ	4,700 U	4,900 UJ	1,000 UJ	5,000 U
Dibenzofuran	380 U	390 U	380 U	260 J	510	130 J	600	1,900 U	2,000 U	330 J	2,100 U
2,4-Dinitrotoluene	380 U	390 U	380 U	380 U	450 U	440 U	420 U	1,900 U	2,000 U	420 U	2,100 U
Diethylphthalate	380 U	390 U	380 U	380 U	450 U	440 U	420 U	1,900 U	2,000 U	420 U	2,100 U
4-Chlorophenyl-phenylether	380 U	390 U	380 U	380 U	450 U	440 U	420 U	1,900 U	2,000 U	420 U	2,100 U
Fluorene	110 J	59 J	380 U	190 J	680	220 J	980	1,900 U	2,000 U	420 U	2,100 U
4-Nitroaniline	960 UJ	980 UJ	940 UJ	970 UJ	1,100 UJ	1,100 UJ	1,000 UJ	4,700 UJ	4,900 UJ	1,000 UJ	5,000 U
4,6-Dinitro-2-methylphenol	960 U	980 U	940 U	970 U	1,100 U	1,100 U	1,000 U	4,700 U	4,900 U	1,000 U	2,100 U
N-nitrosodiphenylamine	380 U	390 U	380 U	380 U	450 U	440 U	420 U	1,900 U	2,000 U	420 U	2,100 U
4-Bromophenyl-phenylether	380 U	390 U	380 U	380 U	450 U	440 U	420 U	1,900 U	2,000 U	420 U	2,100 U
Hexachlorobenzene	380 U	390 U	380 U	380 U	450 U	440 U	420 U	1,900 U	2,000 U	420 U	2,100 U
Pentachlorophenol	960 U	980 U	940 U	970 U	1,100 U	1,100 U	1,000 U	4,700 U	4,900 U	1,000 U	5,000 U
Phenanthrene	1,100	410	460	2,500	45,000 U	1,100	5,700	3,100	3,100	4,800	5,000
Anthracene	400	83 J	95 J	510	840	220 J	1,200	1,900 U	2,000 U	670	2,100 U
Carbazole	110 J	67 J	79 J	380 J	950	220 J	1,500	1,900 U	2,000 U	1,200	2,100 U
Di-n-Butylphthalate	380 U	390 U	380 U	380 U	740	960	980.0 B	1,100 J	1,300 J	680 U	1,100 J
Fluoranthrene	1,600	460	670	2,100	3,100	1,600	2,000	3,000	3,100	7,200	6,700
Pyrene	1,400	430	600	2,100	45,000 U	1,400	1,100	2,400	2,800	6,100	4,600
Butylbenzylphthalate	400	390 U	380 U	380 U	420 J	440 U	420 U	1,900 U	2,000 U	420 U	2,100 U
3,3'-Dichlorobenzidine	380 UJ	390 UJ	380 UJ	380 UJ	450 U	440 U	420 U	1,900 U	2,000 U	420 U	2,100 UJ
Benzo(a)anthracene	700	160 J	250 J	1,000	2,200	880	420 U	1,700 J	2,000 U	3,400	2,700
Chrysene	740	220 J	320 J	1,200	2,300	870	3,800	1,900 U	2,000 U	3,500 J	3,300
bis(2-Ethylhexyl)phthalate	490	400	360 J	740	300,000	560	420 U	1,900 U	2,000 U	12,000	22,000
Di-n-Octylphthalate	55 J	40 J	59 J	60 J	23,000 J	440 U	420 UJ	1,900 UJ	2,000 UJ	420 UJ	2,100 U
Benzo(b)fluoranthene	970	300 J	410	1,300	450 U	730	420 U	1,900 U	2,000 U	420 U	4,300
Benzo(k)fluoranthene	1,100	340 J	460	1,500	2,300	440 U	3,500	1,900 U	2,000 U	420 U	2,800
Benzo(a)pyrene	630	180 J	260 J	720	450 U	440 U	2,500	1,900 U	2,000 U	2,100	3,200
Indeno(1,2,3-cd)pyrene	450	130 J	190 J	520	450 U	440 UJ	420 U	1,900 U	2,000 U	420 U	2,100 U
Dibenzo(a,h)anthracene	180 J	390 U	57 J	200 J	450 U	440 U	420 UJ	1,900 UJ	2,000 UJ	420 U	2,100 U

Table 6

Summary of Historical Analytical Results
Pettibone Creek Investigation
North Chicago, Lake County, Illinois

Sample ID	SED1004	SED1004DUP	SED1005	SED1006	X201	X202	X203	X204	X205	X206	X207
Depth	Surface	Surface	0" - 2"	0" - 2"	4" - 8"	4" - 6"	6" - 16"	16" - 18"	16" - 18"	4" - 8"	0" - 6"
Date	10/24/2000	10/24/2000	10/24/2000	10/24/2000	4/26/1994	4/26/1994	4/26/1994	4/26/1994	4/26/1994	4/26/1994	4/26/1994
Source	TN&A	TN&A	TN&A	TN&A	IEPA	IEPA	IEPA	IEPA	IEPA	IEPA	IEPA
Parameter	**Section 3 (cont.)**				**Section 4**						
Benzo(g,h,i)perylene	480	190 J	260 J	490	450 U	440 U	420 U	1,900 U	2,000 U	420 U	2,100 U
PESTICIDES/PCBs (units = µg/kg)											
alpha-BHC	2.0 U	2.0 U	1.9 U	2.0 U	2.3 U	1.2 J	5.5 P	25 U	26 U	6.0 P	2.4 U
beta-BHC	3.9 J	2.9 J	5.3 J	1.3 J	2.3 U	2.3 U	2.2 U	25 U	26 U	2.2 U	2.4 U
delta-BHC	2.0 UJ	2.0 UJ	1.9 UJ	2.0 UJ	2.3 U	2.3 U	2.2 U	120 P	26 U	2.2 U	2.4 U
gamma-BHC (Lindane)	2.0 U	2.0 U	1.9 U	2.0 U	2.3 U	2.3 U	2.2 U	25 U	26 U	2.2 U	2.4 U
Heptachlor	2.0 U	2.0 U	1.9 U	2.0 U	1.3 J	2.3 U	2.2 U	25 U	26 U	2.2 U	2.4 U
Aldrin	2.0 U	2.0 U	1.9 U	2.0 U	2.3 U	2.3 U	2.2 U	25 U	26 U	2.2 U	2.4 U
Heptachlor epoxide	2.0 U	2.0 U	1.9 U	2.0 U	2.3 U	4.0 P	2.2 U	25 U	26 U	2.2 U	2.4 U
Endosulfan I	2.0 U	2.0 U	1.9 U	2.0 U	2.3 U	2.3 U	2.2 U	25 U	30.0	2.2 U	2.4 U
Dieldrin	3.8 U	3.9 U	1.6 J	3.8 U	4.8 P	9.8 P	12 P	36 JP	25 JP	64 PD	5.8 P
4,4'-DDE	1.0 J	1.5 J	8.6	1.2 J	4.5 U	41.0	350	230 P	260 P	360	4.7 U
Endrin	3.8 U	3.9 U	3.8 U	3.8 U	33 P	9.7 P	82.0 PD	210 P	210 P	220 PD	53 P
Endosulfan II	3.8 U	3.9 U	3.8 U	3.8 U	12	4.4 U	4.3 U	49 U	51 U	4.2 U	17
4,4'-DDD	3.8 UJ	3.9 UJ	1.7 J	3.8 UJ	26 P	59.0	610	3,300	3,200	460 P	53 P
Endosulfan sulfate	2.3 J	3.9 U	2.1 J	1.4 J	4.5 U	4.4 U	4.3 U	49 U	51 U	4.2 U	4.7 U
4,4'-DDT	3.8 UJ	3.9 UJ	3.8 UJ	3.8 UJ	42	71	190	170	310	170 PD	69 P
Methoxychlor	20 U	20 U	19 U	20 U	23	23 U	22 U	250 U	260 U	22 U	24 U
Endrin ketone	2.5 J	3.9 U	3.7 J	3.8 U	4.5 U	4.4 U	4.3 U	49 U	51 U	4.2 U	4.7 U
Endrin aldehyde	1.2 J	3.9 U	3.8 U	3.8 U	4.5 U	4.4 U	4.3 U	96 P	51 U	4.2 U	4.7 U
alpha-Chlordane	2.0 U	2.0 U	1.9 U	0.85 J	1.1 JP	29.0	19.0	84.0	26 U	16	12 P
gamma-Chlordane	1.8 J	0.52 J	0.87 J	0.54 J	2.3 U	16 P	21.0 P	36 P	30 P	2.2 U	8.5 P
Toxaphene	200 U	200 U	190 U	200 U	230 U	230 U	220 U	2,500 U	2,600 U	220 U	240 U
Aroclor-1016	38 U	39 U	38 U	38 U	45 U	44 U	43 U	1,300	1,600	680 P	47 U
Aroclor-1221	77 U	79 U	76 U	78 U	91 U	89 U	86 U	1,000 U	1,000 U	85 U	95 U
Aroclor-1232	38 U	39 U	38 U	38 U	45 U	44 U	43 U	490 U	510 U	42 U	47 U
Aroclor-1242	38 U	39 U	38 U	38 U	45 U	44 U	43 U	490 U	510 U	42 U	47 U
Aroclor-1248	38 U	39 U	38 U	38 U	45 U	44 U	43 U	490 U	510 U	42 U	47 U
Aroclor-1254	38 U	39 U	38 U	38 U	270	44 U	1,200 PD	5,200 PD	3,300 P	1,800 D	650
Aroclor-1260	38 U	39 U	38 U	38 U	310	160	43 U	1,400	1,700	2,800 D	460
INORGANICS (units = mg/kg)											
Aluminum	3,630	3,630	3,190	2,480	4,320	3,740	4,180	11,600	12,400	4,830	4,450
Antimony	0.85 U	0.80 U	0.83 U	0.76 U	14.70 UJ	10.8 UJ	ND	15.5 J	ND	ND	ND
Arsenic	19.7	15	8.4	5	5.90 J	6.1 J	8.8 J	22.1	24.0	7.4	7.4 J

Table 6

Summary of Historical Analytical Results
Pettibone Creek Investigation
North Chicago, Lake County, Illinois

Sample ID	SED1004	SED1004DUP	SED1005	SED1006	X201	X202	X203	X204	X205	X206	X207
Depth	Surface	Surface	0" - 2"	0" - 2"	4" - 8"	4" - 6"	6" - 16"	16" - 18"	16" - 18"	4" - 8"	0" - 6"
Date	10/24/2000	10/24/2000	10/24/2000	10/24/2000	4/26/1994	4/26/1994	4/26/1994	4/26/1994	4/26/1994	4/26/1994	4/26/1994
Source	TN&A	TN&A	TN&A	TN&A	IEPA	IEPA	IEPA	IEPA	IEPA	IEPA	IEPA
Parameter	**Section 3 (cont.)**				**Section 4**						
Barium	39.9	31.9	45.0	38.0	54.90 B	55.2	31.6 B	208.0	167.0	48.8	50.4 B
Beryllium	4.0 J	4.2 J	6.0 J	1.5 J	0.46 B	0.3 B	0.8 B	2.4	3.0	0.6 B	0.7 B
Cadmium	0.32 J	0.51 J	0.66 J	0.57 J	1.20 U	0.8 U	0.9 B	4.7	5.6	0.9 B	2.3
Calcium	94,500	95,900	95,500	88,200	47,800	65,000	39,700	88,700	102,000	53,700	31,800
Chromium	10.9	8.9	14.2	7.3	9.70	13	12.9	61.6	69.2	21.6	20.8
Cobalt	6.0	5.3	3.9	5.5	7.10 B	6.9 B	6.0 B	18.1	15.4	5.0 B	4.1 B
Copper	514	378	790	288	38.2	16.9	159	465	475.0	209.0	425.0
Iron	21,200	19,600	25,500	10,800	11,600	16,000	12,000	19,000	17,300	15,000	12,100
Lead	233	234	570	171	146	48	149	392	435	278	167
Magnesium	56,300	56,900	52,800	45,700	23,700	36,400	20,500	24,600	29,800	28,700	15,700
Manganese	988 J	584 J	674 J	496 J	345	472	342	2,140	2,470	378	291
Mercury	0.10 J	0.10 J	0.060 UJ	0.17 J	0.04 B	0.1 B	0.2	1.4	1.6	0.3	0.1 B
Nickel	35.7 J	32.9 J	46.3 J	18.1 J	9.20 B	10.4	24.9	216	445.0	22.9	19.4
Potassium	676 J	627 J	469 J	356 J	836 B	1,060	885 B	3350	3290.0	1190.0	636.0 B
Selenium	0.92 U	0.87 UJ	1.2	0.83 U	0.27 UJ	0.2 UJ	ND	3.5 J	5.0 J	0.7 BJ	ND
Silver	0.66 J	0.57 J	1.6 J	0.52 J	1.20 U	0.8 U	1.5 B	42.1	50.8	1.8 B	ND
Sodium	2,190 J	1,770 J	2,700 J	1,000 J	292 B	227.0 B	463 B	765 B	748.0 B	273.0 B	548.0 B
Thallium	1.9 U	1.8 U	1.9 U	1.7 U	0.27 U	0.2 U	ND	ND	0.4 BJ	ND	ND
Vanadium	9.3	7.8	5.8	6.5	15	13.8	14.2	25.6	26.9	15.1	12.5 B
Zinc	4,160	3,710	5,760	2,260	159	83.3	664	1,160	605	685	1,230
Cyanide	0.48 U	0.46 UJ	0.47 U	0.44 UJ	1.20 U	1.0 U	ND	3.9	4.2	2.4	ND

Key:

Sample ID:Sample identification
NR: Not requested for analysis
B: Laboratory contaminant found in blank
P: Method qualifier indicates analysis by ICP spectroscopy
D: Identifies compounds analyzed at a secondary dilution factor
ND: Sample concentration below laboratory detection limit (No detect)
BJ: Estimated value of the compound that was also found in the blank
G: Affected by QA/QC obstacles from associated standards, or surrogates, or matrix interferences
UJ: The analyte was not detected above the reported sample quantitation limit, which is approximate, and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample

µg/kg: micrograms per kilogram
mg/kg: milligrams per kilogram
JP: Estimated value of the compound that was analyzed by ICP spectroscopy
U: The analyte was not detected above the reported sample quantitation limit
R: The data are unusable
J: The analyte is positively identified and the value represents approximate concentration
NA: Not analyzed
PD: Identifies compounds analyzed at a secondary dilution factor and denotes analysis by ICP spectroscopy

0"-6": 0 to 6 inches

Carlson: Carlson Environmental, Inc., Fansteel Site Investigation Report Results
TN&A: T N & Associates, Inc., Pettibone Creek Investigation, October 2000 Results
VL EE/CA: Vacant Lot Engineering Evaluation/Cost Analysis, January 1997 Results
IEPA: Expanded Site Inspection, 1994 Results

5.0 ANALYTICAL RESULTS SUMMARY AND CONCLUSIONS

Analytical Results Summary: Sediment samples SED 1003 (NCRS/North Chicago storm water discharge) and SED 1008 (Railroad ditch) contain the highest SVOC (fluorene, anthracene, pyrene, acenaphthene, chrysene, phenanthrene, benzo(a)anthracene, benzo(a)pyrene, dibenzo(a,h)anthracene, and fluoranthene) contamination at concentrations exceeding the ERM and LEL guidelines. Naphthalene and 2-methylnaphthalene concentrations are above their respective ERL guidelines. Beta-BHC, heptachlor epoxide, dieldrin, 4,4'-DDE, and endrin concentrations in some sediment samples, including SED 1007 (background) and SED1003 samples, are above their respective LELs. Sediment samples SED 1001 and SED 1002, downstream of SED 1003 location, contain pyrene, phenanthrene, benzo(a)anthracene, and dibenzo(a,h) anthracene concentrations above the ERM and LEL guidelines. Sediment sample SED 1006, upstream of SED 1003 location, contains phenanthrene concentration above the ERM and LEL guideline. Several other upstream sediment samples contain fluorene, anthracene, pyrene, chrysene, phenanthrene, benzo(a)anthracene, benzo(a)pyrene, dibenzo(a,h)anthracene, and/or fluoranthene concentrations above the ERL but below the ERM guidelines. Various VOCs and pesticides were detected at low levels in the sediment samples and include methylene chloride, trichloroethene, tetrachloroethene, and endosulfan sulfate. NSTP approach and Ontario guidelines are not available for these detected compounds.

Review of the organic data illustrates a pattern of SVOC contamination present in the sediment. Some of the highest levels of SVOC contamination is present in sample SED 1003. This sample was collected at the NCRS/City of North Chicago discharge into Pettibone Creek. SVOC's detected in sample SED 1003 include fluorene (3,200 μg/kg), anthracene (3,700 μg/kg), pyrene (13,000 μg/kg), ancenaphthene (2,800 μg/kg), phenanthrene (15,000 μg/kg), benzo(k)fluoranthene (8,100 μg/kg), indeno(1,2,3-cd)pyrene (3,200 μg/kg), benzo(g,h,i)perylene (3,000 μg/kg) chrysene (5,800 μg/kg), dibenzofuran (1,700 μg/kg), fluoranthene (13,000 μg/kg), benzo(a)anthracene (5,900 μg/kg), bis(2-Ethylhexyl)phthalate (1,700 μg/kg), benzo(b)fluoranthene (7,200 μg/kg), benzo(a)pyrene (4,900 μg/kg) and dibenzo(a,h)anthracene (1,100 μg/kg). Many of these compounds were detected above the ERM concentration in SED 1003. Organic compounds remain elevated in samples SED 1001 and SED 1002, collected downstream from sample SED 1003, suggesting the contaminants are migrating downstream

from the outfall. Samples SED 1004, SED 1005 and SED 1006, collected upstream from sample SED 1003, contain lower levels of these contaminants. Sample SED 1007, the background sample, contains levels of SVOCs consistent with the samples collected upstream from the NCRS discharge. Sample SED 1008, collected from the railroad ditch, east of the storm water pipe, north of the railroad tracks, also contained high levels of SVOCs including fluorene (1,100 μg/kg), pyrene (9,100 μg/kg), benzo(k)fluoranthene (8,100 μg/kg), indeno(1,2,3-cd)pyrene (3,200 μg/kg), benzo(g,h,i)perylene (2,800 μg/kg), phenanthrene (8,100 μg/kg), fluoranthene (10,000 μg/kg), benzo(a)anthracene (4,700 μg/kg), chrysene (5,900 μg/kg), indeno(1,2,3-cd)pyrene (3,200 μg/kg), anthracene (2,300 μg/kg), benzo(b)fluoranthene (7,200 μg/kg), benzo(a)pyrene (4,500 μg/kg), and dibenzo(a,h)anthracene (1,100 μg/kg).

Historical analytical results of sediment samples collected from the Pettibone Creek have indicated contamination in the creek sediment. The contamination has included organic and inorganic compounds. Evaluation of historical results with respect to NSTP approach and Ontario guidelines indicate that Section 1 has SVOC contamination. Historical SVOC contamination in Section 1 does not exceed ERM guidelines but does exceed ERL guidelines. Section 3 has similar historical SVOC contamination exceeding the ERL and LEL guidelines. Section 4 has SVOC contamination consistent with the results of Section 3. Section 4 SVOC contamination exceeds the ERL and LEL guidelines.

Conclusions: As mentioned in the Introduction Section, this investigation focused on two site areas; the site area of Section 1 covering EJ&E Railroad ditch, and the site area of Section 3 between south of 22nd Street and Sheridan Road. TN&A's investigation has confirmed the presence of historically identified contamination as well as other contamination. TN&A's sampling effort was primarily focused on verifying if contamination was present in the sediments. As such, only surface (0 to 6 inches) sediment samples were collected. Based on this investigation, as well as historical investigations conducted in the Pettibone Creek, the entire length of the creek beginning with 22nd Street and ending with Sheridan Road (Section 3) is contaminated.

The EJ & E railroad ditch (Section 1) has shown contamination indicating some past or current unknown discharges. Pettibone Creek remediation requires tackling this contamination issue. It is interesting to

note that some SVOC concentrations in the railroad ditch are of comparable magnitude with SVOC concentrations found in Section 3, specifically SED 1003 (NCRS/City of North Chicago discharge location). Elevated SVOC contamination was observed in Section 3. TN&A's sampling in Section 3, based on historical sampling locations, indicated much higher SVOC contamination in sediments than previously observed in this area. The NCRS/City of North Chicago storm water discharge location in the Pettibone Creek had elevated levels of fluorene, anthracene, pyrene, phenanthrene, chrysene, benzo(a)anthracene, and fluoranthene. The vertical extent of contamination has not yet been defined. There are two active discharges into the Pettibone Creek. EMCO discharges north of the 22nd Street (Section 2) and NCRS/City of North Chicago discharges to the south of 22nd Street (Section 3). Any remediation of the creek requires taking into account the future impacts of these discharges to the Pettibone Creek. U.S. EPA conducted a removal action at the Vacant Lot site (Section 2) in 1998 and excavated contaminated sediments from this section of the Pettibone Creek.

In conclusion, Pettibone Creek sediment is contaminated and poses a threat to the benthic organisms in the creek as well as to the benthic organisms in Lake Michigan due to potential sediment migration. The Ontario guidelines, though not a U.S. EPA guidelines document, provides aquatic environment protection, which may be applicable for evaluating Pettibone Creek related contamination in Lake Michigan. Further investigations are needed to characterize various discharges into the Pettibone Creek, define the lateral and vertical extent of contamination at the origin of the creek (Section 1), define the vertical extent of contamination in Section 3 and Section 4, and evaluate actual or potential threats to the benthic community and aquatic environment.

APPENDIX A

VALIDATED ANALYTICAL PACKAGE

DEC 01 2000

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: _____

SUBJECT: **Review of Data**
Received for Review on **November 06, 2000**

FROM: **Stephen L. Ostrodka, Chief (SMF-4J)**
Superfund Field Services Section

TO: **Data User:** **TN & Assoc.**

We have reviewed the data for the following case:

Site name: **Fansteel PRP (IL)**

Case number: **28655** **SDG Number:** **E0354**

Number and Type of Samples: **9 soil samples**

Sample Numbers: **E0354-E0359, E0360-E0362**

Laboratory: **Compuchem** **Hrs. for Review:** _____

Following are our findings:

CC: Cecilia Moore
Region 5 TPO
Mail Code: SM-5J

Lockheed Martin Services Group
Environmental Services & Technologies Region 5
536 South Clark Street #1050 Chicago, IL 60605
Telephone 312-353-8302 Facsimile 312-353-8307

LOCKHEED MARTIN

Date: November 19, 2000

To: Richard Byvik, EPA WAM

From: Steffanie Tobin, ESAT Chemist

Thru: Ziyad Rajabi, ESAT Team Manager

Copies: W. Ira Wilson, ESAT Organic Group Leader
Jay Thakkar, ESAT Contract RPO

Ref: TDF# 5207-1166
WA# 05-00-4-07
Contract # 68D60002

SUBJECT: Organic Data Review for Case 28655, SDG E0354 for Volatile, Semivolatile and Pest/PCB Analyses Using SOW OLMO4.2 5/99.

Attached is the deliverable for 28655, SDG E0354 for Volatile, Semivolatile and Pest/PCB analyses of 9 soil samples. Included in the deliverable is the CADRE-generated case narrative, Lotus Analytical Results spreadsheets and diskette. If you have any question please contact Ira Wilson.

Case Number : 28655
Site Name: Fansteel PRP (IL)

SDG Number: E0354
Laboratory: Compuchem

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

Nine soil samples (E0354-E0359, E0360-E0362) were collected on 10/24/2000. The laboratory received the samples on 10/25/2000. All samples were analyzed for the list of Volatile, Semivolatile and Pest/PCB analytes. All samples were analyzed according to CLP SOW OLMO4.2 5/99.

Reviewed By: Steffanie Tobin (Lockheed Martin/ESAT)
Date: November 19, 2000

Case Number : 28655
Site Name: Fansteel PRP (IL)

SDG Number: E0354
Laboratory: Compuchem

Endrin

7. FIELD BLANK AND FIELD DUPLICATE

Sample E0357 was identified as the field duplicate of sample E0358. None of the samples in this data set were identified as field blanks. Sample E0357 contains 4 VOA TCLs, 18 SVOA TCLs, 21 SVOA TICs, 6 Pest/PCB TCLs. Sample E0358 contains 3 VOA TCLs, 16 SVOA TCLs, 14 SVOA TICs, 3 Pest/PCB TCLs.

8. INTERNAL STANDARDS

No problems were found for this qualification.

9. COMPOUND IDENTIFICATION

After reviewing the mass spectra and chromatograms, it appears that all VOA, SVOA, and Pesticide/PCB compounds were properly identified.

10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

The following volatile samples have analyte concentrations below the quantitation limit (CRQL). All results below the CRQL are qualified "J".

E0354, E0355
Methylene Chloride, Trichloroethene

E0356
Methylene Chloride, cis-1,2-Dichloroethene, Trichloroethene

E0356MS
Methylene Chloride, cis-1,2-Dichloroethene

E0356MSD
1,1,2-Trichloro-1,2,2-trifluoroethane, Methyl Acetate, Methylene Chloride, tert-Butyl Methyl Ether, cis-1,2-Dichloroethene, 1,2-Dichloroethane, 4-Methyl-2-pentanone, Tetrachloroethene, 2-Hexanone

E0357
Methylene Chloride, cis-1,2-Dichloroethene, Trichloroethene, Tetrachloroethene

E0358
Methylene Chloride, cis-1,2-Dichloroethene, Trichloroethene

E0359
1,1,2-Trichloro-1,2,2-trifluoroethane, Methylene Chloride, Tetrachloroethene

Case Number : 28655 **SDG Number: E0354**
Site Name: Fansteel PRP (IL) **Laboratory: Compuchem**

E0360, E0361
1,1,2-Trichloro-1,2,2-trifluoroethane, Methylene Chloride

E0362
Trichlorofluoromethane, 1,1,2-Trichloro-1,2,2-trifluoroethane, Methylene Chloride, Tetrachloroethene

VBLKLT
Acetone, 2-Butanone

VHBLKLT
Methylene Chloride

The following semivolatile samples have analyte concentrations below the quantitation limit (CRQL). All results below the CRQL are qualified "J".

E0354
Acenaphthene, Dibenzofuran, Fluorene, Anthracene, Carbazole, Butylbenzylphthalate, Dibenz(a,h)anthracene

E0355
Acenaphthene, Dibenzofuran, Fluorene, Anthracene, Carbazole, bis(2-Ethylhexyl)phthalate, Dibenz(a,h)anthracene

E0356
Naphthalene, 2-Methylnaphthalene, 1,1'-Biphenyl

E0356DL
Naphthalene, Dibenzofuran, Carbazole, bis(2-Ethylhexyl)phthalate, Dibenz(a,h)anthracene

E0356MS
Dibenzofuran, Di-n-octylphthalate, Dibenz(a,h)anthracene

E0356MSD
Naphthalene, Dibenzofuran

E0357
Acenaphthene, Fluorene, Carbazole, Di-n-octylphthalate, Dibenz(a,h)anthracene

E0358
Acenaphthene, Fluorene, Anthracene, Carbazole, Benzo(a)anthracene, Chrysene, Di-n-octylphthalate, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene

E0359

Anthracene, Carbazole, Benzo(a)anthracene, Chrysene, bis(2-Ethylhexyl)phthalate, Di-n-octylphthalate, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(g,h,i)perylene

E0360
Naphthalene, 2-Methylnaphthalene, Acenaphthene, Dibenzofuran, Fluorene, Carbazole, Di-n-octylphthalate, Dibenz(a,h)anthracene

E0361
Phenanthrene, Anthracene, Carbazole, Fluoranthene, Pyrene, Butylbenzylphthalate, Benzo(a)anthracene, Chrysene, bis(2-Ethylhexyl)phthalate, Benzo(b)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(g,h,i)perylene

E0362
Naphthalene, 2-Methylnaphthalene, Acenaphthylene, Acenaphthene, Dibenzofuran, Fluorene, Carbazole, Butylbenzylphthalate, bis(2-Ethylhexyl)phthalate, Dibenz(a,h)anthracene

The following pesticide samples have analyte concentrations below the quantitation limit (CRQL). All results below the CRQL are qualified "J".

E0354
delta-BHC, Heptachlor epoxide, Dieldrin, 4,4'-DDE, 4,4'-DDD, Endrin aldehyde, gamma-Chlordane

E0354DL
Heptachlor, Heptachlor epoxide, Dieldrin, 4,4'-DDE, Endrin ketone, gamma-Chlordane

E0355
Dieldrin, 4,4'-DDE, 4,4'-DDD, Endosulfan sulfate, Endrin ketone, gamma-Chlordane

E0356DL
Heptachlor epoxide, Endosulfan sulfate, Endrin ketone, Endrin aldehyde, gamma-Chlordane

E0356MS
Heptachlor epoxide, Endosulfan sulfate, alpha-Chlordane, gamma-Chlordane

E0356MSD
Heptachlor epoxide, 4,4'-DDE, 4,4'-DDD, Endosulfan sulfate, Endrin ketone, Endrin aldehyde, alpha-Chlordane, gamma-Chlordane

E0357
4,4'-DDE, Endosulfan sulfate, Endrin ketone, Endrin aldehyde, gamma-Chlordane

E0358
4,4'-DDE, gamma-Chlordane

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Case Number : 28655 **SDG Number: E0354**
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E0359
Dieldrin, 4,4'-DDD, Endosulfan sulfate, Endrin ketone, gamma-Chlordane

E0360
beta-BHC, 4,4'-DDE, Endosulfan sulfate, alpha-Chlordane, gamma-Chlordane

E0361
beta-BHC, 4,4'-DDD

E0361DL
4,4'-DDE, 4,4'-DDT

E0362
Endosulfan I

E0362DL
4,4'-DDE, 4,4'-DDT, Endrin ketone, gamma-Chlordane

The following pesticide samples have analytes for which the percent difference between column results exceeds primary criteria. Hits are qualified "J".

E0354
beta-BHC, delta-BHC, Heptachlor epoxide, Dieldrin, 4,4'-DDE, Endrin, 4,4'-DDD, Endosulfan sulfate, Endrin ketone, Endrin aldehyde, gamma-Chlordane

E0354DL
Heptachlor, Dieldrin, 4,4'-DDE, Endrin, gamma-Chlordane

E0355
beta-BHC, Dieldrin, 4,4'-DDE, 4,4'-DDD, Endosulfan sulfate, Endrin ketone, gamma-Chlordane

E0356
beta-BHC, Heptachlor epoxide, Dieldrin, Endrin, 4,4'-DDD, Endrin ketone, Endrin aldehyde, gamma-Chlordane

E0356DL
Heptachlor epoxide, Endrin ketone, Endrin aldehyde, gamma-Chlordane

E0356MS
beta-BHC, Heptachlor, Aldrin, Heptachlor epoxide, 4,4'-DDD, Endosulfan sulfate, 4,4'-DDT, alpha-Chlordane, gamma-Chlordane

E0356MSD
beta-BHC, Heptachlor, Aldrin, Heptachlor epoxide, 4,4'-DDD, Endosulfan sulfate, 4,4'-DDT, Endrin

ketone, Endrin aldehyde, alpha-Chlordane, gamma-Chlordane

E0357
beta-BHC, 4,4'-DDE, Endrin aldehyde, gamma-Chlordane

E0358
beta-BHC, gamma-Chlordane

E0359
beta-BHC, Dieldrin, 4,4'-DDD, Endrin ketone, gamma-Chlordane

E0360
beta-BHC, Endosulfan sulfate, gamma-Chlordane

E0361
beta-BHC, Heptachlor epoxide, 4,4'-DDE, 4,4'-DDD, 4,4'-DDT, alpha-Chlordane

E0361DL
Heptachlor epoxide, 4,4'-DDT, alpha-Chlordane

E0362
alpha-BHC, beta-BHC, delta-BHC, Heptachlor epoxide, Endosulfan I, Dieldrin, 4,4'-DDE, 4,4'-DDD, Endosulfan sulfate, 4,4'-DDT, Methoxychlor, Endrin ketone, alpha-Chlordane, gamma-Chlordane

E0362DL
4,4'-DDT, Endrin ketone, gamma-Chlordane

11. SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance. The GC baseline for the pesticide analysis was acceptable.

12. ADDITIONAL INFORMATION

The results of Phenanthrene, Fluoranthene, Pyrene, Benzo(b) fluoranthene, Benzo(k) fluoranthene for E0356 were quantitated outside the calibration range. For the analyte that exceeded the calibration range in the original sample analysis; the results of the diluted analysis should be considered the sample's analyte concentration.

The result of Pyrene for E0356MS and the results of Phenanthrene, Fluoranthene and Pyrene for E0356MSD (SVOA fraction) were quantitated outside the calibration range. The samples were not reanalyzed at dilution since these samples were used for QC purpose only.

For the Pest/PCB fraction, The results of beta-BHC for E0354; beta-BHC, Endrin for E0356; alpha chlordane for E0361 and beta-BHC, gamma chlordane for E0362 were detected outside the calibration range on

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Laboratory: Compuchem

one of the column. However, the results for the above analytes were reported from the column which the results were quantitated within the calibration range. Therefore, the results from the undiluted samples should be used for results validation.

Reviewed By: Steffanie Tobin (Lockheed Martin/ESAT)
Date: November 19, 2000

CADRE Data Qualifier Sheet

Qualifiers	Data Qualifier Definitions
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
N	The analysis indicates the present of an analyte for which there is presumptive evidence to make a tentative identification.
NJ	The analysis indicates the present of an analyte for which there is presumptive evidence to make a tentative identification and the associated numerical value represents its approximate concentration.
R	The data are unusable. (The compound may or may not be present)
H	Sample result is estimated and biased high.
L	Sample result is estimated and biased low.

Semivolatile Analysis Data - SBLKNY
Tentatively Identified Compounds

CASE NO: 28655
SDG NO: E0354

LABORATORY: COMPUCHEM

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN (BC)	5.50	747.700	J

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Semivolatile Analysis Data - E0354
Tentatively Identified Compounds

CASE NO: 28655
SDG NO: E0354

LABORATORY: COMPUCHEM

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
57-10-3	HEXADECANOIC ACID	13.90	1995.000	NJ
	UNKNOWN	17.14	5798.000	J
	UNKNOWN	17.20	2536.000	J
239-01-0	BENZO(A)CARBAZOLE	17.27	4046.000	NJ
	UNKNOWN	17.36	3221.000	J
3351-31-3	CHRYSENE, 3-METHYL-	17.56	4729.000	NJ
	UNKNOWN	17.59	2678.000	J
	UNKNOWN	17.75	3331.000	J
	UNKNOWN	17.98	3186.000	J
	UNKNOWN	18.29	3832.000	J
	UNKNOWN	18.36	1826.000	J
192-97-2	BENZO[E]PYRENE	18.63	2828.000	NJ
198-55-0	PERYLENE	18.88	6344.000	NJ
	UNKNOWN	19.22	3248.000	J
	UNKNOWN	19.32	2028.000	J
	UNKNOWN	19.36	1982.000	J
	UNKNOWN	19.46	2617.000	J
	UNKNOWN	19.71	2198.000	J
	UNKNOWN	19.85	1743.000	J
	UNKNOWN	19.96	2037.000	J
	UNKNOWN	20.00	1561.000	J
	UNKNOWN	20.18	1639.000	J
	UNKNOWN	20.39	2219.000	J
	UNKNOWN	20.56	1783.000	J
	UNKNOWN	21.27	1679.000	J

FILE NAME: E0354.SDG DATE: 11/07/2000 TIME: 14:43 CADRE99 PAGE: 2

Semivolatile Analysis Data - E0355
Tentatively Identified Compounds

CASE NO: 28655 LABORATORY: COMPUCHEM
SDG NO: E0354

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
110-13-4	2,5-HEXANEDIONE	5.30	341.700	NJ
	UNKNOWN	13.89	1148.000	J
243-17-4	11H-BENZO[B]FLUORENE	15.65	549.100	NJ
	BENZOFLUORENE	15.73	475.000	J
2381-21-7	PYRENE, 1-METHYL-	15.97	451.800	NJ
	UNKNOWN	17.12	2126.000	J
	BENZOCARBAZOLE	17.27	645.200	J
2498-77-3	BENZ[A]ANTHRACENE, 1-METHYL-	17.56	699.400	NJ
	UNKNOWN	17.70	481.400	J
	UNKNOWN	17.75	640.000	J
	UNKNOWN	18.29	2842.000	J
207-08-9	BENZO[K]FLUORANTHENE	18.63	1712.000	NJ
198-55-0	PERYLENE	18.88	3660.000	NJ
	UNKNOWN	19.22	1251.000	J
	UNKNOWN	19.32	1244.000	J
	UNKNOWN	19.35	863.700	J
	UNKNOWN	19.46	1475.000	J
	UNKNOWN	19.69	974.700	J
	UNKNOWN	19.85	1098.000	J
	UNKNOWN	19.95	956.700	J
	UNKNOWN	20.07	497.100	J
	UNKNOWN	20.40	669.500	J
215-58-7	BENZO[B]TRIPHENYLENE	21.29	408.200	NJ
192-65-4	NAPHTHO[1,2,3,4-DEF]CHRYSENE	24.32	655.400	NJ
192-65-4	NAPHTHO[1,2,3,4-DEF]CHRYSENE	24.50	602.700	NJ

Semivolatile Analysis Data - E0356
Tentatively Identified Compounds

CASE NO: 28655 LABORATORY: COMPUCHEM
SDG NO: E0354

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
872-05-9	1-DECENE	10.52	1413.000	NJ
112-53-8	1-DODECANOL	12.03	1108.000	NJ
	UNKNOWN CARBOXYLIC ACID	12.60	908.600	J
132-65-0	DIBENZOTHIOPHENE	12.79	1169.000	NJ
779-02-2	ANTHRACENE, 9-METHYL-	13.72	810.400	NJ
	METHYLPHENANTHRENE	13.77	1240.000	J
	CYCLOPENTAPHENANTHRENE	13.89	3219.000	J
612-94-2	NAPHTHALENE, 2-PHENYL-	14.18	785.100	NJ
84-65-1	9,10-ANTHRACENEDIONE	14.25	803.000	NJ
	UNKNOWN	14.94	484.400	J
2381-21-7	PYRENE, 1-METHYL-	15.60	20.500	NJ
	BENZOFLUORENE	15.75	811.100	J
3442-78-2	PYRENE, 2-METHYL-	15.80	489.200	NJ
243-46-9	BENZO[B]NAPHTHO[2,3-D]THIOPHENE	16.58	551.800	NJ
	UNKNOWN	16.65	894.800	J
239-35-0	BENZO[B]NAPHTHO[2,1-D]THIOPHENE	16.82	396.100	NJ
	UNKNOWN	17.13	2483.000	J
34777-33-8	BENZO(C)CARBAZOLE	17.28	657.800	NJ
2693-46-1	3-FLUORANTHENAMINE	17.35	379.700	NJ
3697-24-3	CHRYSENE, 5-METHYL-	17.57	752.200	NJ
	UNKNOWN	17.70	540.600	J
	UNKNOWN	17.79	544.700	J
1599-67-3	1-DOCOSENE	18.04	823.400	NJ
192-97-2	BENZO[E]PYRENE	18.90	1913.000	NJ
	UNKNOWN	19.97	556.600	J
	UNKNOWN	20.41	363.200	J
215-58-7	BENZO[B]TRIPHENYLENE	21.31	487.500	NJ
	UNKNOWN	21.48	352.500	J
0-00-0	1,2:3,4-DIBENZPYRENE	24.36	809.700	NJ

Semivolatile Analysis Data - E0356DL
Tentatively Identified Compounds

CASE NO: 28655 LABORATORY: COMPUCHEM
SDG NO: E0354

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
872-05-9	1-DECENE	10.52	1570.000	NJD
36653-82-4	1-HEXADECANOL	12.02	1349.000	NJD
132-65-0	DIBENZOTHIOPHENE	12.79	1451.000	NJD
	METHYLPHENANTHRENE	13.77	1399.000	JD
	UNKNOWN	13.89	4140.000	JD
3442-78-2	PYRENE, 2-METHYL-	15.65	1521.000	NJD
	BENZOFLUORENE	15.73	1449.000	JD
243-46-9	BENZO[B]NAPHTHO[2,3-D]THIOPHENE	16.58	862.700	NJD
	UNKNOWN	16.65	916.700	JD
	UNKNOWN	17.12	5517.000	JD
82-05-3	7H-BENZ[DE]ANTHRACEN-7-ONE	17.21	1413.000	NJD
34777-33-8	BENZO(C)CARBAZOLE	17.27	2186.000	NJD
2693-46-1	3-FLUORANTHENAMINE	17.34	1563.000	NJD
1705-84-6	TRIPHENYLENE, 2-METHYL-	17.56	1980.000	NJD
2498-77-3	BENZ[A]ANTHRACENE, 1-METHYL-	17.61	1039.000	NJD
	UNKNOWN	17.70	2226.000	JD
	UNKNOWN	17.75	3110.000	JD
	UNKNOWN	17.87	1607.000	JD
	UNKNOWN	18.15	2668.000	JD
	UNKNOWN	18.29	1812.000	JD
	UNKNOWN	18.32	1912.000	JD
207-08-9	BENZO[K]FLUORANTHENE	18.63	2282.000	NJD
205-99-2	BENZ[E]ACEPHENANTHRYLENE	18.86	4926.000	NJD
	UNKNOWN	19.95	879.400	JD

FILE NAME: E0354.SDG DATE: 11/07/2000 TIME: 14:43 CADRE99 PAGE: 5

Semivolatile Analysis Data - E0358
Tentatively Identified Compounds

CASE NO: 28655 LABORATORY: COMPUCHEM
SDG NO: E0354

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	5.30	391.500	J
640-61-9	BENZENESULFONAMIDE, N,4-DIMETHYL-	12.21	778.600	NJ
	UNKNOWN	16.00	211.700	J
	BENZANTHRACENONE	16.44	161.100	J
239-35-0	BENZO[B]NAPHTHO[2,1-D]THIOPHENE	16.58	143.500	NJ
	UNKNOWN	16.64	178.600	J
2498-77-3	BENZ[A]ANTHRACENE, 1-METHYL-	17.56	252.700	NJ
	UNKNOWN	18.29	517.700	J
	UNKNOWN PAH	18.64	406.400	J
198-55-0	PERYLENE	18.88	580.300	NJ
	UNKNOWN	19.20	397.200	J
	UNKNOWN	19.35	341.800	J
	UNKNOWN	19.44	552.500	J
53584-60-4	28-NOR-17.ALPHA.(H)-HOPANE	19.85	304.700	NJ

FILE NAME: E0354.SDG DATE: 11/07/2000 TIME: 14:43 CADRE99 PAGE: 6

Semivolatile Analysis Data - E0359
Tentatively Identified Compounds

CASE NO: 28655 LABORATORY: COMPUCHEM
SDG NO: E0354

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
243-17-4	11H-BENZO[B]FLUORENE	15.65	238.600	NJ
	UNKNOWN	15.84	195.400	J
2381-21-7	PYRENE, 1-METHYL-	15.98	306.400	NJ
103-23-1	HEXANEDIOIC ACID, BIS(2-ETHYLHEXYL) ESTE	16.31	347.600	NJ
	UNKNOWN	16.45	159.300	J
239-35-0	BENZO[B]NAPHTHO[2,1-D]THIOPHENE	16.57	175.100	NJ
	UNKNOWN	17.36	240.700	J
3697-24-3	CHRYSENE, 5-METHYL-	17.55	413.500	NJ
	UNKNOWN	17.99	569.600	J
	UNKNOWN	18.16	250.300	J
	UNKNOWN	18.21	368.800	J
	UNKNOWN	18.30	245.100	J
	UNKNOWN PHTHALATE	18.40	299.800	J
	UNKNOWN	18.65	279.700	J
192-97-2	BENZO[E]PYRENE	18.87	501.100	NJ
	UNKNOWN	19.72	232.300	J
53584-60-4	28-NOR-17.ALPHA.(H)-HOPANE	19.85	212.400	NJ

FILE NAME: E0354.SDG DATE: 11/07/2000 TIME: 14:43 CADRE99 PAGE: 7

Semivolatile Analysis Data - E0360
Tentatively Identified Compounds

CASE NO: 28655 LABORATORY: COMPUCHEM
SDG NO: E0354

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
110-13-4	2,5-HEXANEDIONE	5.30	517.800	NJ
	UNKNOWN	13.89	594.800	J
	UNKNOWN	15.82	343.800	J
243-17-4	11H-BENZO[B]FLUORENE	15.99	239.600	NJ
82-05-3	7H-BENZ[DE]ANTHRACEN-7-ONE	16.44	402.000	NJ
239-35-0	BENZO[B]NAPHTHO[2,1-D]THIOPHENE	16.58	327.800	NJ
	UNKNOWN	16.63	532.500	J
82-05-3	7H-BENZ[DE]ANTHRACEN-7-ONE	16.77	559.600	NJ
	UNKNOWN	17.36	440.100	J
2422-79-9	BENZ[A]ANTHRACENE, 12-METHYL-	17.56	489.000	NJ
	UNKNOWN	17.63	391.800	J
	UNKNOWN	17.87	629.000	J
	UNKNOWN	18.10	717.300	J
	UNKNOWN	18.24	440.700	J
	UNKNOWN	18.31	675.700	J
	BENZOFLUORANTHENE	18.66	452.400	J
207-08-9	BENZO[K]FLUORANTHENE	18.90	818.600	NJ
	UNKNOWN	19.47	265.500	J
	UNKNOWN	19.86	290.200	J
	UNKNOWN	20.42	229.200	J
0-00-0	1,2:3,4-DIBENZPYRENE	24.37	273.500	NJ

FILE NAME: E0354.SDG DATE: 11/07/2000 TIME: 14:43 CADRE99 PAGE: 8

Semivolatile Analysis Data - E0361
Tentatively Identified Compounds

CASE NO: 28655 LABORATORY: COMPUCHEM
SDG NO: E0354

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
638-53-9	TRIDECANOIC ACID	13.05	835.400	NJ
	UNKNOWN	13.82	1888.000	J
	UNKNOWN	13.88	1010.000	J
57-10-3	HEXADECANOIC ACID	13.98	5143.000	NJ
112-80-1	OLEIC ACID	15.03	3537.000	NJ
	UNKNOWN	15.37	1107.000	J
	UNKNOWN CARBOXYLIC ACID	16.18	1489.000	J
	UNKNOWN CARBOXYLIC ACID	17.19	1083.000	J
	UNKNOWN	18.13	1514.000	J
56554-86-0	17-OCTADECENAL	18.40	4261.000	NJ
528-63-2	FURAN, 2,5-BIS(3,4-DIMETHOXYPHENYL)TETRA	18.70	1728.000	NJ
	UNKNOWN	18.77	1255.000	J
	UNKNOWN	19.40	1326.000	J
0-00-0	2-PENTACOSANONE	19.87	893.800	NJ
57-88-5	CHOLESTEROL	20.29	1071.000	NJ
56554-90-6	13-OCTADECENAL	20.73	2384.000	NJ
	UNKNOWN	21.16	2153.000	J
	UNKNOWN	21.44	1106.000	J
	UNKNOWN	22.02	9774.000	J
	UNKNOWN	22.10	2415.000	J
	UNKNOWN	22.63	4697.000	J
	UNKNOWN	22.90	3486.000	J
	UNKNOWN	23.17	1926.000	J
	UNKNOWN	23.24	963.800	J
1058-61-3	STIGMAST-4-EN-3-ONE	23.49	13410.000	NJ
	UNKNOWN	23.73	1983.000	J
	UNKNOWN	23.81	1675.000	J
	UNKNOWN	24.07	1504.000	J
	UNKNOWN	24.29	3395.000	J

Semivolatile Analysis Data - E0362
Tentatively Identified Compounds

CASE NO: 28655 LABORATORY: COMPUCHEM
SDG NO: E0354

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
57-10-3	HEXADECANOIC ACID	13.91	1691.000	NJ
	UNKNOWN	16.31	1726.000	J
239-35-0	BENZO[B]NAPHTHO[2,1-D]THIOPHENE	16.58	1524.000	NJ
	BENZANTHRACENONE	16.77	1571.000	J
	UNKNOWN	17.14	2172.000	J
	UNKNOWN	17.29	1397.000	J
239-01-0	BENZO(A)CARBAZOLE	17.36	1694.000	NJ
1705-84-6	TRIPHENYLENE, 2-METHYL-	17.57	2080.000	NJ
929-77-1	DOCOSANOIC ACID, METHYL ESTER	17.87	3685.000	NJ
1090-13-7	5,12-NAPHTHACENEDIONE	18.07	2688.000	NJ
	UNKNOWN	18.33	2556.000	J
	UNKNOWN	18.36	1320.000	J
198-55-0	PERYLENE	18.65	2375.000	NJ
638-66-4	OCTADECANAL	19.34	4616.000	NJ
	UNKNOWN	19.73	3819.000	J
	UNKNOWN	19.95	1375.000	J
	UNKNOWN	20.22	1493.000	J
	UNKNOWN	20.43	1736.000	J
638-66-4	OCTADECANAL	20.66	2978.000	NJ
	UNKNOWN	21.31	2504.000	J
	UNKNOWN	21.80	1997.000	J
1058-61-3	STIGMAST-4-EN-3-ONE	23.24	1854.000	NJ

Semivolatile Analysis Data - E0357
Tentatively Identified Compounds

CASE NO: 28655 LABORATORY: COMPUCHEM
SDG NO: E0354

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	5.30	470.000	J
243-17-4	11H-BENZO[B]FLUORENE	15.65	167.100	NJ
	UNKNOWN	15.80	212.100	J
2381-21-7	PYRENE, 1-METHYL-	15.99	157.100	NJ
239-35-0	BENZO[B]NAPHTHO[2,1-D]THIOPHENE	16.58	226.200	NJ
	UNKNOWN	16.63	244.900	J
	BENZOCARBAZOLE	17.36	290.500	J
1705-84-6	TRIPHENYLENE, 2-METHYL-	17.56	272.000	NJ
	UNKNOWN	17.87	356.000	J
	UNKNOWN	18.00	296.100	J
	UNKNOWN	18.11	420.800	J
	UNKNOWN	18.22	319.400	J
	UNKNOWN	18.33	535.600	J
	UNKNOWN	18.41	260.300	J
207-08-9	BENZO[K]FLUORANTHENE	18.65	333.800	NJ
198-55-0	PERYLENE	18.90	573.700	NJ
	UNKNOWN	19.24	245.200	J
	UNKNOWN	19.38	200.500	J
	UNKNOWN	19.48	289.200	J
	UNKNOWN	19.73	222.500	J
53584-60-4	28-NOR-17.ALPHA.(H)-HOPANE	19.87	214.000	NJ

Analytical Results (Qualified Data)

Case #: 28655 SDG : E0354
Site : FANSTEEL PRP
Lab. : Compuchem
Reviewer : S. Tobin
Date : 11/19/2000

Number of Soil Samples : 9
Number of Water Samples : 0

Sample Number :	E0354		E0355		E0356		E0356MS		E0356MSD	
Sampling Location :	SED1001		SED1002		SED1003		SED1003		SED1003	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	10/24/00		10/24/00		10/24/00		10/24/00		10/24/00	
Time Sampled :	10:25		10:50		11:25		11:25		11:25	
%Moisture :	19		27		17		17		17	
pH :										
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	12	U	14	U	12	U	12	U	12	U
Chloromethane	12	U	14	U	12	U	12	U	12	U
Vinyl Chloride	12	U	14	U	12	U	12	U	12	U
Bromomethane	12	U	14	U	12	U	12	U	12	U
Chloroethane	12	U	14	U	12	U	12	U	12	U
Trichlorofluoromethane	12	U	14	U	12	U	12	U	12	U
1,1-Dichloroethene	12	U	14	U	12	U	75		68	
1,1,2-Trichloro-1,2,2-trifluoroethane	12	U	14	U	12	U	12	U	2	J
Acetone	12	U	14	U	12	U	12	U	12	U
Carbon Disulfide	12	UJ	14	UJ	12	UJ	12	UJ	12	UJ
Methyl Acetate	12	U	14	U	12	U	12	U	3	J
Methylene Chloride	2	J	2	J	2	J	4	J	5	J
trans-1,2-Dichloroethene	12	U	14	U	12	U	12	U	12	U
Methyl tert-Butyl Ether	12	U	14	U	12	U	12	U	2	J
1,1-Dichloroethane	12	U	14	U	12	U	12	U	12	U
cis-1,2-Dichloroethene	12	U	14	U	2	J	1	J	2	J
2-Butanone	12	U	14	U	12	U	12	U	12	U
Chloroform	12	U	14	U	12	U	12	U	12	U
1,1,1-Trichloroethane	12	U	14	U	12	U	12	U	12	U
Cyclohexane	12	U	14	U	12	U	12	U	12	U
Carbon Tetrachloride	12	U	14	U	12	U	12	U	12	U
Benzene	12	U	14	U	12	U	60		60	
1,2-Dichloroethane	12	U	14	U	12	U	12	U	3	J
Trichloroethene	2	J	2	J	6	J	61		62	
Methylcyclohexane	12	U	14	U	12	U	12	U	12	U
1,2-Dichloropropane	12	U	14	U	12	U	12	U	12	U
Bromodichloromethane	12	U	14	U	12	U	12	U	12	U
cis-1,3-Dichloropropene	12	U	14	U	12	U	12	U	12	U
4-Methyl-2-pentanone	12	U	14	U	12	U	12	U	2	J
Toluene	12	U	14	U	12	U	60		58	
trans-1,3-Dichloropropene	12	U	14	U	12	U	12	U	12	U
1,1,2-Trichloroethane	12	U	14	U	12	U	12	U	12	U
Tetrachloroethene	12	U	14	U	12	U	12	U	1	J

Analytical Results (Qualified Data)

Case #: 28655 SDG : E0354
Site : FANSTEEL PRP
Lab. : Compuchem
Reviewer : S. Tobin
Date : 11/19/2000

Number of Soil Samples : 9
Number of Water Samples : 0

Sample Number :	E0354		E0355		E0356		E0356MS		E0356MSD	
Sampling Location :	SED1001		SED1002		SED1003		SED1003		SED1003	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	10/24/00		10/24/00		10/24/00		10/24/00		10/24/00	
Time Sampled :	10:25		10:50		11:25		11:25		11:25	
%Moisture :	19		27		17		17		17	
pH :										
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2-Hexanone	12	U	14	U	12	U	12	U	2	J
Dibromochloromethane	12	U	14	U	12	U	12	U	12	U
1,2-Dibromoethane	12	U	14	U	12	U	12	U	12	U
Chlorobenzene	12	U	14	U	12	U	58		58	
Ethylbenzene	12	U	14	U	12	U	12	U	12	U
Xylenes (total)	12	U	14	U	12	U	12	U	12	U
Styrene	12	U	14	U	12	U	12	U	12	U
Bromoform	12	U	14	U	12	U	12	U	12	U
Isopropylbenzene	12	U	14	U	12	U	12	U	12	U
1,1,2,2-Tetrachloroethane	12	U	14	U	12	U	12	U	12	U
1,3-Dichlorobenzene	12	U	14	U	12	U	12	U	12	U
1,4-Dichlorobenzene	12	U	14	U	12	U	12	U	12	U
1,2-Dichlorobenzene	12	U	14	U	12	U	12	U	12	U
1,2-Dibromo-3-chloropropane	12	U	14	U	12	U	12	U	12	U
1,2,4-Trichlorobenzene	12	U	14	U	12	U	12	U	12	U

Analytical Results (Qualified Data)

Case #: 28655 SDG : E0354
Site : FANSTEEL PRP
Lab. : Compuchem
Reviewer : S. Tobin
Date : 11/19/2000

Number of Soil Samples : 9
Number of Water Samples : 0

Sample Number :	E0357		E0358		E0359		E0360		E0361	
Sampling Location :	SED1004		SED1004DUP		SED1005		SED1006		SED1007	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	10/24/00		10/24/00		10/24/00		10/24/00		10/24/00	
Time Sampled :	11:45		11:45		12:15		12:25		14:15	
%Moisture :	14		16		12		14		42	
pH :										
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	12	U	12	U	11	U	12	U	17	U
Chloromethane	12	U	12	U	11	U	12	U	17	U
Vinyl Chloride	12	U	12	U	11	U	12	U	17	U
Bromomethane	12	U	12	U	11	U	12	U	17	U
Chloroethane	12	U	12	U	11	U	12	U	17	U
Trichlorofluoromethane	12	U	12	U	11	U	12	U	17	U
1,1-Dichloroethene	12	U	12	U	11	U	12	U	17	U
1,1,2-Trichloro-1,2,2-trifluoroethane	12	U	12	U	2	J	2	J	3	J
Acetone	12	U	12	U	11	U	12	U	17	U
Carbon Disulfide	12	UJ	12	UJ	11	UJ	12	UJ	17	UJ
Methyl Acetate	12	U	12	U	11	U	12	U	17	U
Methylene Chloride	2	J	2	J	3	J	3	J	4	J
trans-1,2-Dichloroethene	12	U	12	U	11	U	12	U	17	U
Methyl tert-Butyl Ether	12	U	12	U	11	U	12	U	17	U
1,1-Dichloroethane	12	U	12	U	11	U	12	U	17	U
cis-1,2-Dichloroethene	5	J	2	J	11	U	12	U	17	U
2-Butanone	12	U	12	U	11	U	12	U	17	U
Chloroform	12	U	12	U	11	U	12	U	17	U
1,1,1-Trichloroethane	12	U	12	U	11	U	12	U	17	U
Cyclohexane	12	U	12	U	11	U	12	U	17	U
Carbon Tetrachloride	12	U	12	U	11	U	12	U	17	U
Benzene	12	U	12	U	11	U	12	U	17	U
1,2-Dichloroethane	12	U	12	U	11	U	12	U	17	U
Trichloroethene	5	J	3	J	11	U	12	U	17	U
Methylcyclohexane	12	U	12	U	11	U	12	U	17	U
1,2-Dichloropropane	12	U	12	U	11	U	12	U	17	U
Bromodichloromethane	12	U	12	U	11	U	12	U	17	U
cis-1,3-Dichloropropene	12	U	12	U	11	U	12	U	17	U
4-Methyl-2-pentanone	12	U	12	U	11	U	12	U	17	U
Toluene	12	U	12	U	11	U	12	U	17	U
trans-1,3-Dichloropropene	12	U	12	U	11	U	12	U	17	U
1,1,2-Trichloroethane	12	U	12	U	11	U	12	U	17	U
Tetrachloroethene	1	J	12	U	1	J	12	U	17	U

Analytical Results (Qualified Data)

Case #: 28655 SDG : E0354
Site : FANSTEEL PRP
Lab. : Compuchem
Reviewer : S. Tobin
Date : 11/19/2000

Number of Soil Samples : 9
Number of Water Samples : 0

Sample Number :	E0357		E0358		E0359		E0360		E0361	
Sampling Location :	SED1004		SED1004DUP		SED1005		SED1006		SED1007	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	10/24/00		10/24/00		10/24/00		10/24/00		10/24/00	
Time Sampled :	11:45		11:45		12:15		12:25		14:15	
%Moisture :	14		16		12		14		42	
pH :										
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2-Hexanone	12	U	12	U	11	U	12	U	17	U
Dibromochloromethane	12	U	12	U	11	U	12	U	17	U
1,2-Dibromoethane	12	U	12	U	11	U	12	U	17	U
Chlorobenzene	12	U	12	U	11	U	12	U	17	U
Ethylbenzene	12	U	12	U	11	U	12	U	17	U
Xylenes (total)	12	U	12	U	11	U	12	U	17	U
Styrene	12	U	12	U	11	U	12	U	17	U
Bromoform	12	U	12	U	11	U	12	U	17	U
Isopropylbenzene	12	U	12	U	11	U	12	U	17	U
1,1,2,2-Tetrachloroethane	12	U	12	U	11	U	12	U	17	U
1,3-Dichlorobenzene	12	U	12	U	11	U	12	U	17	U
1,4-Dichlorobenzene	12	U	12	U	11	U	12	U	17	U
1,2-Dichlorobenzene	12	U	12	U	11	U	12	U	17	U
1,2-Dibromo-3-chloropropane	12	U	12	U	11	U	12	U	17	U
1,2,4-Trichlorobenzene	12	U	12	U	11	U	12	U	17	U

Analytical Results (Qualified Data)

Case #: 28655 SDG : E0354
Site : FANSTEEL PRP
Lab. : Compuchem
Reviewer : S. Tobin
Date : 11/19/2000

Number of Soil Samples : 9
Number of Water Samples : 0

Sample Number :	E0362		VHBLKLT		VBLKLT					
Sampling Location :	SED1008									
Matrix :	Soil		Soil		Soil					
Units :	ug/Kg		ug/Kg		ug/Kg					
Date Sampled :	10/24/00									
Time Sampled :	14:35									
%Moisture :	23		0		N/A					
pH :										
Dilution Factor :	1.0		1.0		1.0					
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	13	U	10	U	10	U				
Chloromethane	13	U	10	U	10	U				
Vinyl Chloride	13	U	10	U	10	U				
Bromomethane	13	U	10	U	10	U				
Chloroethane	13	U	10	U	10	U				
Trichlorofluoromethane	2	J	10	U	10	U				
1,1-Dichloroethene	13	U	10	U	10	U				
1,1,2-Trichloro-1,2,2-trifluoroethane	2	J	10	U	10	U				
Acetone	13	U	10	U	4	J				
Carbon Disulfide	13	UJ	10	UJ	10	UJ				
Methyl Acetate	13	U	10	U	10	U				
Methylene Chloride	4	J	2	J	10	U				
trans-1,2-Dichloroethene	13	U	10	U	10	U				
Methyl tert-Butyl Ether	13	U	10	U	10	U				
1,1-Dichloroethane	13	U	10	U	10	U				
cis-1,2-Dichloroethene	13	U	10	U	10	U				
2-Butanone	13	U	10	U	2	J				
Chloroform	13	U	10	U	10	U				
1,1,1-Trichloroethane	13	U	10	U	10	U				
Cyclohexane	13	U	10	U	10	U				
Carbon Tetrachloride	13	U	10	U	10	U				
Benzene	13	U	10	U	10	U				
1,2-Dichloroethane	13	U	10	U	10	U				
Trichloroethene	13	U	10	U	10	U				
Methylcyclohexane	13	U	10	U	10	U				
1,2-Dichloropropane	13	U	10	U	10	U				
Bromodichloromethane	13	U	10	U	10	U				
cis-1,3-Dichloropropene	13	U	10	U	10	U				
4-Methyl-2-pentanone	13	U	10	U	10	U				
Toluene	13	U	10	U	10	U				
trans-1,3-Dichloropropene	13	U	10	U	10	U				
1,1,2-Trichloroethane	13	U	10	U	10	U				
Tetrachloroethene	5	J	10	U	10	U				

Analytical Results (Qualified Data)

Case #: 28655 SDG : E0354
Site : FANSTEEL PRP
Lab. : Compuchem
Reviewer : S. Tobin
Date : 11/19/2000

Number of Soil Samples : 9
Number of Water Samples : 0

Sample Number :	E0362		VHBLKLT		VBLKLT					
Sampling Location :	SED1008									
Matrix :	Soil		Soil		Soil					
Units :	ug/Kg		ug/Kg		ug/Kg					
Date Sampled :	10/24/00									
Time Sampled :	14:35									
%Moisture :	23		0		N/A					
pH :										
Dilution Factor :	1.0		1.0		1.0					
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2-Hexanone	13	U	10	U	10	U				
Dibromochloromethane	13	U	10	U	10	U				
1,2-Dibromoethane	13	U	10	U	10	U				
Chlorobenzene	13	U	10	U	10	U				
Ethylbenzene	13	U	10	U	10	U				
Xylenes (total)	13	U	10	U	10	U				
Styrene	13	U	10	U	10	U				
Bromoform	13	U	10	U	10	U				
Isopropylbenzene	13	U	10	U	10	U				
1,1,2,2-Tetrachloroethane	13	U	10	U	10	U				
1,3-Dichlorobenzene	13	U	10	U	10	U				
1,4-Dichlorobenzene	13	U	10	U	10	U				
1,2-Dichlorobenzene	13	U	10	U	10	U				
1,2-Dibromo-3-chloropropane	13	U	10	U	10	U				
1,2,4-Trichlorobenzene	13	U	10	U	10	U				

Analytical Results (Qualified Data)

Case #: 28655 SDG : E0354
Site : FANSTEEL PRP
Lab. : Compuchem
Reviewer : S. Tobin
Date : 11/19/2000

Number of Soil Samples : 9
Number of Water Samples : 0

Sample Number :	E0354		E0355		E0356		E0356DL		E0356MS	
Sampling Location :	SED1001		SED1002		SED1003		SED1003		SED1003	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	10/24/00		10/24/00		10/24/00		10/24/00		10/24/00	
Time Sampled :	10:25		10:50		11:25		11:25		11:25	
%Moisture :	19		27		17		17		17	
pH :	7.8		5.8		7.8		7.8		7.8	
Dilution Factor :	2.0		2.0		2.0		8.0		2.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde	810	U	900	U	800	U	3200	U	790	U
Phenol	810	U	900	U	800	U	3200	U	2600	
bis-(2-Chloroethyl) ether	810	U	900	U	800	U	3200	U	790	U
2-Chlorophenol	810	U	900	U	800	U	3200	U	2700	
2-Methylphenol	810	U	900	U	800	U	3200	U	790	U
2,2'-oxybis(1-Chloropropane)	810	U	900	U	800	U	3200	U	790	U
Acetophenone	810	U	900	U	800	U	3200	U	790	U
4-Methylphenol	810	U	900	U	800	U	3200	U	790	U
N-Nitroso-di-n-propylamine	810	U	900	U	800	U	3200	U	1900	
Hexachloroethane	810	U	900	U	800	U	3200	U	790	U
Nitrobenzene	810	U	900	U	800	U	3200	U	790	U
Isophorone	810	U	900	U	800	U	3200	U	790	U
2-Nitrophenol	810	U	900	U	800	U	3200	U	790	U
2,4-Dimethylphenol	810	U	900	U	800	U	3200	U	790	U
bis(2-Chloroethoxy)methane	810	U	900	U	800	U	3200	U	790	U
2,4-Dichlorophenol	810	U	900	U	800	U	3200	U	790	U
Naphthalene	810	U	900	U	480	J	530	J	790	U
4-Chloroaniline	810	U	900	U	800	U	3200	U	790	U
Hexachlorobutadiene	810	U	900	U	800	U	3200	U	790	U
Caprolactam	810	U	900	U	800	U	3200	U	790	U
4-Chloro-3-methylphenol	810	U	900	U	800	U	3200	U	2600	
2-Methylnaphthalene	810	UJ	900	UJ	250	J	3200	UJ	790	UJ
Hexachlorocyclopentadiene	810	U	900	U	800	U	3200	U	790	U
2,4,6-Trichlorophenol	810	U	900	U	800	U	3200	U	790	U
2,4,5-Trichlorophenol	2000	U	2300	U	2000	U	8000	U	2000	U
1,1'-Biphenyl	810	U	900	U	170	J	3200	U	790	U
2-Chloronaphthalene	810	U	900	U	800	U	3200	U	790	U
2-Nitroaniline	2000	U	2300	U	2000	U	8000	U	2000	U
Dimethylphthalate	810	U	900	U	800	U	3200	U	790	U
2,6-Dinitrotoluene	810	U	900	U	800	U	3200	U	790	U
Acenaphthylene	810	U	900	U	800	U	3200	U	790	U
3-Nitroaniline	2000	U	2300	U	2000	U	8000	U	2000	U
Acenaphthene	410	J	220	J	2800	J	3500		2300	

Analytical Results (Qualified Data)

Case #: 28655 SDG : E0354
Site : FANSTEEL PRP
Lab. : Compuchem
Reviewer : S. Tobin
Date : 11/19/2000

Number of Soil Samples : 9
Number of Water Samples : 0

Sample Number :	E0354		E0355		E0356		E0356DL		E0356MS	
Sampling Location :	SED1001		SED1002		SED1003		SED1003		SED1003	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	10/24/00		10/24/00		10/24/00		10/24/00		10/24/00	
Time Sampled :	10:25		10:50		11:25		11:25		11:25	
%Moisture :	19		27		17		17		17	
pH :	7.6		5.8		7.8		7.8		7.8	
Dilution Factor :	2.0		2.0		2.0		8.0		2.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-Dinitrophenol	2000	U	2300	U	2000	U	8000	U	2000	U
4-Nitrophenol	2000	UJ	2300	UJ	2000	UJ	8000	UJ	2600	J
Dibenzofuran	230	J	120	J	1700		2200	J	340	J
2,4-Dinitrotoluene	810	U	900	U	800	U	3200	U	1600	
Diethylphthalate	810	U	900	U	800	U	3200	U	790	U
Fluorene	530	J	320	J	3200		4100		830	
4-Chlorophenyl-phenyl ether	810	U	900	U	800	U	3200	U	790	U
4-Nitroaniline	2000	UJ	2300	UJ	2000	UJ	8000	UJ	2000	UJ
4,6-Dinitro-2-methylphenol	2000	U	2300	U	2000	U	8000	U	2000	U
N-Nitrosodiphenylamine	810	U	900	U	800	U	3200	U	790	U
4-Bromophenyl-phenylether	810	U	900	U	800	U	3200	U	790	U
Hexachlorobenzene	810	U	900	U	800	U	3200	U	790	U
Atrazine	810	UJ	900	UJ	800	UJ	3200	UJ	790	UJ
Pentachlorophenol	2000	U	2300	U	2000	U	8000	U	2400	
Phenanthrene	4000		2800		15000		20000		5200	
Anthracene	780	J	590	J	3700		5200		1200	
Carbazole	610	J	420	J	2600	J	3200	J	900	J
Di-n-butylphthalate	810	U	900	U	800	U	3200	U	790	U
Fluoranthene	4900		3500		13000		18000		5700	
Pyrene	4300		3300		13000	J	14000		7100	
Butylbenzylphthalate	500	J	900	U	800	U	3200	U	790	U
3,3'-Dichlorobenzidine	810	UJ	900	UJ	800	UJ	3200	UJ	790	UJ
Benzo(a)anthracene	1900		1600		5900		6500		2500	
Chrysene	2400		1900		5800		6900		3000	
bis(2-Ethylhexyl)phthalate	1000		740	J	1700		2100	J	1800	
Di-n-octylphthalate	810	U	900	U	800	U	3200	U	130	J
Benzo(b)fluoranthene	3100		2400		7200		8600		3800	
Benzo(k)fluoranthene	3500		2600		8100		9700		4200	
Benzo(a)pyrene	2000		1500		4900		5800		2500	
Indeno(1,2,3-cd)pyrene	1400		1000		3200		3700		1800	
Dibenzo(a,h)anthracene	430	J	400	J	1100		1200	J	610	J
Benzo(g,h,i)perylene	1300		1000		3000		3400		1900	

Analytical Results (Qualified Data)

Case #: 28655 SDG : E0354
Site : FANSTEEL PRP
Lab. : Compuchem
Reviewer : S. Tobin
Date : 11/19/2000

Number of Soil Samples : 9
Number of Water Samples : 0

Sample Number :	E0356MSD		E0357		E0358		E0359		E0360	
Sampling Location :	SED1003		SED1004		SED1004DUP		SED1005		SED1006	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	10/24/00		10/24/00		10/24/00		10/24/00		10/24/00	
Time Sampled :	11:25		11:45		11:45		12:15		12:25	
%Moisture :	17		14		16		12		14	
pH :	7.8		7.9		7.9		6.5		7.7	
Dilution Factor :	2.0		1.0		1.0		1.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde	800	U	380	U	390	U	380	U	380	U
Phenol	2900		380	U	390	U	380	U	380	U
bis-(2-Chloroethyl) ether	800	U	380	U	390	U	380	U	380	U
2-Chlorophenol	3100		380	U	390	U	380	U	380	U
2-Methylphenol	800	U	380	U	390	U	380	U	380	U
2,2'-oxybis(1-Chloropropane)	800	U	380	U	390	U	380	U	380	U
Acetophenone	800	U	380	U	390	U	380	U	380	U
4-Methylphenol	800	U	380	U	390	U	380	U	380	U
N-Nitroso-di-n-propylamine	2100		380	U	390	U	380	U	380	U
Hexachloroethane	800	U	380	U	390	U	380	U	380	U
Nitrobenzene	800	U	380	U	390	U	380	U	380	U
Isophorone	800	U	380	U	390	U	380	U	380	U
2-Nitrophenol	800	U	380	U	390	U	380	U	380	U
2,4-Dimethylphenol	800	U	380	U	390	U	380	U	380	U
bis(2-Chloroethoxy)methane	800	U	380	U	390	U	380	U	380	U
2,4-Dichlorophenol	800	U	380	U	390	U	380	U	380	U
Naphthalene	240	J	380	U	390	U	380	U	58	J
4-Chloroaniline	800	U	380	U	390	U	380	U	380	U
Hexachlorobutadiene	800	U	380	U	390	U	380	U	380	U
Caprolactam	800	U	380	U	390	U	380	U	380	U
4-Chloro-3-methylphenol	3100		380	U	390	U	380	U	380	U
2-Methylnaphthalene	800	UJ	380	UJ	390	UJ	380	UJ	73	J
Hexachlorocyclopentadiene	800	U	380	U	390	U	380	U	380	U
2,4,6-Trichlorophenol	800	U	380	U	390	U	380	U	380	U
2,4,5-Trichlorophenol	2000	U	960	U	980	U	940	U	970	U
1,1'-Biphenyl	800	U	380	U	390	U	380	U	380	U
2-Chloronaphthalene	800	U	380	U	390	U	380	U	380	U
2-Nitroaniline	2000	U	960	U	980	U	940	U	970	U
Dimethylphthalate	800	U	380	U	390	U	380	U	380	U
2,6-Dinitrotoluene	800	U	380	U	390	U	380	U	380	U
Acenaphthylene	800	U	380	U	390	U	380	U	380	U
3-Nitroaniline	2000	U	960	U	980	U	940	U	970	U
Acenaphthene	3300		49	J	50	J	380	U	150	J

Analytical Results (Qualified Data)

Case #: 28655 SDG : E0354
Site : FANSTEEL PRP
Lab. : Compuchem
Reviewer : S. Tobin
Date : 11/19/2000

Number of Soil Samples : 9
Number of Water Samples : 0

Sample Number :	E0356MSD		E0357		E0358		E0359		E0360	
Sampling Location :	SED1003		SED1004		SED1004DUP		SED1005		SED1006	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	10/24/00		10/24/00		10/24/00		10/24/00		10/24/00	
Time Sampled :	11:25		11:45		11:45		12:15		12:25	
%Moisture :	17		14		16		12		14	
pH :	7.8		7.9		7.9		6.5		7.7	
Dilution Factor :	2.0		1.0		1.0		1.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-Dinitrophenol	2000	U	960	U	980	U	940	U	970	U
4-Nitrophenol	3100	J	960	UJ	980	UJ	940	UJ	970	UJ
Dibenzofuran	780	J	380	U	390	U	380	U	260	J
2,4-Dinitrotoluene	1800		380	U	390	U	380	U	380	U
Diethylphthalate	800	U	380	U	390	U	380	U	380	U
Fluorene	1600		110	J	59	J	380	U	190	J
4-Chlorophenyl-phenyl ether	800	U	380	U	390	U	380	U	380	U
4-Nitroaniline	2000	UJ	960	UJ	980	UJ	940	UJ	970	UJ
4,6-Dinitro-2-methylphenol	2000	U	960	U	980	U	940	U	970	U
N-Nitrosodiphenylamine	800	U	380	U	390	U	380	U	380	U
4-Bromophenyl-phenylether	800	U	380	U	390	U	380	U	380	U
Hexachlorobenzene	800	U	380	U	390	U	380	U	380	U
Atrazine	800	UJ	380	UJ	390	UJ	380	UJ	380	UJ
Pentachlorophenol	2600		960	U	980	U	940	U	970	U
Phenanthrene	9400		1100		410		460		2500	
Anthracene	2400		400		83	J	95	J	510	
Carbazole	1600	J	110	J	67	J	79	J	380	J
Di-n-butylphthalate	800	U	380	U	390	U	380	U	380	U
Fluoranthene	10000		1600		460		670		2100	
Pyrene	11000		1400		430		600		2100	
Butylbenzylphthalate	800	U	440		390	U	380	U	380	U
3,3'-Dichlorobenzidine	800	UJ	380	UJ	390	UJ	380	UJ	380	UJ
Benzo(a)anthracene	4100		700		160	J	250	J	1000	
Chrysene	4800		740		220	J	320	J	1200	
bis(2-Ethylhexyl)phthalate	1200		490		400		360	J	740	
Di-n-octylphthalate	800	U	55	J	40	J	59	J	60	J
Benzo(b)fluoranthene	5600		970		300	J	410		1300	
Benzo(k)fluoranthene	6400		1100		340	J	460		1500	
Benzo(a)pyrene	4100		630		180	J	260	J	720	
Indeno(1,2,3-cd)pyrene	2700		450		130	J	190	J	520	
Dibenzo(a,h)anthracene	880		180	J	390	U	57	J	200	J
Benzo(g,h,i)perylene	2700		480		190	J	260	J	490	

Analytical Results (Qualified Data)

Case #: 28655 SDG : E0354
Site : FANSTEEL PRP
Lab. : Compuchem
Reviewer : S. Tobin
Date : 11/19/2000

Number of Soil Samples : 9
Number of Water Samples : 0

Sample Number :	E0361		E0362		SBLKNY					
Sampling Location :	SED1007		SED1008							
Matrix :	Soil		Soil		Soil					
Units :	ug/Kg		ug/Kg		ug/Kg					
Date Sampled :	10/24/00		10/24/00							
Time Sampled :	14:15		14:35							
%Moisture :	42		23		N/A					
pH :	7.9		7.5							
Dilution Factor :	1.0		5.0		1.0					
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde	560	U	2100	U	330	U				
Phenol	560	U	2100	U	330	U				
bis-(2-Chloroethyl) ether	560	U	2100	U	330	U				
2-Chlorophenol	560	U	2100	U	330	U				
2-Methylphenol	560	U	2100	U	330	U				
2,2'-oxybis(1-Chloropropane)	560	U	2100	U	330	U				
Acetophenone	560	U	2100	U	330	U				
4-Methylphenol	560	U	2100	U	330	U				
N-Nitroso-di-n-propylamine	560	U	2100	U	330	U				
Hexachloroethane	560	U	2100	U	330	U				
Nitrobenzene	560	U	2100	U	330	U				
Isophorone	560	U	2100	U	330	U				
2-Nitrophenol	560	U	2100	U	330	U				
2,4-Dimethylphenol	560	U	2100	U	330	U				
bis(2-Chloroethoxy)methane	560	U	2100	U	330	U				
2,4-Dichlorophenol	560	U	2100	U	330	U				
Naphthalene	560	U	360	J	330	U				
4-Chloroaniline	560	U	2100	U	330	U				
Hexachlorobutadiene	560	U	2100	U	330	U				
Caprolactam	560	U	2100	U	330	U				
4-Chloro-3-methylphenol	560	U	2100	U	330	U				
2-Methylnaphthalene	560	UJ	270	J	330	UJ				
Hexachlorocyclopentadiene	560	U	2100	U	330	U				
2,4,6-Trichlorophenol	560	U	2100	U	330	U				
2,4,5-Trichlorophenol	1400	U	5300	U	830	U				
1,1'-Biphenyl	560	U	2100	U	330	U				
2-Chloronaphthalene	560	U	2100	U	330	U				
2-Nitroaniline	1400	U	5300	U	830	U				
Dimethylphthalate	560	U	2100	U	330	U				
2,6-Dinitrotoluene	560	U	2100	U	330	U				
Acenaphthylene	560	U	470	J	330	U				
3-Nitroaniline	1400	U	5300	U	830	U				
Acenaphthene	560	U	980	J	330	U				

Analytical Results (Qualified Data)

Case #: 28655 SDG : E0354
Site : FANSTEEL PRP
Lab. : Compuchem
Reviewer : S. Tobin
Date : 11/19/2000

Number of Soil Samples : 9
Number of Water Samples : 0

Sample Number :	E0361		E0362		SBLKNY					
Sampling Location :	SED1007		SED1008							
Matrix :	Soil		Soil		Soil					
Units :	ug/Kg		ug/Kg		ug/Kg					
Date Sampled :	10/24/00		10/24/00							
Time Sampled :	14:15		14:35							
%Moisture :	42		23		N/A					
pH :	7.9		7.5							
Dilution Factor :	1.0		5.0		1.0					
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-Dinitrophenol	1400	U	5300	U	830	U				
4-Nitrophenol	1400	UJ	5300	UJ	830	UJ				
Dibenzofuran	560	U	590	J	330	U				
2,4-Dinitrotoluene	560	U	2100	U	330	U				
Diethylphthalate	560	U	2100	U	330	U				
Fluorene	560	U	1100	J	330	U				
4-Chlorophenyl-phenyl ether	560	U	2100	U	330	U				
4-Nitroaniline	1400	UJ	5300	UJ	830	UJ				
4,6-Dinitro-2-methylphenol	1400	U	5300	U	830	U				
N-Nitrosodiphenylamine	560	U	2100	U	330	U				
4-Bromophenyl-phenylether	560	U	2100	U	330	U				
Hexachlorobenzene	560	U	2100	U	330	U				
Atrazine	560	UJ	2100	UJ	330	UJ				
Pentachlorophenol	1400	U	5300	U	830	U				
Phenanthrene	330	J	8100		330	U				
Anthracene	61	J	2300		330	U				
Carbazole	61	J	1300	J	330	UJ				
Di-n-butylphthalate	560	U	2100	U	330	U				
Fluoranthene	440	J	10000		330	U				
Pyrene	460	J	9100		330	U				
Butylbenzylphthalate	82	J	240	J	330	U				
3,3'-Dichlorobenzidine	560	UJ	2100	UJ	330	UJ				
Benzo(a)anthracene	210	J	4700		330	U				
Chrysene	370	J	5900		330	U				
bis(2-Ethylhexyl)phthalate	460	J	870	J	330	U				
Di-n-octylphthalate	560	U	2100	U	330	U				
Benzo(b)fluoranthene	510	J	7200		330	U				
Benzo(k)fluoranthene	580		8100		330	U				
Benzo(a)pyrene	260	J	4500		330	U				
Indeno(1,2,3-cd)pyrene	280	J	3200		330	U				
Dibenzo(a,h)anthracene	87	J	1100	J	330	U				
Benzo(g,h,i)perylene	300	J	2800		330	U				

Analytical Results (Qualified Data)

Case #: 28655 SDG : E0354
Site : FANSTEEL PRP
Lab. : Compuchem
Reviewer : S. Tobin
Date : 11/19/2000

Number of Soil Samples : 9
Number of Water Samples : 0

Sample Number :	E0354		E0354DL		E0355		E0356		E0356DL	
Sampling Location :	SED1001		SED1001		SED1002		SED1003		SED1003	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	10/24/00		10/24/00		10/24/00		10/24/00		10/24/00	
Time Sampled :	10:25		10:25		10:50		11:25		11:25	
%Moisture :	19		19		27		17		17	
pH :	7.6		7.6		5.8		7.8		7.8	
Dilution Factor :	1.0		2.0		1.0		1.0		10.0	
Pesticide/PCB Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
alpha-BHC	2.1	U	4.2	UJ	2.3	U	2.0	U	20	UJ
beta-BHC	8.1	J	4.2	U	4.3	J	10	J	20	U
delta-BHC	0.86	J	4.2	U	2.3	UJ	2.0	UJ	20	U
gamma-BHC (Lindane)	2.1	U	4.2	U	2.3	U	2.0	U	20	U
Heptachlor	2.1	U	2.3	J	2.3	U	2.0	U	20	U
Aldrin	2.1	U	4.2	U	2.3	U	2.0	U	20	U
Heptachlor epoxide	0.70	J	1.7	J	2.3	U	4.2	J	6.4	J
Endosulfan I	2.1	U	4.2	U	2.3	U	2.0	U	20	U
Dieldrin	2.2	J	2.6	J	2.1	J	8.1	J	40	U
4,4'-DDE	3.7	J	3.1	J	2.7	J	8.6	J	40	U
Endrin	11	J	10	J	4.5	U	50	J	40	U
Endosulfan II	4.1	U	8.2	UJ	4.5	U	4.0	U	40	UJ
4,4'-DDD	2.2	J	8.2	UJ	1.6	J	5.2	J	40	UJ
Endosulfan sulfate	9.0	J	8.2		3.8	J	40	J	29	J
4,4'-DDT	4.1	UJ	8.2	UJ	4.5	UJ	4.0	UJ	40	U
Methoxychlor	21	U	42	U	23	U	42	J	200	U
Endrin ketone	7.3	J	7.2	J	2.9	J	33	J	19	J
Endrin aldehyde	2.3	J	8.2	U	4.5	U	8.2	J	8.9	J
alpha-Chlordane	2.1	U	4.2	U	2.3	U	2.0	U	20	U
gamma-Chlordane	1.1	J	1.6	J	1.3	J	2.3	J	4.8	J
Toxaphene	210	U	420	U	230	U	200	U	2000	U
Aroclor-1016	41	U	81	U	45	U	40	U	400	U
Aroclor-1221	83	U	170	U	92	U	80	U	800	U
Aroclor-1232	41	U	81	U	45	U	40	U	400	U
Aroclor-1242	41	U	81	U	45	U	40	U	400	U
Aroclor-1248	41	U	81	U	45	U	40	U	400	U
Aroclor-1254	41	U	81	U	45	U	40	U	400	U
Aroclor-1260	41	U	81	U	45	U	40	U	400	U

Analytical Results (Qualified Data)

Case #: 28655 SDG : E0354
Site : FANSTEEL PRP
Lab. : Compuchem
Reviewer : S. Tobin
Date : 11/19/2000

Number of Soil Samples : 9
Number of Water Samples : 0

Sample Number :	E0356MS		E0356MSD		E0357		E0358		E0359	
Sampling Location :	SED1003		SED1003		SED1004		SED1004DUP		SED1005	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	10/24/00		10/24/00		10/24/00		10/24/00		10/24/00	
Time Sampled :	11:25		11:25		11:45		11:45		12:15	
%Moisture :	17		17		14		16		12	
pH :	7.8		7.8		7.9		7.9		6.5	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Pesticide/PCB Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
alpha-BHC	2.0	U	2.0	U	2.0	U	2.0	U	1.9	U
beta-BHC	12	J	6.2	J	3.9	J	2.9	J	5.3	J
delta-BHC	2.0	UJ	2.0	UJ	2.0	UJ	2.0	UJ	1.9	UJ
gamma-BHC (Lindane)	13	J	12	J	2.0	U	2.0	U	1.9	U
Heptachlor	11	J	12	J	2.0	U	2.0	U	1.9	U
Aldrin	14	J	12	J	2.0	U	2.0	U	1.9	U
Heptachlor epoxide	1.1	J	1.7	J	2.0	U	2.0	U	1.9	U
Endosulfan I	2.0	U	2.0	U	2.0	U	2.0	U	1.9	U
Dieldrin	28	J	27	J	3.8	U	3.9	U	1.6	J
4,4'-DDE	4.7	J	3.8	J	1.0	J	1.5	J	8.6	
Endrin	29	J	27	J	3.8	U	3.9	U	3.8	U
Endosulfan II	3.9	U	3.9	U	3.8	U	3.9	U	3.8	U
4,4'-DDD	5.7	J	2.2	J	3.8	UJ	3.9	UJ	1.7	J
Endosulfan sulfate	2.9	J	3.5	J	2.3	J	3.9	U	2.1	J
4,4'-DDT	35	J	32	J	3.8	UJ	3.9	UJ	3.8	UJ
Methoxychlor	20	U	20	U	20	U	20	U	19	U
Endrin ketone	13	J	3.6	J	2.5	J	3.9	U	3.7	J
Endrin aldehyde	3.9	U	1.1	J	1.2	J	3.9	U	3.8	U
alpha-Chlordane	0.76	J	0.85	J	2.0	U	2.0	U	1.9	U
gamma-Chlordane	0.87	J	1.2	J	1.8	J	0.52	J	0.87	J
Toxaphene	200	U	200	U	200	U	200	U	190	U
Aroclor-1016	39	U	39	U	38	U	39	U	38	U
Aroclor-1221	80	U	80	U	77	U	79	U	76	U
Aroclor-1232	39	U	39	U	38	U	39	U	38	U
Aroclor-1242	39	U	39	U	38	U	39	U	38	U
Aroclor-1248	39	U	39	U	38	U	39	U	38	U
Aroclor-1254	39	U	39	U	38	U	39	U	38	U
Aroclor-1260	39	U	39	U	38	U	39	U	38	U

Analytical Results (Qualified Data)

Case #: 28655 SDG : E0354
Site : FANSTEEL PRP
Lab. : Compuchem
Reviewer : S. Tobin
Date : 11/19/2000

Number of Soil Samples : 9
Number of Water Samples : 0

Sample Number :	E0360		E0361		E0361DL		E0362		E0362DL	
Sampling Location :	SED1006		SED1007		SED1007		SED1008		SED1008	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	10/24/00		10/24/00		10/24/00		10/24/00		10/24/00	
Time Sampled :	12:25		14:15		14:15		14:35		14:35	
%Moisture :	14		42		42		23		23	
pH :	7.7		7.9		7.9		7.5		7.5	
Dilution Factor :	1.0		1.0		2.0		1.0		10.0	
Pesticide/PCB Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
alpha-BHC	2.0	U	2.9	U	5.8	UJ	3.4	J	22	UJ
beta-BHC	1.3	J	0.94	J	5.8	U	4.0	J	22	U
delta-BHC	2.0	UJ	2.9	UJ	5.8	U	4.2	J	22	U
gamma-BHC (Lindane)	2.0	U	2.9	U	5.8	U	2.2	U	22	U
Heptachlor	2.0	U	2.9	U	5.8	U	2.2	U	22	U
Aldrin	2.0	U	2.9	U	5.8	U	2.2	U	22	U
Heptachlor epoxide	2.0	U	7.3	J	6.2	J	2.4	J	22	U
Endosulfan I	2.0	U	2.9	U	5.8	U	0.59	J	22	U
Dieldrin	3.8	U	5.6	U	11	U	5.2	J	43	U
4,4'-DDE	1.2	J	11	J	10	J	11	J	15	J
Endrin	3.8	U	5.6	U	11	U	4.3	U	43	U
Endosulfan II	3.8	U	5.6	U	11	UJ	4.3	U	43	UJ
4,4'-DDD	3.8	UJ	3.6	J	11	UJ	7.2	J	43	UJ
Endosulfan sulfate	1.4	J	5.6	U	11	U	9.0	J	43	U
4,4'-DDT	3.8	UJ	9.3	J	7.2	J	28	J	18	J
Methoxychlor	20	U	29		58	U	53	J	220	U
Endrin ketone	3.8	U	5.6	U	11	U	14	J	15	J
Endrin aldehyde	3.8	U	5.6	U	11	U	6.4	J	43	U
alpha-Chlordane	0.85	J	43	J	37	J	3.9	J	22	U
gamma-Chlordane	0.54	J	24		20		5.2	J	6.0	J
Toxaphene	200	U	290	U	580	U	220	U	2200	U
Aroclor-1016	38	U	56	U	110	U	43	U	430	U
Aroclor-1221	78	U	110	U	230	U	87	U	870	U
Aroclor-1232	38	U	56	U	110	U	43	U	430	U
Aroclor-1242	38	U	56	U	110	U	43	U	430	U
Aroclor-1248	38	U	56	U	110	U	43	U	430	U
Aroclor-1254	38	U	56	U	110	U	43	U	430	U
Aroclor-1260	38	U	56	U	110	U	43	U	430	U

Analytical Results (Qualified Data)

Case #: 28655 SDG : E0354
Site : FANSTEEL PRP
Lab. : Compuchem
Reviewer : S. Tobin
Date : 11/19/2000

Number of Soil Samples : 9
Number of Water Samples : 0

Sample Number :	PBLKNZ									
Sampling Location :										
Matrix :	Soil									
Units :	ug/Kg									
Date Sampled :										
Time Sampled :										
%Moisture :	N/A									
pH :										
Dilution Factor :	1.0									
Pesticide/PCB Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
alpha-BHC	1.7	U								
beta-BHC	1.7	U								
delta-BHC	1.7	UJ								
gamma-BHC (Lindane)	1.7	U								
Heptachlor	1.7	U								
Aldrin	1.7	U								
Heptachlor epoxide	1.7	U								
Endosulfan I	1.7	U								
Dieldrin	3.3	U								
4,4'-DDE	3.3	U								
Endrin	3.3	U								
Endosulfan II	3.3	U								
4,4'-DDD	3.3	UJ								
Endosulfan sulfate	3.3	U								
4,4'-DDT	3.3	UJ								
Methoxychlor	17	U								
Endrin ketone	3.3	U								
Endrin aldehyde	3.3	U								
alpha-Chlordane	1.7	U								
gamma-Chlordane	1.7	U								
Toxaphene	170	U								
Aroclor-1016	33	U								
Aroclor-1221	67	U								
Aroclor-1232	33	U								
Aroclor-1242	33	U								
Aroclor-1248	33	U								
Aroclor-1254	33	U								
Aroclor-1260	33	U								

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V
ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

Sample Delivery Group: E0354 CERCLIS No: ILD097271563

Case No: 28655 Site Name/Location: FANSTEEL PRP

Contractor or EPA Lab: CompuChem Data User: TN + Assoc.

No. of Samples: 9 Date Sampled or Date Received: 11-6-00

Have Chain-of-Custody records been received? Yes ✓ No ____
Have traffic reports or packing lists been received? Yes ✓ No ____
If no, are traffic report or packing list numbers written on the Chain-of-Custody Record?
Yes ____ No ____
If no, which traffic report or packing list numbers are missing?

Are basic data forms in? Yes ✓ No ____
No of samples claimed: 9 No. of samples received: 9

Received by: Eva M. Dixon / ESAT Date: 11-6-00

Received by LSSS: Eva M. Dixon / ESAT Date: 11-6-00

Review started: 11/17/00 Reviewer Signature: Stephanie Tobin

Total time spent on review: 9 hrs Date review completed: 11/21/00

Copied by: Eva M. Dixon / ESAT Date: 12-1-00

Mailed to user by: Eva M. Dixon / ESAT Date: 12-1-00

DATA USER:
Please fill in the blanks below and return this form to:
Sylvia Griffin, Data Mgmt. Coordinator, Region V, ML-10C

Data received by: ____ Date: ____

Data review received by: ____ Date: ____

Inorganic Data Complete	[ ] Suitable for Intended Purpose [ ] ✓ if OK
Organic Data Complete	[ ] Suitable for Intended Purpose [ ] ✓ if OK
Dioxin data Complete	[ ] Suitable for Intended Purpose [ ] ✓ if OK
SAS Data Complete	[ ] Suitable for Intended Purpose [ ] ✓ if OK

PROBLEMS: Please indicate reasons why data are not suitable for your uses.

Received by Data Mgmt. Coordinator for Files. Date: ____

Regional Transmittal Form

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE:

SUBJECT: Review of Data
Received for Review on 11-6-00

FROM: Stephen L. Ostrodka, Chief (SMF-4J)
Superfund Field Services Section

TO: Data User: TN + Assoc.

We have reviewed the data for the following case:

SITE NAME: Fansteel PRP (IL)

CASE NUMBER: 28655 SDG NUMBER: E0354

Number and Type of Samples: 9 (Soil)

Sample Numbers: E0354-9, E0360-2

Laboratory: CompuChem Hrs for Review:

Following are our findings:

CC: Cecilia Moore
Region 5 TPO
Mail Code: SM-5J

COMPUCHEM
A division of Liberty Analytical Corporation
501 Madison Ave.
Cary, NC 27513

SDG NARRATIVE

CASE #28655
SDG #E0354
CONTRACT #68W99071

SAMPLE IDENTIFICATIONS:

E0354 E0355 E0356 E0357 E0358 E0359 E0360 E0361 E0362

This portion of the SDG narrative deals with the semivolatile fractions for the nine samples above only. For the receiving information associated with these samples, please refer to the volatile SDG narrative.

All pertinent Quality Assurance notices are included in the narrative section and all pertinent Laboratory notices for Case #28655, SDG #E0354 are included in the sample data sections.

SEMIVOLATILE
The semivolatile fractions were extracted and analyzed within the required holding time. The percent moisture values for the samples ranged from 12% to 42% and the pH values ranged from 5.8 to 7.9.

Four to seventeen Target Compound List (TCL) analytes were detected with concentrations above the Contract Required Quantitation Limit (CRQL) in eight of the samples. These analytes were phenanthrene, fluoranthene, pyrene, benzo(a)anthracene, chrysene, bis(2-ethylhexyl)phthalate, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, benzo(g,h,i)perylene, acenaphthene, dibenzofuran, fluorene, anthracene, carbazole, dibenzo(a,h)anthracene, butylbenzylphthalate.

In the continuing calibration standards associated with these samples, benzo(b)fluoranthene and benzo(k)fluoranthene were chromatographically resolved and were identified as separate peaks with different retention times. However, in all of the samples and the duplicate matrix spikes, the isomers could not be chromatographically resolved. This is indicated with "X" flags on the Form Is.

Fifteen to thirty-one Tentatively Identified Compounds (TIC) were detected in the samples. These TICs were assessed as unknowns, alcohols, carboxylic acids, PAHs, thiophenes, naphthalenes, amines, amides, alkenes, ketones, cholesterol and phthalates. Other TICs were detected and assessed as unknown alkanes in some of the samples. The TICs that were characterized as alkanes have been summarized on the Alkane Narrative Report that is located in the narrative section of the data package. The TIC spectra for the alkanes are located in the data section for the individual samples.

In the analyses of E0355, E0356, E0357 and E0360, one or more TICs were assessed as TCL analytes. However, the retention times of these TICs did not compare well to the analyte retention times in the associated Continuing Calibration standard. In accordance with the EPA CLP Statement of Work, Document number OLM04.2, TICs above 85% purity should be assessed as the compound [page D-46/SVOA; section 11.1.2.5.6].

Due to the appearance of the extracts, E0354, E0355, E0356 and E0362 were initially analyzed diluted. In this analysis of E0356 the on-column amounts of one or more analytes exceeded the instrument's upper analytical range as defined by the highest concentration level in the Initial Calibration. The sample was reanalyzed at a higher dilution level in order to bring the on-column amounts within the range. The two diluted analyses of E0356 have been reported and billed for.

QC SUMMARY

All decafluorotriphenylphosphine (DFTPP) abundance criteria were met for tunes associated to this SDG. Overall QC criteria were met for all initial and continuing calibration standards associated to this SDG.

The surrogates met recovery criteria for the semivolatile fractions. The internal standards met area response and retention time criteria.

The duplicate matrix spikes met accuracy and precison criteria, with some exceptions. The recoveries of acenaphthene and pyrene were flagged as outliers in the MS and the recoveries of phenol, 2-chlorophenol, acenaphthene, 2,4-dintrotoluene and pyrene were flagged as outliers in the MSD. The relative percent difference value for acenaphthene was also flagged as an outlier in the comparison of the duplicate matrix spikes.

The associated blanks met Quality Control criteria.

In the analyses of the Initial and Continuing Calibration standards and all of the samples, manual quantitations were performed. The reasons have been coded with explanations provided in the notice included in the narrative section of the SDG.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the laboratory manager or his/her designee, as verified by the following signature:

Patricia B Hopkins

Patricia B. Hopkins
Data Analyst II
2 November 2000

Note: This report is paginated for reference and accountability in numerical sequence.

ALKANE NARRATIVE REPORT
Report date : 11/02/2000
SDG: E0354

Client Sample ID: E0354 Lab Sample ID: E0354-1 File ID: E0354-1DA66

Compound	RT	Est. Conc.	Q
Unknown Alkane	17.70	4678	J
Unknown Alkane	17.87	4351	J
Cyclic Alkane	18.03	4675	J
Straight-Chain Alkane	18.15	2492	J
Straight-Chain Alkane	19.61	1913	J
Cyclic Alkane	20.07	1775	J
Unknown Alkane	20.24	1383	J

Client Sample ID: E0355 Lab Sample ID: E0354-2 File ID: E0354-2DA66

Compound	RT	Est. Conc.	Q
Cyclic Alkane	18.03	1454	J
Straight-Chain Alkane	18.15	1334	J
Straight-Chain Alkane	19.61	942.5	J

Client Sample ID: E0356 Lab Sample ID: E0354-3 File ID: E0354-3DA66

Compound	RT	Est. Conc.	Q
Straight-Chain Alkane	16.77	412.3	J

Client Sample ID: E0356DL Lab Sample ID: E0354-3 File ID: E0354-3D2A6

Compound	RT	Est. Conc.	Q
Cyclic Alkane	18.04	3185	JD

Client Sample ID: E0358 Lab Sample ID: E0354-5 File ID: E0354-5A

Compound	RT	Est. Conc.	Q
Straight-Chain Alkane	16.27	149.1	J
Straight-Chain Alkane	16.76	421.9	J
Straight-Chain Alkane	17.25	287.2	J
Straight-Chain Alkane	17.42	317.6	J
Straight-Chain Alkane	17.51	192.0	J
Straight-Chain Alkane	17.71	593.0	J
Straight-Chain Alkane	17.86	322.7	J
Straight-Chain Alkane	18.15	350.7	J
Straight-Chain Alkane	18.59	424.4	J
Straight-Chain Alkane	19.61	197.0	J

Client Sample ID: E0359 Lab Sample ID: E0354-6 File ID: E0354-6A66

Compound	RT	Est. Conc.	Q
Unknown Alkane	15.76	186.3	J
Straight-Chain Alkane	16.77	279.1	J
Straight-Chain Alkane	17.25	300.3	J
Unknown Alkane	17.43	288.9	J
Straight-Chain Alkane	17.70	330.5	J

Unknown Alkane	17.85	327.9	J
Branched Alkane	18.58	232.2	J
Straight-Chain Alkane	19.62	186.9	J

Client Sample ID: E0360 Lab Sample ID: E0354-7 File ID: E0354-7A66

Compound	RT	Est. Conc.	Q
Straight-Chain Alkane	16.29	453.5	J
Straight-Chain Alkane	17.26	628.7	J
Unknown Alkane	17.41	534.0	J
Straight-Chain Alkane	17.53	499.9	J
Straight-Chain Alkane	17.71	703.5	J
Unknown Alkane	18.15	581.1	J
Straight-Chain Alkane	18.59	402.6	J

Client Sample ID: E0361 Lab Sample ID: E0354-8 File ID: E0354-8A66

Compound	RT	Est. Conc.	Q
Straight-Chain Alkane	16.30	782.2	J
Straight-Chain Alkane	16.80	2618	J
Branched Alkane	17.77	6189	J
Straight-Chain Alkane	18.18	1132	J
Straight-Chain Alkane	18.67	7037	J
Straight-Chain Alkane	19.70	2204	J

Client Sample ID: E0362 Lab Sample ID: E0354-9 File ID: E0354-9DA66

Compound	RT	Est. Conc.	Q
Straight-Chain Alkane	17.24	2149	J
Unknown Alkane	17.72	3044	J
Straight-Chain Alkane	18.16	2179	J
Unknown Alkane	18.60	4550	J
Straight-Chain Alkane	19.63	3413	J
Unknown Alkane	20.26	1080	J

Client Sample ID: E0357 Lab Sample ID: E0354-4 File ID: E0354-4JA66

Compound	RT	Est. Conc.	Q
Straight-Chain Alkane	15.77	153.7	J
Unknown Alkane	16.28	271.8	J
Straight-Chain Alkane	16.77	267.0	J
Straight-Chain Alkane	17.26	431.4	J
Straight-Chain Alkane	17.41	344.3	J
Unknown Alkane	17.51	308.8	J
Unknown Alkane	17.72	438.6	J
Straight-Chain Alkane	18.16	270.0	J
Straight-Chain Alkane	18.60	262.6	J
Unknown Alkane	19.63	176.0	J

CompuChem
a division of Liberty Analytical Corp.
501 Madison Avenue
Cary, North Carolina 27513

SDG NARRATIVE

CASE: 28655
SDG: E0354
CONTRACT: 68W99071

SAMPLE IDENTIFICATIONS: E0354, E0355, E0356, E0357, E0358, E0359, E0360, E0361, E0362

This portion of the SDG narrative covers only the pesticide fractions of the nine (9) samples listed above. For receiving information pertaining to these samples, please refer to the portion of the SDG narrative that covers the volatile fractions.

PESTICIDES

Extraction and analysis holding time requirements were met for these samples. The pesticide Target Compound List (TCL) analyte beta-BHC was confirmed by dual column analysis at a concentration above the Contract Required Quantitation Limit (CRQL) in all of the samples except E0360 and E0361. E0354, E0356, E0359, E0361, and E0362 contained the pesticide TCL analytes heptachlor epoxide, dieldrin, 4,4'-DDE, endrin, 4,4'-DDD, endosulfan sulfate, methoxychlor, endrin ketone, endrin aldehyde, alpha-chlordane and/or gamma-chlordane at a concentration above the CRQL. E0362 also contained the pesticide TCL analytes alpha-BHC and delta-BHC at concentrations above the CRQL. No PCB TCL analytes were confirmed by dual column analysis at a concentration above the CRQL in any of these samples.

Manual quantitations were performed on several of the process files associated with this SDG. The reasons have been coded with explanations provided in the notice included in the narrative section of the SDG.

In initial undiluted analyses of E0354, E0356, E0361, and E0362, the on-column amount of at least one pesticide TCL analyte exceeded the instrument's calibration range on one column. The samples were reanalyzed at dilutions ranging from 2X to 10X in order to bring the amounts into range. We have reported and billed for both analyses of each of these four samples.

All of the surrogates met recovery criteria with several exceptions. The recovery of decachloro-biphenyl (DCB) fell above the quality control criteria limit on one or both columns in the analyses of E0354, E0356, E0357, E0362, and the duplicate matrix spikes due to matrix interference. The recovery of the tetrachloro-m-xylene (TCX) fell above the quality control criteria limit on the CLPEST2 column in the analyses of E0355, E0356, E0360, and the matrix spike duplicate. All of the surrogates met retention time criteria in the analyses of these samples.

The associated method blank met all quality control criteria. No pesticide or PCB TCL analytes were confirmed in the method blank.

E0356 was used as the original to prepare the duplicate matrix spikes as requested. The duplicate matrix spikes were analyzed at the lower dilution level of the original (undiluted). The associated duplicate matrix spikes met all advisory accuracy and precision criteria with two exceptions. The recovery of the spike compound endrin was flagged as an outlier in both the matrix spike and matrix spike duplicate.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions listed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Stephanie W Winfield 11-2-00

Stephanie W. Winfield
Technical Reviewer
November 2, 2000

CompuChem
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ORIGINAL

Quality Assurance Notice

Case # 28655 SDG# _____
Receipt Date 10/25/00 Matrix SOIL

In the USEPA Contract Laboratory Program (CLP) "Statement of Work for Organic Analysis, Multi-Media, Multi-Concentration (Document Number OLM04.2),"directions are provided dealing with a temperature blank, termed the USEPA Cooler Temperature Indicator.

If a cooler temperature indicator bottle is not present in the cooler, the laboratory is required to contact the Sample Management Office (SMO), inform them of that fact and use an alternative means of determining the cooler temperature.

The following is a list of options employed by CompuChem to determine the cooler temperature. For the Case/ SDG presented above, the option(s) used have been indicated by a check mark.

Note: Any of the options performed are done so immediately after the cooler has been opened and the determination made that the cooler temperature indicator bottle is absent.

Water Samples

___An aliquot from a sample bottle designated for extractable organics is poured into a disposable container, a thermometer is inserted into the disposable container, and the temperature is taken and recorded after a 3 minute equilibration period. The contents of the disposable container are then properly discarded.

___A calibrated IR temperature gun is focused onto a sample container, contained in the cooler, and after a minimum of 5 seconds, a temperature reading is taken and recorded.

Soil Samples

✓ A calibrated IR gun is used, as indicated for water samples.
___A temperature strip is affixed to the outside of a sample container and, after one minute, the temperature is read and recorded.

As required by the organic SOW, the alternative technique used to determine the cooler temperature must be documented in the SDG Narrative.

QAN-R-5
000314

Signature Melissa Steve
Date 10/25/00

GC and GC/MS Column and Trap Specifications Table

COLUMNS

Brand Name	Coating Material	ID (mm)	Film Thickness (um)	Length (m)
GC Laboratory				
Restek	RTX-1701	0.53	0.5	30
J & W	DB-608	0.53	0.83	30
Restek	CLPesticides	0.53	0.5	30
Restek	CLPesticides II	0.53	0.42	30
GC Volatiles Laboratory				
Restek	RTX-1	0.53	0.5	105
Restek	RTX-502.2	0.53	0.5	105
GC/MS Volatiles Laboratory				
J & W	DB-624	0.53	3.0	30/75
Supelco	Equity™-624	0.53	3.0	75
GC/MS Semivolatiles Laboratory				
J & W	DB-5.625	0.32	1.0	30
J & W	DB5-MS	0.25	0.25	30
Hewlett Packard	HP5-MS	0.25	0.25	30
Optima	5-MS	0.25	0.25	30
Restek	RTX-5MS	0.25	0.25	30

TRAPS

GC and GC/MS Volatiles Laboratory	
Tekmar 3	* 8 cm of 2,6-diphenylene oxide polymer (Tenax) * 8 cm of silica gel * 7 cm of coconut charcoal * 0.5 cm of silanized glass wool at each end
Tekmar 5	* 1 cm of methyl silicone packing (OV-1 coating) * 8 cm of 2,6-diphenylene oxide polymer (Tenax) * 8 cm of silica gel * 7 cm of coconut charcoal * 0.5 cm of silanized glass wool at each end
Supelco K (Vocarb3000)	* 10 cm of Carbopack B (Graphitized Carbons) * 6 cm of Carboxen 1000 (Carbon molecular sieves) * 1 cm of Carboxen 1001 (Carbon molecular sieves)

CompuChem

a division of Liberty Analytical Corporation

CompuChem's Pagination Convention

As required by the current EPA CLP Statement of Work (SOW) (Document Number OLM04.0, plus revisions), data to be delivered must be paginated (by machine or hand). In the event that the initial numbering is incorrect (a page numbered twice or a page skipped, for example), it is CompuChem's policy to add in an alphabetic suffix to a page number when necessary (e.g., 100A, 100B, etc.).

Notification Regarding Manual Editing/Integration Flags

In some instances, manual adjustments to the software output are necessary to provide accurate data. These adjustments are performed by the data reviewer, GC/MS operator, or GC chemist. An Extracted Ion Current Profile (EICP) or a GC chromatographic peak has been provided for the manual integration of each compound to demonstrate the accuracy of that process. Adjustments are flagged on the quantitation report in the far right column beyond the FINAL concentration for GC/MS analysis, and in the "Flags" column for GC analysis. The manual editing/integration flags are:

M - Denotes that a manual integration has been performed for this compound. The manual integration was performed in order to provide the most accurate area count as possible for the peak.

H - Denotes that the data reviewer, GC/MS operator, or GC Chemist has chosen an alternate peak within the retention time window from that chosen by the software for that compound. No manual integration is performed in choosing an alternate peak. The software still performs the integration.

MH - Denotes that an alternate peak has been chosen within the retention time window from that chosen by the software for that compound and also a manual integration of the chosen peak has been performed. The manual integration was performed in order to provide the most accurate area count possible for the peak.

L - Denotes that the data reviewer or GC/MS operator has selected an alternate library search. This is typically done when an additional tentatively identified compound (TIC) has been added to the number of peaks searched. No manual integration is performed in choosing an alternate peak. The software still performs the integration.

ML - Denotes that an alternate library search has been selected and a manual integration has also been performed. This is typically done when an additional TIC has been added and the TIC peak also required a manual integration.

With the introduction of the current EPA CLP SOW (Document Number OLM03.0, plus revisions) additional explanations for manual editing/integration are required. In the accompanying raw data packages, additional codes have been applied to the "M" flag and carry the following meanings;

M1 - The compound was not found by the automatic integration routine.

M2 - The compound was incorrectly integrated by the automatic integration routine.

M3 - The co-eluting compounds were incorrectly integrated by the automatic integration routine.

These codes will appear in the GC/MS and GC data packages.

Robert E. Meierer
Vice President

DATA REPORTING QUALIFIERS

On the Form I, under the column labeled "Q" for qualifier, each result is flagged with the specific data reporting qualifiers listed below, as appropriate. Up to five qualifiers may be reported on Form I for each compound. The qualifiers used are:

U : This flag indicates the compound was analyzed for but not detected. The Contract Required Quantitation Limit (CRQL) (or Reporting Limit) will be adjusted to reflect any dilution and, for soils, the percent moisture.

J : This flag indicates an estimated value. The flag is used as detailed below:

1. When estimating a concentration for tentatively identified compounds (TICs) where a response factor of 1.0 is assumed for the TIC analyte,

2. When the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the CRQL (or Reporting Limit) but greater than zero, and

3. When the retention time data indicates the presence of a compound that meets the pesticide/Aroclor or other GC or HPLC identification criteria, and the result is less than the CRQL (or Reporting Limit) but greater than zero. For example, if the CRQL (or Reporting Limit) is 10 µg/L, but a concentration of 3 µg/L is calculated, it is reported as 3J.

N : This flag indicates presumptive evidence of a compound. This flag is only used for TICs, where the identification is based on a mass spectral library search. For generic characterization of a TIC such as 'chlorinated hydrocarbon', the N flag is not used.

P : In the EPA's Contract Laboratory Program (CLP), this flag is used for a pesticide/Aroclor target analyte, when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a P.
For SW-846 GC and HPLC analyses, when the Relative Percent Difference (RPD) is greater than 40% and there is no evidence of chromatographic anomalies or interferences, then the higher of the two values is reported and flagged with a P. When the RPD is equal to or less than 40%, our policy is to also report the higher of the two values, although the choice could be a project specific issue.

C : This flag applies to GC or HPLC results where the identification has been confirmed by GC/MS. If GC/MS confirmation was attempted but was unsuccessful, this flag is not applied; a laboratory-defined flag is used instead (see the X/Y/Z qualifier.)

DATA REPORTING QUALIFIERS (continued)

B : This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates probable blank contamination and warns the data user to take appropriate action. This flag is used for a TIC as well as for a positively identified target compound. The combination of flags BU or UB is not an allowable policy. Blank contaminants are flagged B only when they are detected in the sample.

E : This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis. If one or more compounds have a response greater than the upper level of the calibration range, the sample or extract will be diluted and reanalyzed. All such compounds with a response greater than the upper level of the calibration range will have the concentration flagged with an E on Form I for the original analysis.

D : If a sample or extract is reanalyzed at a higher dilution factor, for example when the concentration of an analyte exceeds the upper calibration range, the DL suffix is appended to the sample number on Form I for the more diluted sample, and all reported concentrations on that Form I are flagged with the D flag. This flag alerts data users that any discrepancies between the reported concentrations may be due to dilution of the sample or extract.

NOTE 1: The D flag is not applied to compounds which are not detected in the sample analysis i.e. compounds reported with the CRQL (or Reporting Limit) and the U flag.

NOTE 2: Separate Form Is are used for reporting the original analysis (Client Sample No. XXXXX) and the more diluted sample analysis (Client Sample No. XXXXXDL) i.e. the results from both analyses are not combined on a single Form I.

A : This flag indicates that a TIC is a suspected aldol-condensation product.

S : This flag indicates that an analyte was detected by a single column GC analysis but the result was below the Reporting Limit. This flag is only used when clients request a second (confirmation) column analysis after detecting an analyte above the Reporting Limit in the initial, single column analysis. This flag alerts the data user that only an analyte was detected below the Reporting Limit and a second (confirmation) analysis was not performed.

X/Y/Z : Other specific flags may be required to properly define the results. If used, the flags will be fully described in the SDG Narrative. The laboratory-defined flags are limited to X, Y and Z.

EPA United States Environmental Protection Agency
Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

SDG No. E0354

Case No. 28655

1. Matrix (Enter in Column A)
1. Surface Water
2. Ground Water
3. Leachate
4. Field QC
5. Soil/Sediment
6. PE-water
7. PE-soil
8. Other (specify in Column A)

2. Preservative (Enter in Column D)
1. HCl
2. HNO3
3. NaHSO4
4. H2SO4
5. Ice only
6. CH3OH
7. Other (specify in Column D)
N. Not Preserved

3. Region No. V
Sampling Co. TN & Associates
5. Date Shipped 10/24/00
Carrier FedEx
7. Date Received--Received by: 10/25/00 M. Stev 19
Sampler (Name) R. Nagin
Airbill Number 823766154546
Laboratory Contract No. 68W99071
Unit Price 671
Sampler Signature R. Nagin
6. Ship To: Liberty Analytical 501 Madison Avenue Cary, NC 27513
ATTN: Alice Evans
8. Transfer to:
Date Received
Received by:
Contract Number
Price

4. Purpose**
Lead: [X] SF [ ] PRP [ ] ST [ ] FED [ ] BZ
Early Action: [ ] IA [ ] PA [ ] REM [X] RI [ ] SI [ ] ESI
Long-Term Action: [ ] RIFS [ ] RD [ ] RA [ ] O&M

CLP Sample Numbers (from labels)	A Matrix (from Box 1) Other:	B Conc.: Low Med	C Sample Type: Comp./Grab	D Preservative (from Box 2) Other:	E RAS Analysis TA (circle one) PR* 7 14 21 VOA	TA (circle one) PR* 7 14 21 BNA	TA (circle one) PR* 7 14 21 Pest/PCB	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K Sample Condition
E0354	5	M	Grab	5	X	X	X	S-043985,86,88	SED1001	10/24/00 1025	MEOS15	RN	Good
E0355	5	M	Grab	5	X	X	X	S 043989,90,92	SED1002	10/24/00 1050	MEOS16	RN	
E0356	5	M	Grab	5	X	X	X	S-043976-79,993-998	SED1003	10/24/00 1125	MEOS17	RN	
E0357	5	M	Grab	5	X	X	X	S-043961,69,70	SED1004	10/24/00 1145	MEOS18	RN	
E0358	5	M	Grab	5	X	X	X	S-043971,73,80	SED1004 Dup	10/24/00 1145	MEOS19	RN	
E0359	5	M	Grab	5	X	X	X	S-043952-54	SED1005	10/24/00 1215	MEOS20	RN	
E0360	5	M	Grab	5	X	X	X	S-043956-58	SED1006	10/24/00 1225	MEOS21	RN	
E0361	5	M	Grab	5	X	X	X	S-043960-62	SED1007	10/24/00 1415	MEOS22	RN	
E0362	5	M	Grab	5	X	X	X	S-043963,64,66	SED1008	10/24/00 1435	MEOS23	RN	SDG Final Sampl

ORIGINAL

Shipment for Case Complete? (Y/N) Page 1 of 1

VOA MS/MSD Required? (Y)/N Sample #: E0356
BNA MS/MSD Required? (Y)/N Sample #: E0356
Pest/PCB MS/MSD Required? (Y)/N Sample #: E0356

Additional Sampler Signatures —

Chain of Custody Seal Number(s) 26916, 26917

*PR provides 7-day data turnaround in addition to preliminary results. Requests for preliminary results will increase analytical costs.

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
R. Nagin	10/24/00 1630				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature) Melissa Stev	Date / Time 10/25/00 9:30	Remarks: Is custody seal intact? (Y)/N/none 4°C	

Distribution: Blue - Region Copy; White - Lab Copy for Return to SMO; Pink - SMO Copy; Yellow - Lab Copy for Return to Region

See Reverse for Additional Standard Instructions
**See Reverse for Purpose Code Definitions

EPA Form 9110-2 (2/99)

CLASS-99-002

398955

2B
SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Level:(low/med) LOW

	EPA SAMPLE NO.	SMC1 (TOL)#	SMC2 (BFB)#	SMC3 (DCE)#	OTHER	TOT OUT
1	VBLKLT	99	105	105		0
02	E0354	99	100	97		0
03	E0355	97	100	98		0
4	E0356	97	100	98		0
5	E0357	98	99	99		0
06	E0358	91	94	95		0
07	E0356MS	99	99	96		0
8	E0356MSD	98	102	101		0
9	E0359	96	99	96		0
10	0360	95	98	98		0
1	E0361	96	95	97		0
2	E0362	111	73	96		0
13	VHBLKLT	95	99	97		0
14						
5						
6						
17						
18						
9						
0						
21						
2						
3						
24						
25						
6						
7						
28						
29						
0						

		QC LIMITS
SMC1 (TOL)	= Toluene-d8	(84-138)
SMC2 (BFB)	= Bromofluorobenzene	(59-113)
SMC3 (DCE)	= 1,2-Dichloroethane-d4	(70-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

3B
SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix Spike - EPA Sample No.: E0356 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	60.24	0.00	74.93	124	59-172
Trichloroethene	60.24	5.58	60.77	92	62-137
Benzene	60.24	0.00	59.88	99	66-142
Toluene	60.24	0.00	59.53	99	59-139
Chlorobenzene	60.24	0.00	57.82	96	60-1

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	60.24	67.99	113	9	22	59-172
Trichloroethene	60.24	61.65	93	1	24	62-137
Benzene	60.24	60.01	100	1	21	66-142
Toluene	60.24	58.34	97	2	21	59-139
Chlorobenzene	60.24	58.03	96	0	21	60-133

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKLT

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Lab File ID: WG6534-1A55 Lab Sample ID: WG6534-1

Date Analyzed: 10/31/00 Time Analyzed: 0928

GC Column: EQUITY624 5ID: 0.53 (mm) Heated Purge: (Y/N) Y

Instrument ID: F50055

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	E0354	E0354-1	E0354-1A55	1014
02	E0355	E0354-2	E0354-2A55	1046
03	E0356	E0354-3	E0354-3A55	1119
04	E0357	E0354-4	E0354-4A55	1151
05	E0358	E0354-5	E0354-5A55	1224
06	E0356MS	WG6534-4	WG6534-4A55	1256
07	E0356MSD	WG6534-5	WG6534-5A55	1329
08	E0359	E0354-6	E0354-6A55	1402
09	E0360	E0354-7	E0354-7A55	1434
10	E0361	E0354-8	E0354-8A55	1507
11	E0362	E0354-9	E0354-9A55	1540
12	VHBLKLT	WG6534-6	WG6534-6A55	1613
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKLT

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: WG6534-1

Sample wt/vol: 5.0(g/mL) G Lab File ID: WG6534-1A55

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
75-35-4	1,1-Dichloroethene	10	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	10	U
67-64-1	Acetone	4	J
75-15-0	Carbon Disulfide	10	U
79-20-9	Methyl Acetate	10	U
75-09-2	Methylene Chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
1634-04-4	Methyl-tert-butyl ether	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	2	J
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
110-82-7	Cyclohexane	10	U
56-23-5	Carbon Tetrachloride	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKLT

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: WG6534-1

Sample wt/vol: 5.0(g/mL) G Lab File ID: WG6534-1A55

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
79-01-6	Trichloroethene	10	U
108-87-2	Methylcyclohexane	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (Total)	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
96-12-8	1,2-Dibromo-3-Chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U

1F

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKLT

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: WG6534-1

Sample wt/vol: 5.0 (g/mL) G Lab File ID: WG6534-1A55

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VHBLKLT

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: WG6534-6

Sample wt/vol: 5.0(g/mL) G Lab File ID: WG6534-6A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. _____ Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
75-35-4	1,1-Dichloroethene	10	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	10	U
67-64-1	Acetone	10 ~~3~~	~~J~~BU
75-15-0	Carbon Disulfide	10	U
79-20-9	Methyl Acetate	10	U
75-09-2	Methylene Chloride	2	J
156-60-5	trans-1,2-Dichloroethene	10	U
1634-04-4	Methyl-tert-butyl ether	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	10 ~~2~~	~~J~~BU
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
110-82-7	Cyclohexane	10	U
56-23-5	Carbon Tetrachloride	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VHBLKLT

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: WG6534-6

Sample wt/vol: 5.0(g/mL) G Lab File ID: WG6534-6A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. _____ Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
79-01-6	Trichloroethene	10	U
108-87-2	Methylcyclohexane	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (Total)	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
96-12-8	1,2-Dibromo-3-Chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U

1F
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VHBLKLT

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: WG6534-6

Sample wt/vol: 5.0 (g/mL) G Lab File ID: WG6534-6A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. _____ Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0356MS

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: WG6534-4

Sample wt/vol: 5.0(g/mL) G Lab File ID: WG6534-4A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. 17 Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	C
75-71-8	Dichlorodifluoromethane	12	U
74-87-3	Chloromethane	12	U
75-01-4	Vinyl Chloride	12	U
74-83-9	Bromomethane	12	U
75-00-3	Chloroethane	12	U
75-69-4	Trichlorofluoromethane	12	U
75-35-4	1,1-Dichloroethene	75	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	12	U
67-64-1	Acetone	12 ~~5~~	~~J~~BU
75-15-0	Carbon Disulfide	12	U
79-20-9	Methyl Acetate	12	U
75-09-2	Methylene Chloride	4	J
156-60-5	trans-1,2-Dichloroethene	12	U
1634-04-4	Methyl-tert-butyl ether	12	U
75-34-3	1,1-Dichloroethane	12	U
156-59-2	cis-1,2-Dichloroethene	1	J
78-93-3	2-Butanone	12 ~~2~~	~~J~~BU
67-66-3	Chloroform	12	U
71-55-6	1,1,1-Trichloroethane	12	U
110-82-7	Cyclohexane	12	U
56-23-5	Carbon Tetrachloride	12	U
71-43-2	Benzene	60	
107-06-2	1,2-Dichloroethane	12	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0356MS

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: WG6534-4

Sample wt/vol: 5.0(g/mL) G Lab File ID: WG6534-4A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. 17 Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
79-01-6	Trichloroethene	61	
108-87-2	Methylcyclohexane	12	U
78-87-5	1,2-Dichloropropane	12	U
75-27-4	Bromodichloromethane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
108-10-1	4-Methyl-2-Pentanone	12	U
108-88-3	Toluene	60	
10061-02-6	trans-1,3-Dichloropropene	12	U
79-00-5	1,1,2-Trichloroethane	12	U
127-18-4	Tetrachloroethene	12	U
591-78-6	2-Hexanone	12	U
124-48-1	Dibromochloromethane	12	U
106-93-4	1,2-Dibromoethane	12	U
108-90-7	Chlorobenzene	58	
100-41-4	Ethylbenzene	12	U
1330-20-7	Xylene (Total)	12	U
100-42-5	Styrene	12	U
75-25-2	Bromoform	12	U
98-82-8	Isopropylbenzene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
541-73-1	1,3-Dichlorobenzene	12	U
106-46-7	1,4-Dichlorobenzene	12	U
95-50-1	1,2-Dichlorobenzene	12	U
96-12-8	1,2-Dibromo-3-Chloropropane	12	U
120-82-1	1,2,4-Trichlorobenzene	12	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0356MSD

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: WG6534-5

Sample wt/vol: 5.0(g/mL) G Lab File ID: WG6534-5A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. 17 Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	12	U
74-87-3	Chloromethane	12	U
75-01-4	Vinyl Chloride	12	U
74-83-9	Bromomethane	12	U
75-00-3	Chloroethane	12	U
75-69-4	Trichlorofluoromethane	12	U
75-35-4	1,1-Dichloroethene	68	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2	J
67-64-1	Acetone	12 ~~11~~	~~J~~BU
75-15-0	Carbon Disulfide	12	U
79-20-9	Methyl Acetate	3	J
75-09-2	Methylene Chloride	5	J
156-60-5	trans-1,2-Dichloroethene	12	U
1634-04-4	Methyl-tert-butyl ether	2	J
75-34-3	1,1-Dichloroethane	12	U
156-59-2	cis-1,2-Dichloroethene	2	J
78-93-3	2-Butanone	12 ~~6~~	~~J~~BU
67-66-3	Chloroform	12	U
71-55-6	1,1,1-Trichloroethane	12	U
110-82-7	Cyclohexane	12	U
56-23-5	Carbon Tetrachloride	12	U
71-43-2	Benzene	60	
107-06-2	1,2-Dichloroethane	3	J

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0356MSD

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: WG6534-5

Sample wt/vol: 5.0(g/mL) G Lab File ID: WG6534-5A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. 17 Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
79-01-6	Trichloroethene	62	
108-87-2	Methylcyclohexane	12	U
78-87-5	1,2-Dichloropropane	12	U
75-27-4	Bromodichloromethane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
108-10-1	4-Methyl-2-Pentanone	2	J
108-88-3	Toluene	58	
10061-02-6	trans-1,3-Dichloropropene	12	U
79-00-5	1,1,2-Trichloroethane	12	U
127-18-4	Tetrachloroethene	1	J
591-78-6	2-Hexanone	2	J
124-48-1	Dibromochloromethane	12	U
106-93-4	1,2-Dibromoethane	12	U
108-90-7	Chlorobenzene	58	
100-41-4	Ethylbenzene	12	U
1330-20-7	Xylene (Total)	12	U
100-42-5	Styrene	12	U
75-25-2	Bromoform	12	U
98-82-8	Isopropylbenzene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
541-73-1	1,3-Dichlorobenzene	12	U
106-46-7	1,4-Dichlorobenzene	12	U
95-50-1	1,2-Dichlorobenzene	12	U
96-12-8	1,2-Dibromo-3-Chloropropane	12	U
120-82-1	1,2,4-Trichlorobenzene	12	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0354

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-1

Sample wt/vol: 5.0(g/mL) G Lab File ID: E0354-1A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. 19 Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	12	U
74-87-3	Chloromethane	12	U
75-01-4	Vinyl Chloride	12	U
74-83-9	Bromomethane	12	U
75-00-3	Chloroethane	12	U
75-69-4	Trichlorofluoromethane	12	U
75-35-4	1,1-Dichloroethene	12	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	12	U
67-64-1	Acetone	12 ~~8~~	~~J~~BU
75-15-0	Carbon Disulfide	12	U
79-20-9	Methyl Acetate	12	U
75-09-2	Methylene Chloride	2	J
156-60-5	trans-1,2-Dichloroethene	12	U
1634-04-4	Methyl-tert-butyl ether	12	U
75-34-3	1,1-Dichloroethane	12	U
156-59-2	cis-1,2-Dichloroethene	12	U
78-93-3	2-Butanone	12 ~~2~~	~~J~~BU
67-66-3	Chloroform	12	U
71-55-6	1,1,1-Trichloroethane	12	U
110-82-7	Cyclohexane	12	U
56-23-5	Carbon Tetrachloride	12	U
71-43-2	Benzene	12	U
107-06-2	1,2-Dichloroethane	12	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0354

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-1

Sample wt/vol: 5.0(g/mL) G Lab File ID: E0354-1A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. 19 Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
79-01-6	Trichloroethene	2	J
108-87-2	Methylcyclohexane	12	U
78-87-5	1,2-Dichloropropane	12	U
75-27-4	Bromodichloromethane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
108-10-1	4-Methyl-2-Pentanone	12	U
108-88-3	Toluene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
79-00-5	1,1,2-Trichloroethane	12	U
127-18-4	Tetrachloroethene	12	U
591-78-6	2-Hexanone	12	U
124-48-1	Dibromochloromethane	12	U
106-93-4	1,2-Dibromoethane	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
1330-20-7	Xylene (Total)	12	U
100-42-5	Styrene	12	U
75-25-2	Bromoform	12	U
98-82-8	Isopropylbenzene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
541-73-1	1,3-Dichlorobenzene	12	U
106-46-7	1,4-Dichlorobenzene	12	U
95-50-1	1,2-Dichlorobenzene	12	U
96-12-8	1,2-Dibromo-3-Chloropropane	12	U
120-82-1	1,2,4-Trichlorobenzene	12	U

1F
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0354

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-1

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E0354-1A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. 19 Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0355

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-2

Sample wt/vol: 5.0(g/mL) G Lab File ID: E0354-2A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. 27 Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	14	U
74-87-3	Chloromethane	14	U
75-01-4	Vinyl Chloride	14	U
74-83-9	Bromomethane	14	U
75-00-3	Chloroethane	14	U
75-69-4	Trichlorofluoromethane	14	U
75-35-4	1,1-Dichloroethene	14	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	14	U
67-64-1	Acetone	14 B	JBU 5 11/17
75-15-0	Carbon Disulfide	14	U
79-20-9	Methyl Acetate	14	U
75-09-2	Methylene Chloride	2	J
156-60-5	trans-1,2-Dichloroethene	14	U
1634-04-4	Methyl-tert-butyl ether	14	U
75-34-3	1,1-Dichloroethane	14	U
156-59-2	cis-1,2-Dichloroethene	14	U
78-93-3	2-Butanone	14	U
67-66-3	Chloroform	14	U
71-55-6	1,1,1-Trichloroethane	14	U
110-82-7	Cyclohexane	14	U
56-23-5	Carbon Tetrachloride	14	U
71-43-2	Benzene	14	U
107-06-2	1,2-Dichloroethane	14	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0355

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-2

Sample wt/vol: 5.0(g/mL) G Lab File ID: E0354-2A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. 27 Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
79-01-6	Trichloroethene	2	J
108-87-2	Methylcyclohexane	14	U
78-87-5	1,2-Dichloropropane	14	U
75-27-4	Bromodichloromethane	14	U
10061-01-5	cis-1,3-Dichloropropene	14	U
108-10-1	4-Methyl-2-Pentanone	14	U
108-88-3	Toluene	14	U
10061-02-6	trans-1,3-Dichloropropene	14	U
79-00-5	1,1,2-Trichloroethane	14	U
127-18-4	Tetrachloroethene	14	U
591-78-6	2-Hexanone	14	U
124-48-1	Dibromochloromethane	14	U
106-93-4	1,2-Dibromoethane	14	U
108-90-7	Chlorobenzene	14	U
100-41-4	Ethylbenzene	14	U
1330-20-7	Xylene (Total)	14	U
100-42-5	Styrene	14	U
75-25-2	Bromoform	14	U
98-82-8	Isopropylbenzene	14	U
79-34-5	1,1,2,2-Tetrachloroethane	14	U
541-73-1	1,3-Dichlorobenzene	14	U
106-46-7	1,4-Dichlorobenzene	14	U
95-50-1	1,2-Dichlorobenzene	14	U
96-12-8	1,2-Dibromo-3-Chloropropane	14	U
120-82-1	1,2,4-Trichlorobenzene	14	U

1F
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0355

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-2

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E0354-2A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. 27 Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-TIC OLM04.2

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0356

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-3

Sample wt/vol: 5.0(g/mL) G Lab File ID: E0354-3A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. 17 Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	12	U
74-87-3	Chloromethane	12	U
75-01-4	Vinyl Chloride	12	U
74-83-9	Bromomethane	12	U
75-00-3	Chloroethane	12	U
75-69-4	Trichlorofluoromethane	12	U
75-35-4	1,1-Dichloroethene	12	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	12	U
67-64-1	Acetone	12 ~~8~~	~~J~~BU
75-15-0	Carbon Disulfide	12	U
79-20-9	Methyl Acetate	12	U
75-09-2	Methylene Chloride	2	J
156-60-5	trans-1,2-Dichloroethene	12	U
1634-04-4	Methyl-tert-butyl ether	12	U
75-34-3	1,1-Dichloroethane	12	U
156-59-2	cis-1,2-Dichloroethene	2	J
78-93-3	2-Butanone	12 ~~2~~	~~J~~BU
67-66-3	Chloroform	12	U
71-55-6	1,1,1-Trichloroethane	12	U
110-82-7	Cyclohexane	12	U
56-23-5	Carbon Tetrachloride	12	U
71-43-2	Benzene	12	U
107-06-2	1,2-Dichloroethane	12	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0356

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-3

Sample wt/vol: 5.0(g/mL) G Lab File ID: E0354-3A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. 17 Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
79-01-6	Trichloroethene	6	J
108-87-2	Methylcyclohexane	12	U
78-87-5	1,2-Dichloropropane	12	U
75-27-4	Bromodichloromethane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
108-10-1	4-Methyl-2-Pentanone	12	U
108-88-3	Toluene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
79-00-5	1,1,2-Trichloroethane	12	U
127-18-4	Tetrachloroethene	12	U
591-78-6	2-Hexanone	12	U
124-48-1	Dibromochloromethane	12	U
106-93-4	1,2-Dibromoethane	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
1330-20-7	Xylene (Total)	12	U
100-42-5	Styrene	12	U
75-25-2	Bromoform	12	U
98-82-8	Isopropylbenzene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
541-73-1	1,3-Dichlorobenzene	12	U
106-46-7	1,4-Dichlorobenzene	12	U
95-50-1	1,2-Dichlorobenzene	12	U
96-12-8	1,2-Dibromo-3-Chloropropane	12	U
120-82-1	1,2,4-Trichlorobenzene	12	U

1F

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0356

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-3

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E0354-3A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. 17 Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0357

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-4

Sample wt/vol: 5.0(g/mL) G Lab File ID: E0354-4A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. 14 Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	12	U
74-87-3	Chloromethane	12	U
75-01-4	Vinyl Chloride	12	U
74-83-9	Bromomethane	12	U
75-00-3	Chloroethane	12	U
75-69-4	Trichlorofluoromethane	12	U
75-35-4	1,1-Dichloroethene	12	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	12	U
67-64-1	Acetone	12 ~~8~~	~~J~~BU
75-15-0	Carbon Disulfide	12	U
79-20-9	Methyl Acetate	12	U
75-09-2	Methylene Chloride	2	J
156-60-5	trans-1,2-Dichloroethene	12	U
1634-04-4	Methyl-tert-butyl ether	12	U
75-34-3	1,1-Dichloroethane	12	U
156-59-2	cis-1,2-Dichloroethene	~~5~~	J
78-93-3	2-Butanone	12 ~~2~~	~~J~~BU
67-66-3	Chloroform	12	U
71-55-6	1,1,1-Trichloroethane	12	U
110-82-7	Cyclohexane	12	U
56-23-5	Carbon Tetrachloride	12	U
71-43-2	Benzene	12	U
107-06-2	1,2-Dichloroethane	12	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0357

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-4

Sample wt/vol: 5.0(g/mL) G Lab File ID: E0354-4A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. 14 Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	C
79-01-6	Trichloroethene	5	J
108-87-2	Methylcyclohexane	12	U
78-87-5	1,2-Dichloropropane	12	U
75-27-4	Bromodichloromethane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
108-10-1	4-Methyl-2-Pentanone	12	U
108-88-3	Toluene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
79-00-5	1,1,2-Trichloroethane	12	U
127-18-4	Tetrachloroethene	1	J
591-78-6	2-Hexanone	12	U
124-48-1	Dibromochloromethane	12	U
106-93-4	1,2-Dibromoethane	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
1330-20-7	Xylene (Total)	12	U
100-42-5	Styrene	12	U
75-25-2	Bromoform	12	U
98-82-8	Isopropylbenzene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
541-73-1	1,3-Dichlorobenzene	12	U
106-46-7	1,4-Dichlorobenzene	12	U
95-50-1	1,2-Dichlorobenzene	12	U
96-12-8	1,2-Dibromo-3-Chloropropane	12	U
120-82-1	1,2,4-Trichlorobenzene	12	U

1F
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0357

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-4

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E0354-4A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. 14 Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0358

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-5

Sample wt/vol: 5.0(g/mL) G Lab File ID: E0354-5A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. 16 Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	12	U
74-87-3	Chloromethane	12	U
75-01-4	Vinyl Chloride	12	U
74-83-9	Bromomethane	12	U
75-00-3	Chloroethane	12	U
75-69-4	Trichlorofluoromethane	12	U
75-35-4	1,1-Dichloroethene	12	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	12	U
67-64-1	Acetone	12 ~~8~~	~~J~~BU
75-15-0	Carbon Disulfide	12	U
79-20-9	Methyl Acetate	12	U
75-09-2	Methylene Chloride	2	J
156-60-5	trans-1,2-Dichloroethene	12	U
1634-04-4	Methyl-tert-butyl ether	12	U
75-34-3	1,1-Dichloroethane	12	U
156-59-2	cis-1,2-Dichloroethene	2	J
78-93-3	2-Butanone	12 ~~8~~	~~J~~BU
67-66-3	Chloroform	12	U
71-55-6	1,1,1-Trichloroethane	12	U
110-82-7	Cyclohexane	12	U
56-23-5	Carbon Tetrachloride	12	U
71-43-2	Benzene	12	U
107-06-2	1,2-Dichloroethane	12	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0358

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-5

Sample wt/vol: 5.0(g/mL) G Lab File ID: E0354-5A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. 16 Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
79-01-6	Trichloroethene	3	J
108-87-2	Methylcyclohexane	12	U
78-87-5	1,2-Dichloropropane	12	U
75-27-4	Bromodichloromethane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
108-10-1	4-Methyl-2-Pentanone	12	U
108-88-3	Toluene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
79-00-5	1,1,2-Trichloroethane	12	U
127-18-4	Tetrachloroethene	12	U
591-78-6	2-Hexanone	12	U
124-48-1	Dibromochloromethane	12	U
106-93-4	1,2-Dibromoethane	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
1330-20-7	Xylene (Total)	12	U
100-42-5	Styrene	12	U
75-25-2	Bromoform	12	U
98-82-8	Isopropylbenzene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
541-73-1	1,3-Dichlorobenzene	12	U
106-46-7	1,4-Dichlorobenzene	12	U
95-50-1	1,2-Dichlorobenzene	12	U
96-12-8	1,2-Dibromo-3-Chloropropane	12	U
120-82-1	1,2,4-Trichlorobenzene	12	U

1F
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0358

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-5

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E0354-5A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. 16 Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0359

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-6

Sample wt/vol: 5.0(g/mL) G Lab File ID: E0354-6A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. 12 Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	11	U
74-87-3	Chloromethane	11	U
75-01-4	Vinyl Chloride	11	U
74-83-9	Bromomethane	11	U
75-00-3	Chloroethane	11	U
75-69-4	Trichlorofluoromethane	11	U
75-35-4	1,1-Dichloroethene	11	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2	J
67-64-1	Acetone	11 ~~3~~	~~J~~B U
75-15-0	Carbon Disulfide	11	U
79-20-9	Methyl Acetate	11	U
75-09-2	Methylene Chloride	3	J
156-60-5	trans-1,2-Dichloroethene	11	U
1634-04-4	Methyl-tert-butyl ether	11	U
75-34-3	1,1-Dichloroethane	11	U
156-59-2	cis-1,2-Dichloroethene	11	U
78-93-3	2-Butanone	11 ~~2~~	~~J~~B U
67-66-3	Chloroform	11	U
71-55-6	1,1,1-Trichloroethane	11	U
110-82-7	Cyclohexane	11	U
56-23-5	Carbon Tetrachloride	11	U
71-43-2	Benzene	11	U
107-06-2	1,2-Dichloroethane	11	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0359

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-6

Sample wt/vol: 5.0(g/mL) G Lab File ID: E0354-6A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. 12 Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	C
79-01-6	Trichloroethene	11	U
108-87-2	Methylcyclohexane	11	U
78-87-5	1,2-Dichloropropane	11	U
75-27-4	Bromodichloromethane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
108-10-1	4-Methyl-2-Pentanone	11	U
108-88-3	Toluene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
79-00-5	1,1,2-Trichloroethane	11	U
127-18-4	Tetrachloroethene	1	J
591-78-6	2-Hexanone	11	U
124-48-1	Dibromochloromethane	11	U
106-93-4	1,2-Dibromoethane	11	U
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	11	U
1330-20-7	Xylene (Total)	11	U
100-42-5	Styrene	11	U
75-25-2	Bromoform	11	U
98-82-8	Isopropylbenzene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	11	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
96-12-8	1,2-Dibromo-3-Chloropropane	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U

1F
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0359

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-6

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E0354-6A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. 12 Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0360

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-7

Sample wt/vol: 5.0(g/mL) G Lab File ID: E0354-7A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. 14 Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	12	U
74-87-3	Chloromethane	12	U
75-01-4	Vinyl Chloride	12	U
74-83-9	Bromomethane	12	U
75-00-3	Chloroethane	12	U
75-69-4	Trichlorofluoromethane	12	U
75-35-4	1,1-Dichloroethene	12	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2	J
67-64-1	Acetone	12	~~J~~BU
75-15-0	Carbon Disulfide	12	U
79-20-9	Methyl Acetate	12	U
75-09-2	Methylene Chloride	3	J
156-60-5	trans-1,2-Dichloroethene	12	U
1634-04-4	Methyl-tert-butyl ether	12	U
75-34-3	1,1-Dichloroethane	12	U
156-59-2	cis-1,2-Dichloroethene	12	U
78-93-3	2-Butanone	12	U
67-66-3	Chloroform	12	U
71-55-6	1,1,1-Trichloroethane	12	U
110-82-7	Cyclohexane	12	U
56-23-5	Carbon Tetrachloride	12	U
71-43-2	Benzene	12	U
107-06-2	1,2-Dichloroethane	12	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0360

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-7

Sample wt/vol: 5.0(g/mL) G Lab File ID: E0354-7A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. 14 Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
79-01-6	Trichloroethene	12	U
108-87-2	Methylcyclohexane	12	U
78-87-5	1,2-Dichloropropane	12	U
75-27-4	Bromodichloromethane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
108-10-1	4-Methyl-2-Pentanone	12	U
108-88-3	Toluene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
79-00-5	1,1,2-Trichloroethane	12	U
127-18-4	Tetrachloroethene	12	U
591-78-6	2-Hexanone	12	U
124-48-1	Dibromochloromethane	12	U
106-93-4	1,2-Dibromoethane	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
1330-20-7	Xylene (Total)	12	U
100-42-5	Styrene	12	U
75-25-2	Bromoform	12	U
98-82-8	Isopropylbenzene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
541-73-1	1,3-Dichlorobenzene	12	U
106-46-7	1,4-Dichlorobenzene	12	U
95-50-1	1,2-Dichlorobenzene	12	U
96-12-8	1,2-Dibromo-3-Chloropropane	12	U
120-82-1	1,2,4-Trichlorobenzene	12	U

1F
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0360

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-7

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E0354-7A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. 14 Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1D
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0354

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-1

Sample wt/vol: 30.2(g/mL) G Lab File ID: E0354-1DA66

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: 19 decanted: (Y/N) N Date Extracted: 10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 7.6 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	2000	U
100-02-7	4-Nitrophenol	2000	U
132-64-9	Dibenzofuran	230	J
121-14-2	2,4-Dinitrotoluene	810	U
84-66-2	Diethylphthalate	810	U
86-73-7	Fluorene	530	J
7005-72-3	4-Chlorophenyl-phenylether	810	U
100-01-6	4-Nitroaniline	2000	U
534-52-1	4,6-Dinitro-2-methylphenol	2000	U
86-30-6	N-nitrosodiphenylamine (1)	810	U
101-55-3	4-Bromophenyl-phenylether	810	U
118-74-1	Hexachlorobenzene	810	U
1912-24-9	Atrazine	810	U
87-86-5	Pentachlorophenol	2000	U
85-01-8	Phenanthrene	4000	
120-12-7	Anthracene	780	J
86-74-8	Carbazole	610	J
84-74-2	Di-n-butylphthalate	810	U
206-44-0	Fluoranthene	4900	
129-00-0	Pyrene	4300	
85-68-7	Butylbenzylphthalate	500	J
91-94-1	3,3'-Dichlorobenzidine	810	U
56-55-3	Benzo(a)anthracene	1900	
218-01-9	Chrysene	2400	
117-81-7	bis(2-Ethylhexyl)phthalate	1000	
117-84-0	Di-n-octylphthalate	810	U
205-99-2	Benzo(b)fluoranthene	3100	X
207-08-9	Benzo(k)fluoranthene	3500	X
50-32-8	Benzo(a)pyrene	2000	
193-39-5	Indeno(1,2,3-cd)pyrene	1400	
53-70-3	Dibenzo(a,h)anthracene	430	J
191-24-2	Benzo(g,h,i)perylene	1300	

(1) - Cannot be separated from Diphenylamine

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0354

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-1

Sample wt/vol: 30.2(g/mL) G Lab File ID: E0354-1DA66

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: 19 decanted: (Y/N) N Date Extracted: 10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 7.6 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	810	U
108-95-2	Phenol	810	U
111-44-4	bis(2-Chloroethyl)ether	810	U
95-57-8	2-Chlorophenol	810	U
95-48-7	2-Methylphenol	810	U
108-60-1	2,2'-oxybis(1-Chloropropane)	810	U
98-86-2	Acetophenone	810	U
106-44-5	4-Methylphenol	810	U
621-64-7	N-Nitroso-di-n-propylamine	810	U
67-72-1	Hexachloroethane	810	U
98-95-3	Nitrobenzene	810	U
78-59-1	Isophorone	810	U
88-75-5	2-Nitrophenol	810	U
105-67-9	2,4-Dimethylphenol	810	U
111-91-1	bis(2-Chloroethoxy)methane	810	U
120-83-2	2,4-Dichlorophenol	810	U
91-20-3	Naphthalene	810	U
106-47-8	4-Chloroaniline	810	U
87-68-3	Hexachlorobutadiene	810	U
105-60-2	Caprolactam	810	U
59-50-7	4-Chloro-3-methylphenol	810	U
91-57-6	2-Methylnaphthalene	810	U
77-47-4	Hexachlorocyclopentadiene	810	U
88-06-2	2,4,6-Trichlorophenol	810	U
95-95-4	2,4,5-Trichlorophenol	2000	U
92-52-4	1,1'-Biphenyl	810	U
91-58-7	2-Chloronaphthalene	810	U
88-74-4	2-Nitroaniline	2000	U
131-11-3	Dimethylphthalate	810	U
606-20-2	2,6-Dinitrotoluene	810	U
208-96-8	Acenaphthylene	810	U
99-09-2	3-Nitroaniline	2000	U
83-32-9	Acenaphthene	410	J

1D
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0356MSD

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: WG6540-3

Sample wt/vol: 30.0(g/mL) G Lab File ID: WG6540-3A66

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: 17 decanted: (Y/N) N Date Extracted: 10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 7.8 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	2000	U
100-02-7	4-Nitrophenol	3100	
132-64-9	Dibenzofuran	780	J
121-14-2	2,4-Dinitrotoluene	1800	
84-66-2	Diethylphthalate	800	U
86-73-7	Fluorene	1600	
7005-72-3	4-Chlorophenyl-phenylether	800	U
100-01-6	4-Nitroaniline	2000	U
534-52-1	4,6-Dinitro-2-methylphenol	2000	U
86-30-6	N-nitrosodiphenylamine (1)	800	U
101-55-3	4-Bromophenyl-phenylether	800	U
118-74-1	Hexachlorobenzene	800	U
1912-24-9	Atrazine	800	U
87-86-5	Pentachlorophenol	2600	
85-01-8	Phenanthrene	9400	E
120-12-7	Anthracene	2400	
86-74-8	Carbazole	1600	
84-74-2	Di-n-butylphthalate	800	U
206-44-0	Fluoranthene	10000	E
129-00-0	Pyrene	11000	E
85-68-7	Butylbenzylphthalate	800	U
91-94-1	3,3'-Dichlorobenzidine	800	U
56-55-3	Benzo(a)anthracene	4100	
218-01-9	Chrysene	4800	
117-81-7	bis(2-Ethylhexyl)phthalate	1200	
117-84-0	Di-n-octylphthalate	800	U
205-99-2	Benzo(b)fluoranthene	5600	X
207-08-9	Benzo(k)fluoranthene	6400	X
50-32-8	Benzo(a)pyrene	4100	
193-39-5	Indeno(1,2,3-cd)pyrene	2700	
53-70-3	Dibenzo(a,h)anthracene	880	
191-24-2	Benzo(g,h,i)perylene	2700	

(1) - Cannot be separated from Diphenylamine

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0356MSD

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: WG6540-3

Sample wt/vol: 30.0(g/mL) G Lab File ID: WG6540-3A66

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: 17 decanted: (Y/N) N Date Extracted: 10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 7.8 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	
100-52-7	Benzaldehyde	800	U
108-95-2	Phenol	2900	
111-44-4	bis(2-Chloroethyl)ether	800	U
95-57-8	2-Chlorophenol	3100	
95-48-7	2-Methylphenol	800	U
108-60-1	2,2'-oxybis(1-Chloropropane)	800	U
98-86-2	Acetophenone	800	U
106-44-5	4-Methylphenol	800	U
621-64-7	N-Nitroso-di-n-propylamine	2100	
67-72-1	Hexachloroethane	800	U
98-95-3	Nitrobenzene	800	U
78-59-1	Isophorone	800	U
88-75-5	2-Nitrophenol	800	U
105-67-9	2,4-Dimethylphenol	800	U
111-91-1	bis(2-Chloroethoxy)methane	800	U
120-83-2	2,4-Dichlorophenol	800	U
91-20-3	Naphthalene	240	J
106-47-8	4-Chloroaniline	800	U
87-68-3	Hexachlorobutadiene	800	U
105-60-2	Caprolactam	800	U
59-50-7	4-Chloro-3-methylphenol	3100	
91-57-6	2-Methylnaphthalene	800	U
77-47-4	Hexachlorocyclopentadiene	800	U
88-06-2	2,4,6-Trichlorophenol	800	U
95-95-4	2,4,5-Trichlorophenol	2000	U
92-52-4	1,1'-Biphenyl	800	U
91-58-7	2-Chloronaphthalene	800	U
88-74-4	2-Nitroaniline	2000	U
131-11-3	Dimethylphthalate	800	U
606-20-2	2,6-Dinitrotoluene	800	U
208-96-8	Acenaphthylene	800	U
99-09-2	3-Nitroaniline	2000	U
83-32-9	Acenaphthene	3300	

1D
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0356MS

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: WG6540-2

Sample wt/vol: 30.1(g/mL) G Lab File ID: WG6540-2A66

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: 17 decanted: (Y/N) N Date Extracted: 10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 7.8 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	2000	U
100-02-7	4-Nitrophenol	2600	
132-64-9	Dibenzofuran	340	J
121-14-2	2,4-Dinitrotoluene	1600	
84-66-2	Diethylphthalate	790	U
86-73-7	Fluorene	830	
7005-72-3	4-Chlorophenyl-phenylether	790	U
100-01-6	4-Nitroaniline	2000	U
534-52-1	4,6-Dinitro-2-methylphenol	2000	U
86-30-6	N-nitrosodiphenylamine (1)	790	U
101-55-3	4-Bromophenyl-phenylether	790	U
118-74-1	Hexachlorobenzene	790	U
1912-24-9	Atrazine	790	U
87-86-5	Pentachlorophenol	2400	
85-01-8	Phenanthrene	5200	
120-12-7	Anthracene	1200	
86-74-8	Carbazole	900	
84-74-2	Di-n-butylphthalate	790	U
206-44-0	Fluoranthene	5700	
129-00-0	Pyrene	7100	E
85-68-7	Butylbenzylphthalate	790	U
91-94-1	3,3'-Dichlorobenzidine	790	U
56-55-3	Benzo(a)anthracene	2500	
218-01-9	Chrysene	3000	
117-81-7	bis(2-Ethylhexyl)phthalate	1800	
117-84-0	Di-n-octylphthalate	130	J
205-99-2	Benzo(b)fluoranthene	3800	X
207-08-9	Benzo(k)fluoranthene	4200	X
50-32-8	Benzo(a)pyrene	2500	
193-39-5	Indeno(1,2,3-cd)pyrene	1800	
53-70-3	Dibenzo(a,h)anthracene	610	J
191-24-2	Benzo(g,h,i)perylene	1900	

(1) - Cannot be separated from Diphenylamine

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0356MS

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: WG6540-2

Sample wt/vol: 30.1(g/mL) G Lab File ID: WG6540-2A66

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: 17 decanted: (Y/N) N Date Extracted: 10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 7.8 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	790	U
108-95-2	Phenol	2600	
111-44-4	bis(2-Chloroethyl)ether	790	U
95-57-8	2-Chlorophenol	2700	
95-48-7	2-Methylphenol	790	U
108-60-1	2,2'-oxybis(1-Chloropropane)	790	U
98-86-2	Acetophenone	790	U
106-44-5	4-Methylphenol	790	U
621-64-7	N-Nitroso-di-n-propylamine	1900	
67-72-1	Hexachloroethane	790	U
98-95-3	Nitrobenzene	790	U
78-59-1	Isophorone	790	U
88-75-5	2-Nitrophenol	790	U
105-67-9	2,4-Dimethylphenol	790	U
111-91-1	bis(2-Chloroethoxy)methane	790	U
120-83-2	2,4-Dichlorophenol	790	U
91-20-3	Naphthalene	790	U
106-47-8	4-Chloroaniline	790	U
87-68-3	Hexachlorobutadiene	790	U
105-60-2	Caprolactam	790	U
59-50-7	4-Chloro-3-methylphenol	2600	
91-57-6	2-Methylnaphthalene	790	U
77-47-4	Hexachlorocyclopentadiene	790	U
88-06-2	2,4,6-Trichlorophenol	790	U
95-95-4	2,4,5-Trichlorophenol	2000	U
92-52-4	1,1'-Biphenyl	790	U
91-58-7	2-Chloronaphthalene	790	U
88-74-4	2-Nitroaniline	2000	U
131-11-3	Dimethylphthalate	790	U
606-20-2	2,6-Dinitrotoluene	790	U
208-96-8	Acenaphthylene	790	U
99-09-2	3-Nitroaniline	2000	U
83-32-9	Acenaphthene	2300	

1G

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLKNY

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: WG6540-1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: WG6540-1A66

Level: (low/med) LOW Date Received: _____

% Moisture: _____ Decanted: (Y/N)___ Date Extracted:10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: ___ Extraction: (Type) SONC

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN (BC)	5.50	750	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKNY

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: WG6540-1

Sample wt/vol: 30.0(g/mL) G Lab File ID: WG6540-1A66

Level: (low/med) LOW Date Received: _____

% Moisture: 0 decanted: (Y/N) N Date Extracted: 10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: _____ Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	
51-28-5	2,4-Dinitrophenol	830	U
100-02-7	4-Nitrophenol	830	U
132-64-9	Dibenzofuran	330	U
121-14-2	2,4-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
86-73-7	Fluorene	330	U
7005-72-3	4-Chlorophenyl-phenylether	330	U
100-01-6	4-Nitroaniline	830	U
534-52-1	4,6-Dinitro-2-methylphenol	830	U
86-30-6	N-nitrosodiphenylamine (1)	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
1912-24-9	Atrazine	330	U
87-86-5	Pentachlorophenol	830	U
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
86-74-8	Carbazole	330	U
84-74-2	Di-n-butylphthalate	330	U
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene	330	U
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	330	U
56-55-3	Benzo(a)anthracene	330	U
218-01-9	Chrysene	330	U
117-81-7	bis(2-Ethylhexyl)phthalate	330	U
117-84-0	Di-n-octylphthalate	330	U
205-99-2	Benzo(b)fluoranthene	330	U
207-08-9	Benzo(k)fluoranthene	330	U
50-32-8	Benzo(a)pyrene	330	U
193-39-5	Indeno(1,2,3-cd)pyrene	330	U
53-70-3	Dibenzo(a,h)anthracene	330	U
191-24-2	Benzo(g,h,i)perylene	330	U

(1) - Cannot be separated from Diphenylamine

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKNY

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: WG6540-1

Sample wt/vol: 30.0(g/mL) G Lab File ID: WG6540-1A66

Level: (low/med) LOW Date Received: _____

% Moisture: 0 decanted: (Y/N) N Date Extracted: 10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: ____ Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	330	U
108-95-2	Phenol	330	U
111-44-4	bis(2-Chloroethyl)ether	330	U
95-57-8	2-Chlorophenol	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	2,2'-oxybis(1-Chloropropane)	330	U
98-86-2	Acetophenone	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-di-n-propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
111-91-1	bis(2-Chloroethoxy)methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
105-60-2	Caprolactam	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	830	U
92-52-4	1,1'-Biphenyl	330	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	830	U
131-11-3	Dimethylphthalate	330	U
606-20-2	2,6-Dinitrotoluene	330	U
208-96-8	Acenaphthylene	330	U
99-09-2	3-Nitroaniline	830	U
83-32-9	Acenaphthene	330	U

4B
SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLKNY

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Lab File ID: WG6540-1A66 Lab Sample ID: WG6540-1

Instrument ID: 5972HP66 Date Extracted: 10/27/00

Matrix: (soil/water) SOIL Date Analyzed: 10/30/00

Level:(low/med) LOW Time Analyzed: 1257

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	E0354	E0354-1	E0354-1DA66	10/30/00
02	E0355	E0354-2	E0354-2DA66	10/30/00
03	E0356	E0354-3	E0354-3DA66	10/30/00
04	E0356MS	WG6540-2	WG6540-2A66	10/30/00
05	E0356MSD	WG6540-3	WG6540-3A66	10/30/00
06	E0356DL	E0354-3	E0354-3D2A66	10/30/00
07	E0358	E0354-5	E0354-5A66	10/30/00
08	E0359	E0354-6	E0354-6A66	10/30/00
09	E0360	E0354-7	E0354-7A66	10/30/00
10	E0361	E0354-8	E0354-8A66	10/30/00
11	E0362	E0354-9	E0354-9DA66	10/30/00
12	E0357	E0354-4	E0354-4JA66	10/30/00
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COMMENTS:

FORM IV SV OLM04.2

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix Spike - EPA Sample No.: E0356 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Phenol	3002	0.00	2556	85	26- 90
2-Chlorophenol	3002	0.00	2713	90	25-102
N-Nitroso-di-n-prop.(1)	2001	0.00	1873	94	41-126
4-Chloro-3-methylphenol	3002	0.00	2611	87	26-103
Acenaphthene	2001	2814	2318	-25*	31-137
4-Nitrophenol	3002	0.00	2598	87	11-114
2,4-Dinitrotoluene	2001	0.00	1606	80	28- 89
Pentachlorophenol	3002	0.00	2420	81	17-109
Pyrene	2001	13070	7070	-300*	35-142

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	3012	2914	97*	13	35	26- 90
2-Chlorophenol	3012	3136	104*	14	50	25-102
N-Nitroso-di-n-prop.(1)	2008	2135	106	12	38	41-126
4-Chloro-3-methylphenol	3012	3069	102	16	33	26-103
Acenaphthene	2008	3340	26*	10200*	19	31-137
4-Nitrophenol	3012	3109	103	17	50	11-114
2,4-Dinitrotoluene	2008	1821	91*	13	47	28- 89
Pentachlorophenol	3012	2637	88	8	47	17-109
Pyrene	2008	10500	-128*	-80	36	35-142

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 1 out of 9 outside limits
Spike Recovery: 7 out of 18 outside limits

COMMENTS:

2D
SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (2FP)#	S6 (TBP)#	S7 (2CP)#	S8 (DCB)#	TOT OUT
01	SBLKNY	73	70	69	71	74	67	70	67	0
02	E0354	83	93	94	91	94	89	88	63	0
03	E0355	70	79	82	79	82	78	79	42	0
04	E0356	69	82	81	74	78	77	74	54	0
05	E0356MS	73	81	75	77	81	79	70	59	0
06	E0356MSD	76	84	85	79	88	88	75	65	0
07	E0356DL	83	99	90	80	81	85	83	66	0
08	E0358	62	71	66	64	69	55	62	47	0
09	E0359	33	38	35	33	37	32	35	28	0
10	E0360	80	88	83	80	83	68	77	80	0
11	E0361	75	79	78	74	83	84	76	76	0
12	E0362	100	109	92	88	97	94	92	97	0
13	E0357	64	73	74	67	70	61	64	53	0
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		QC LIMITS	
S1 (NBZ)	= Nitrobenzene-d5	(23-120)	
S2 (FBP)	= 2-Fluorobiphenyl	(30-115)	
S3 (TPH)	= Terphenyl-d14	(18-137)	
S4 (PHL)	= Phenol-d5	(24-113)	
S5 (2FP)	= 2-Fluorophenol	(25-121)	
S6 (TBP)	= 2,4,6-Tribromophenol	(19-122)	
S7 (2CP)	= 2-Chlorophenol-d4	(20-130)	(advisory)
S8 (DCB)	= 1,2-Dichlorobenzene-d4	(20-130)	(advisory)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

1F
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0362

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-9

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E0354-9A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. 23 Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0362

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-9

Sample wt/vol: 5.0(g/mL) G Lab File ID: E0354-9A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. 23 Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	
79-01-6	Trichloroethene	13	U
108-87-2	Methylcyclohexane	13	U
78-87-5	1,2-Dichloropropane	13	U
75-27-4	Bromodichloromethane	13	U
10061-01-5	cis-1,3-Dichloropropene	13	U
108-10-1	4-Methyl-2-Pentanone	13	U
108-88-3	Toluene	13	U
10061-02-6	trans-1,3-Dichloropropene	13	U
79-00-5	1,1,2-Trichloroethane	13	U
127-18-4	Tetrachloroethene	5	J
591-78-6	2-Hexanone	13	U
124-48-1	Dibromochloromethane	13	U
106-93-4	1,2-Dibromoethane	13	U
108-90-7	Chlorobenzene	13	U
100-41-4	Ethylbenzene	13	U
1330-20-7	Xylene (Total)	13	U
100-42-5	Styrene	13	U
75-25-2	Bromoform	13	U
98-82-8	Isopropylbenzene	13	U
79-34-5	1,1,2,2-Tetrachloroethane	13	U
541-73-1	1,3-Dichlorobenzene	13	U
106-46-7	1,4-Dichlorobenzene	13	U
95-50-1	1,2-Dichlorobenzene	13	U
96-12-8	1,2-Dibromo-3-Chloropropane	13	U
120-82-1	1,2,4-Trichlorobenzene	13	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0362

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-9

Sample wt/vol: 5.0(g/mL) G Lab File ID: E0354-9A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. 23 Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	13	U
74-87-3	Chloromethane	13	U
75-01-4	Vinyl Chloride	13	U
74-83-9	Bromomethane	13	U
75-00-3	Chloroethane	13	U
75-69-4	Trichlorofluoromethane	2	J
75-35-4	1,1-Dichloroethene	13	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2	J
67-64-1	Acetone	13	~~J~~B
75-15-0	Carbon Disulfide	13	U
79-20-9	Methyl Acetate	13	U
75-09-2	Methylene Chloride	4	J
156-60-5	trans-1,2-Dichloroethene	13	U
1634-04-4	Methyl-tert-butyl ether	13	U
75-34-3	1,1-Dichloroethane	13	U
156-59-2	cis-1,2-Dichloroethene	13	U
78-93-3	2-Butanone	13	U
67-66-3	Chloroform	13	U
71-55-6	1,1,1-Trichloroethane	13	U
110-82-7	Cyclohexane	13	U
56-23-5	Carbon Tetrachloride	13	U
71-43-2	Benzene	13	U
107-06-2	1,2-Dichloroethane	13	U

1F

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0361

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-8

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E0354-8A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. 42 Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0361

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-8

Sample wt/vol: 5.0(g/mL) G Lab File ID: E0354-8A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. 42 Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
79-01-6	Trichloroethene	17	U
108-87-2	Methylcyclohexane	17	U
78-87-5	1,2-Dichloropropane	17	U
75-27-4	Bromodichloromethane	17	U
10061-01-5	cis-1,3-Dichloropropene	17	U
108-10-1	4-Methyl-2-Pentanone	17	U
108-88-3	Toluene	17	U
10061-02-6	trans-1,3-Dichloropropene	17	U
79-00-5	1,1,2-Trichloroethane	17	U
127-18-4	Tetrachloroethene	17	U
591-78-6	2-Hexanone	17	U
124-48-1	Dibromochloromethane	17	U
106-93-4	1,2-Dibromoethane	17	U
108-90-7	Chlorobenzene	17	U
100-41-4	Ethylbenzene	17	U
1330-20-7	Xylene (Total)	17	U
100-42-5	Styrene	17	U
75-25-2	Bromoform	17	U
98-82-8	Isopropylbenzene	17	U
79-34-5	1,1,2,2-Tetrachloroethane	17	U
541-73-1	1,3-Dichlorobenzene	17	U
106-46-7	1,4-Dichlorobenzene	17	U
95-50-1	1,2-Dichlorobenzene	17	U
96-12-8	1,2-Dibromo-3-Chloropropane	17	U
120-82-1	1,2,4-Trichlorobenzene	17	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0361

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-8

Sample wt/vol: 5.0(g/mL) G Lab File ID: E0354-8A55

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: not dec. 42 Date Analyzed: 10/31/00

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	
75-71-8	Dichlorodifluoromethane	17	U
74-87-3	Chloromethane	17	U
75-01-4	Vinyl Chloride	17	U
74-83-9	Bromomethane	17	U
75-00-3	Chloroethane	17	U
75-69-4	Trichlorofluoromethane	17	U
75-35-4	1,1-Dichloroethene	17	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	3	J
67-64-1	Acetone	17 ~~6~~	~~JB~~ U
75-15-0	Carbon Disulfide	17	U
79-20-9	Methyl Acetate	17	U
75-09-2	Methylene Chloride	4	J
156-60-5	trans-1,2-Dichloroethene	17	U
1634-04-4	Methyl-tert-butyl ether	17	U
75-34-3	1,1-Dichloroethane	17	U
156-59-2	cis-1,2-Dichloroethene	17	U
78-93-3	2-Butanone	17	U
67-66-3	Chloroform	17	U
71-55-6	1,1,1-Trichloroethane	17	U
110-82-7	Cyclohexane	17	U
56-23-5	Carbon Tetrachloride	17	U
71-43-2	Benzene	17	U
107-06-2	1,2-Dichloroethane	17	U

1G

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0354

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-1

Sample wt/vol: 30.2 (g/mL) G Lab File ID: E0354-1DA66

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: 19 Decanted: (Y/N) N Date Extracted:10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 7.6 Extraction: (Type) SONC

Number TICs found: 26

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 57-10-3	HEXADECANOIC ACID	13.90	2000	NJ
2.	UNKNOWN	17.14	5800	J
3.	UNKNOWN	17.20	2500	J
4. 239-01-0	BENZO(A)CARBAZOLE	17.27	4000	NJ
5.	UNKNOWN	17.36	3200	J
6. 3351-31-3	CHRYSENE, 3-METHYL-	17.56	4700	NJ
7.	UNKNOWN	17.59	2700	J
8.	UNKNOWN	17.75	3300	J
9.	UNKNOWN	17.98	3200	J
10.	UNKNOWN	18.29	3800	J
11.	UNKNOWN	18.36	1800	J
12. 192-97-2	BENZO[E]PYRENE	18.63	2800	NJ
13. 198-55-0	PERYLENE	18.88	6300	NJ
14.	UNKNOWN	19.22	3200	J
15.	UNKNOWN	19.32	2000	J
16.	UNKNOWN	19.36	2000	J
17.	UNKNOWN	19.46	2600	J
18.	UNKNOWN	19.71	2200	J
19.	UNKNOWN	19.85	1700	J
20.	UNKNOWN	19.96	2000	J
21.	UNKNOWN	20.00	1600	J
22.	UNKNOWN	20.18	1600	J
23.	UNKNOWN	20.39	2200	J
24.	UNKNOWN	20.56	1800	J
25.	UNKNOWN	21.27	1700	J
26.	UNKNOWN	21.45	1500	J
27.				
28.				
29.				
30.				

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0355

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-2

Sample wt/vol: 30.0(g/mL) G Lab File ID: E0354-2DA66

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: 27 decanted: (Y/N) N Date Extracted: 10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 5.8 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	900	U
108-95-2	Phenol	900	U
111-44-4	bis(2-Chloroethyl)ether	900	U
95-57-8	2-Chlorophenol	900	U
95-48-7	2-Methylphenol	900	U
108-60-1	2,2'-oxybis(1-Chloropropane)	900	U
98-86-2	Acetophenone	900	U
106-44-5	4-Methylphenol	900	U
621-64-7	N-Nitroso-di-n-propylamine	900	U
67-72-1	Hexachloroethane	900	U
98-95-3	Nitrobenzene	900	U
78-59-1	Isophorone	900	U
88-75-5	2-Nitrophenol	900	U
105-67-9	2,4-Dimethylphenol	900	U
111-91-1	bis(2-Chloroethoxy)methane	900	U
120-83-2	2,4-Dichlorophenol	900	U
91-20-3	Naphthalene	900	U
106-47-8	4-Chloroaniline	900	U
87-68-3	Hexachlorobutadiene	900	U
105-60-2	Caprolactam	900	U
59-50-7	4-Chloro-3-methylphenol	900	U
91-57-6	2-Methylnaphthalene	900	U
77-47-4	Hexachlorocyclopentadiene	900	U
88-06-2	2,4,6-Trichlorophenol	900	U
95-95-4	2,4,5-Trichlorophenol	2300	U
92-52-4	1,1'-Biphenyl	900	U
91-58-7	2-Chloronaphthalene	900	U
88-74-4	2-Nitroaniline	2300	U
131-11-3	Dimethylphthalate	900	U
606-20-2	2,6-Dinitrotoluene	900	U
208-96-8	Acenaphthylene	900	U
99-09-2	3-Nitroaniline	2300	U
83-32-9	Acenaphthene	220	J

1D
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0355

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-2

Sample wt/vol: 30.0(g/mL) G Lab File ID: E0354-2DA66

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: 27 decanted: (Y/N) N Date Extracted: 10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 5.8 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	2300	U
100-02-7	4-Nitrophenol	2300	U
132-64-9	Dibenzofuran	120	J
121-14-2	2,4-Dinitrotoluene	900	U
84-66-2	Diethylphthalate	900	U
86-73-7	Fluorene	320	J
7005-72-3	4-Chlorophenyl-phenylether	900	U
100-01-6	4-Nitroaniline	2300	U
534-52-1	4,6-Dinitro-2-methylphenol	2300	U
86-30-6	N-nitrosodiphenylamine (1)	900	U
101-55-3	4-Bromophenyl-phenylether	900	U
118-74-1	Hexachlorobenzene	900	U
1912-24-9	Atrazine	900	U
87-86-5	Pentachlorophenol	2300	U
85-01-8	Phenanthrene	2800	
120-12-7	Anthracene	590	J
86-74-8	Carbazole	420	J
84-74-2	Di-n-butylphthalate	900	U
206-44-0	Fluoranthene	3500	
129-00-0	Pyrene	3300	
85-68-7	Butylbenzylphthalate	900	U
91-94-1	3,3'-Dichlorobenzidine	900	U
56-55-3	Benzo(a)anthracene	1600	
218-01-9	Chrysene	1900	
117-81-7	bis(2-Ethylhexyl)phthalate	740	J
117-84-0	Di-n-octylphthalate	900	U
205-99-2	Benzo(b)fluoranthene	2400	X
207-08-9	Benzo(k)fluoranthene	2800	X
50-32-8	Benzo(a)pyrene	1500	
193-39-5	Indeno(1,2,3-cd)pyrene	1000	
53-70-3	Dibenzo(a,h)anthracene	400	J
191-24-2	Benzo(g,h,i)perylene	1000	

(1) - Cannot be separated from Diphenylamine

1G

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0355

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-2

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E0354-2DA66

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: 27 Decanted: (Y/N) N Date Extracted:10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 5.8 Extraction: (Type) SONC

Number TICs found: 26

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 110-13-4	2,5-HEXANEDIONE	5.30	340	NJ
2.	UNKNOWN (BC)	5.50	830	~~J~~BU
3.	UNKNOWN	13.89	1100	J
4. 243-17-4	11H-BENZO[B]FLUORENE	15.65	550	NJ
5.	BENZOFLUORENE	15.73	470	J
6. 2381-21-7	PYRENE, 1-METHYL-	15.97	450	NJ
7.	UNKNOWN	17.12	2100	J
8.	BENZOCARBAZOLE	17.27	650	J
9. 2498-77-3	BENZ[A]ANTHRACENE, 1-METHYL-	17.56	700	NJ
10.	UNKNOWN	17.70	480	J
11.	UNKNOWN	17.75	640	J
12.	UNKNOWN	18.29	2800	J
13. 207-08-9	BENZO[K]FLUORANTHENE	18.63	1700	NJ
14. 198-55-0	PERYLENE	18.88	3700	NJ
15.	UNKNOWN	19.22	1300	J
16.	UNKNOWN	19.32	1200	J
17.	UNKNOWN	19.35	860	J
18.	UNKNOWN	19.46	1500	J
19.	UNKNOWN	19.69	970	J
20.	UNKNOWN	19.85	1100	J
21.	UNKNOWN	19.95	960	J
22.	UNKNOWN	20.07	500	J
23.	UNKNOWN	20.40	670	J
24. 215-58-7	BENZO[B]TRIPHENYLENE	21.29	410	NJ
25. 192-65-4	NAPHTHO[1,2,3,4-DEF]CHRYSENE	24.32	660	NJ
26. 192-65-4	NAPHTHO[1,2,3,4-DEF]CHRYSENE	24.50	600	NJ
27.				
28.				
29.				
30.				

FORM I SV-TIC OLM04.2

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0356

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-3

Sample wt/vol: 30.0(g/mL) G Lab File ID: E0354-3DA66

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: 17 decanted: (Y/N) N Date Extracted: 10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 7.8 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	800	U
108-95-2	Phenol	800	U
111-44-4	bis(2-Chloroethyl)ether	800	U
95-57-8	2-Chlorophenol	800	U
95-48-7	2-Methylphenol	800	U
108-60-1	2,2'-oxybis(1-Chloropropane)	800	U
98-86-2	Acetophenone	800	U
106-44-5	4-Methylphenol	800	U
621-64-7	N-Nitroso-di-n-propylamine	800	U
67-72-1	Hexachloroethane	800	U
98-95-3	Nitrobenzene	800	U
78-59-1	Isophorone	800	U
88-75-5	2-Nitrophenol	800	U
105-67-9	2,4-Dimethylphenol	800	U
111-91-1	bis(2-Chloroethoxy)methane	800	U
120-83-2	2,4-Dichlorophenol	800	U
91-20-3	Naphthalene	480	J
106-47-8	4-Chloroaniline	800	U
87-68-3	Hexachlorobutadiene	800	U
105-60-2	Caprolactam	800	U
59-50-7	4-Chloro-3-methylphenol	800	U
91-57-6	2-Methylnaphthalene	250	J
77-47-4	Hexachlorocyclopentadiene	800	U
88-06-2	2,4,6-Trichlorophenol	800	U
95-95-4	2,4,5-Trichlorophenol	2000	U
92-52-4	1,1'-Biphenyl	170	J
91-58-7	2-Chloronaphthalene	800	U
88-74-4	2-Nitroaniline	2000	U
131-11-3	Dimethylphthalate	800	U
606-20-2	2,6-Dinitrotoluene	800	U
208-96-8	Acenaphthylene	800	U
99-09-2	3-Nitroaniline	2000	U
83-32-9	Acenaphthene	2800	

1D
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0356

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-3

Sample wt/vol: 30.0(g/mL) G Lab File ID: E0354-3DA66

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: 17 decanted: (Y/N) N Date Extracted: 10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 7.8 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	
51-28-5	2,4-Dinitrophenol	2000	U
100-02-7	4-Nitrophenol	2000	U
132-64-9	Dibenzofuran	1700	
121-14-2	2,4-Dinitrotoluene	800	U
84-66-2	Diethylphthalate	800	U
86-73-7	Fluorene	3200	
7005-72-3	4-Chlorophenyl-phenylether	800	U
100-01-6	4-Nitroaniline	2000	U
534-52-1	4,6-Dinitro-2-methylphenol	2000	U
86-30-6	N-nitrosodiphenylamine (1)	800	U
101-55-3	4-Bromophenyl-phenylether	800	U
118-74-1	Hexachlorobenzene	800	U
1912-24-9	Atrazine	800	U
87-86-5	Pentachlorophenol	2000	U
85-01-8	Phenanthrene	15000	E
120-12-7	Anthracene	3700	
86-74-8	Carbazole	2600	
84-74-2	Di-n-butylphthalate	800	U
206-44-0	Fluoranthene	13000	E
129-00-0	Pyrene	13000	E
85-68-7	Butylbenzylphthalate	800	U
91-94-1	3,3'-Dichlorobenzidine	800	U
56-55-3	Benzo(a)anthracene	5900	
218-01-9	Chrysene	5800	
117-81-7	bis(2-Ethylhexyl)phthalate	1700	
117-84-0	Di-n-octylphthalate	800	U
205-99-2	Benzo(b)fluoranthene	7200	EX
207-08-9	Benzo(k)fluoranthene	8100	EX
50-32-8	Benzo(a)pyrene	4900	
193-39-5	Indeno(1,2,3-cd)pyrene	3200	
53-70-3	Dibenzo(a,h)anthracene	1100	
191-24-2	Benzo(g,h,i)perylene	3000	

(1) - Cannot be separated from Diphenylamine

1G
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0356

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-3

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E0354-3DA66

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: 17 Decanted: (Y/N) N Date Extracted: 10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 7.8 Extraction: (Type) SONC

Number TICs found: 31 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN (BC)	5.49	840	~~JB~~ 4
2. 872-05-9	1-DECENE	10.52	1400	NJ
3. 112-53-8	1-DODECANOL	12.03	1100	NJ
4.	UNKNOWN CARBOXYLIC ACID	12.60	910	J
5. 132-65-0	DIBENZOTHIOPHENE	12.79	1200	NJ
6. 779-02-2	ANTHRACENE, 9-METHYL-	13.72	810	NJ
7.	METHYLPHENANTHRENE	13.77	1200	J
8.	CYCLOPENTAPHENANTHRENE	13.89	3200	J
9. 612-94-2	NAPHTHALENE, 2-PHENYL-	14.18	790	NJ
10. 84-65-1	9,10-ANTHRACENEDIONE	14.25	800	NJ
11.	UNKNOWN	14.94	480	J
12. 2381-21-7	PYRENE, 1-METHYL-	15.60	20	NJ
13.	BENZOFLUORENE	15.75	810	J
14. 3442-78-2	PYRENE, 2-METHYL-	15.80	490	NJ
15. 243-46-9	BENZO[B]NAPHTHO[2,3-D]THIOPH	16.58	550	NJ
16.	UNKNOWN	16.65	890	J
17. 239-35-0	BENZO[B]NAPHTHO[2,1-D]THIOPH	16.82	400	NJ
18.	UNKNOWN	17.13	2500	J
19. 34777-33-8	BENZO(C)CARBAZOLE	17.28	660	NJ
20. 2693-46-1	3-FLUORANTHENAMINE	17.35	380	NJ
21. 3697-24-3	CHRYSENE, 5-METHYL-	17.57	750	NJ
22.	UNKNOWN	17.70	540	J
23.	UNKNOWN	17.79	540	J
24. 1599-67-3	1-DOCOSENE	18.04	820	NJ
25. 192-97-2	BENZO[E]PYRENE	18.90	1900	NJ
26.	UNKNOWN	19.97	560	J
27.	UNKNOWN	20.41	360	J
28. 215-58-7	BENZO[B]TRIPHENYLENE	21.31	490	NJ
29.	UNKNOWN	21.48	350	J
30. 0-00-0	1,2:3,4-DIBENZPYRENE	24.36	810	NJ

1G

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0356

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-3

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E0354-3DA66

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: 17 Decanted: (Y/N) N Date Extracted:10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 7.8 Extraction: (Type) SONC

Number TICs found: 31

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 0-00-0	1,2:4,5-DIBENZPYRENE	24.53	470	NJ
2.				
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FORM I SV-TIC OLM04.2

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0356DL

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-3

Sample wt/vol: 30.0(g/mL) G Lab File ID: E0354-3D2A66

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: 17 decanted: (Y/N) N Date Extracted: 10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 8.0

GPC Cleanup: (Y/N) Y pH: 7.8 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	3200	U
108-95-2	Phenol	3200	U
111-44-4	bis(2-Chloroethyl)ether	3200	U
95-57-8	2-Chlorophenol	3200	U
95-48-7	2-Methylphenol	3200	U
108-60-1	2,2'-oxybis(1-Chloropropane)	3200	U
98-86-2	Acetophenone	3200	U
106-44-5	4-Methylphenol	3200	U
621-64-7	N-Nitroso-di-n-propylamine	3200	U
67-72-1	Hexachloroethane	3200	U
98-95-3	Nitrobenzene	3200	U
78-59-1	Isophorone	3200	U
88-75-5	2-Nitrophenol	3200	U
105-67-9	2,4-Dimethylphenol	3200	U
111-91-1	bis(2-Chloroethoxy)methane	3200	U
120-83-2	2,4-Dichlorophenol	3200	U
91-20-3	Naphthalene	530	DJ
106-47-8	4-Chloroaniline	3200	U
87-68-3	Hexachlorobutadiene	3200	U
105-60-2	Caprolactam	3200	U
59-50-7	4-Chloro-3-methylphenol	3200	U
91-57-6	2-Methylnaphthalene	3200	U
77-47-4	Hexachlorocyclopentadiene	3200	U
88-06-2	2,4,6-Trichlorophenol	3200	U
95-95-4	2,4,5-Trichlorophenol	8000	U
92-52-4	1,1'-Biphenyl	3200	U
91-58-7	2-Chloronaphthalene	3200	U
88-74-4	2-Nitroaniline	8000	U
131-11-3	Dimethylphthalate	3200	U
606-20-2	2,6-Dinitrotoluene	3200	U
208-96-8	Acenaphthylene	3200	U
99-09-2	3-Nitroaniline	8000	U
83-32-9	Acenaphthene	3500	D

1D
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0356DL

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-3

Sample wt/vol: 30.0(g/mL) G Lab File ID: E0354-3D2A66

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: 17 decanted: (Y/N) N Date Extracted: 10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 8.0

GPC Cleanup: (Y/N) Y pH: 7.8 Extraction: (Type) SONC

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		
51-28-5	2,4-Dinitrophenol	8000	U
100-02-7	4-Nitrophenol	8000	U
132-64-9	Dibenzofuran	2200	DJ
121-14-2	2,4-Dinitrotoluene	3200	U
84-66-2	Diethylphthalate	3200	U
86-73-7	Fluorene	4100	D
7005-72-3	4-Chlorophenyl-phenylether	3200	U
100-01-6	4-Nitroaniline	8000	U
534-52-1	4,6-Dinitro-2-methylphenol	8000	U
86-30-6	N-nitrosodiphenylamine (1)	3200	U
101-55-3	4-Bromophenyl-phenylether	3200	U
118-74-1	Hexachlorobenzene	3200	U
1912-24-9	Atrazine	3200	U
87-86-5	Pentachlorophenol	8000	U
85-01-8	Phenanthrene	20000	D
120-12-7	Anthracene	5200	D
86-74-8	Carbazole	3200	DJ
84-74-2	Di-n-butylphthalate	3200	U
206-44-0	Fluoranthene	18000	D
129-00-0	Pyrene	14000	D
85-68-7	Butylbenzylphthalate	3200	U
91-94-1	3,3'-Dichlorobenzidine	3200	U
56-55-3	Benzo(a)anthracene	6500	D
218-01-9	Chrysene	6900	D
117-81-7	bis(2-Ethylhexyl)phthalate	2100	DJ
117-84-0	Di-n-octylphthalate	3200	U
205-99-2	Benzo(b)fluoranthene	8600	DX
207-08-9	Benzo(k)fluoranthene	9700	DX
50-32-8	Benzo(a)pyrene	5800	D
193-39-5	Indeno(1,2,3-cd)pyrene	3700	D
53-70-3	Dibenzo(a,h)anthracene	1200	DJ
191-24-2	Benzo(g,h,i)perylene	3400	D

(1) - Cannot be separated from Diphenylamine

1G

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0356DL

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-3

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E0354-3D2A66

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: 17 Decanted: (Y/N) N Date Extracted:10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 8.0

GPC Cleanup: (Y/N) Y pH: 7.8 Extraction: (Type) SONC

Number TICs found: 26

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 872-05-9	1-DECENE	10.52	1600	NJD
2. 36653-82-4	1-HEXADECANOL	12.02	1300	NJD
3. 132-65-0	DIBENZOTHIOPHENE	12.79	1500	NJD
4.	METHYLPHENANTHRENE	13.77	1400	JD
5.	UNKNOWN	13.89	4100	JD
6. 3442-78-2	PYRENE, 2-METHYL-	15.65	1500	NJD
7.	BENZOFLUORENE	15.73	1400	JD
8. 243-46-9	BENZO[B]NAPHTHO[2,3-D]THIOPH	16.58	860	NJD
9.	UNKNOWN	16.65	920	JD
10.	UNKNOWN	17.12	5500	JD
11. 82-05-3	7H-BENZ[DE]ANTHRACEN-7-ONE	17.21	1400	NJD
12. 34777-33-8	BENZO(C)CARBAZOLE	17.27	2200	NJD
13. 2693-46-1	3-FLUORANTHENAMINE	17.34	1600	NJD
14. 1705-84-6	TRIPHENYLENE, 2-METHYL-	17.56	2000	NJD
15. 2498-77-3	BENZ[A]ANTHRACENE, 1-METHYL-	17.61	1000	NJD
16.	UNKNOWN	17.70	2200	JD
17.	UNKNOWN	17.75	3100	JD
18.	UNKNOWN	17.87	1600	JD
19.	UNKNOWN	18.15	2700	JD
20.	UNKNOWN	18.29	1800	JD
21.	UNKNOWN	18.32	1900	JD
22. 207-08-9	BENZO[K]FLUORANTHENE	18.63	2300	NJD
23. 205-99-2	BENZ[E]ACEPHENANTHRYLENE	18.86	4900	NJD
24.	UNKNOWN	19.95	880	JD
25.	UNKNOWN PAH	21.29	880	JD
26. 192-65-4	NAPHTHO[1,2,3,4-DEF]CHRYSENE	24.32	1600	NJD
27.				
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FORM I SV-TIC OLM04.2

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0357

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-4

Sample wt/vol: 30.2(g/mL) G Lab File ID: E0354-4JA66

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: 14 decanted: (Y/N) N Date Extracted: 10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.9 Extraction: (Type) SONC

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		
100-52-7	Benzaldehyde	380	U
108-95-2	Phenol	380	U
111-44-4	bis(2-Chloroethyl)ether	380	U
95-57-8	2-Chlorophenol	380	U
95-48-7	2-Methylphenol	380	U
108-60-1	2,2'-oxybis(1-Chloropropane)	380	U
98-86-2	Acetophenone	380	U
106-44-5	4-Methylphenol	380	U
621-64-7	N-Nitroso-di-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	bis(2-Chloroethoxy)methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
91-20-3	Naphthalene	380	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
105-60-2	Caprolactam	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	380	U
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	960	U
92-52-4	1,1'-Biphenyl	380	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	960	U
131-11-3	Dimethylphthalate	380	U
606-20-2	2,6-Dinitrotoluene	380	U
208-96-8	Acenaphthylene	380	U
99-09-2	3-Nitroaniline	960	U
83-32-9	Acenaphthene	49	J

1D
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0357

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-4

Sample wt/vol: 30.2(g/mL) G Lab File ID: E0354-4JA66

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: 14 decanted: (Y/N) N Date Extracted: 10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.9 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	960	U
100-02-7	4-Nitrophenol	960	U
132-64-9	Dibenzofuran	380	U
121-14-2	2,4-Dinitrotoluene	380	U
84-66-2	Diethylphthalate	380	U
86-73-7	Fluorene	110	J
7005-72-3	4-Chlorophenyl-phenylether	380	U
100-01-6	4-Nitroaniline	960	U
534-52-1	4,6-Dinitro-2-methylphenol	960	U
86-30-6	N-nitrosodiphenylamine (1)	380	U
101-55-3	4-Bromophenyl-phenylether	380	U
118-74-1	Hexachlorobenzene	380	U
1912-24-9	Atrazine	380	U
87-86-5	Pentachlorophenol	960	U
85-01-8	Phenanthrene	1100	
120-12-7	Anthracene	400	
86-74-8	Carbazole	110	J
84-74-2	Di-n-butylphthalate	380	U
206-44-0	Fluoranthene	1600	
129-00-0	Pyrene	1400	
85-68-7	Butylbenzylphthalate	440	
91-94-1	3,3'-Dichlorobenzidine	380	U
56-55-3	Benzo(a)anthracene	700	
218-01-9	Chrysene	740	
117-81-7	bis(2-Ethylhexyl)phthalate	490	
117-84-0	Di-n-octylphthalate	55	J
205-99-2	Benzo(b)fluoranthene	970	X
207-08-9	Benzo(k)fluoranthene	1100	X
50-32-8	Benzo(a)pyrene	630	
193-39-5	Indeno(1,2,3-cd)pyrene	450	
53-70-3	Dibenzo(a,h)anthracene	180	J
191-24-2	Benzo(g,h,i)perylene	480	

(1) - Cannot be separated from Diphenylamine

1D
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0358

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-5

Sample wt/vol: 30.4(g/mL) G Lab File ID: E0354-5A66

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: 16 decanted: (Y/N) N Date Extracted: 10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.9 Extraction: (Type) SONC

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		
51-28-5	2,4-Dinitrophenol	980	U
100-02-7	4-Nitrophenol	980	U
132-64-9	Dibenzofuran	390	U
121-14-2	2,4-Dinitrotoluene	390	U
84-66-2	Diethylphthalate	390	U
86-73-7	Fluorene	59	J
7005-72-3	4-Chlorophenyl-phenylether	390	U
100-01-6	4-Nitroaniline	980	U
534-52-1	4,6-Dinitro-2-methylphenol	980	U
86-30-6	N-nitrosodiphenylamine (1)	390	U
101-55-3	4-Bromophenyl-phenylether	390	U
118-74-1	Hexachlorobenzene	390	U
1912-24-9	Atrazine	390	U
87-86-5	Pentachlorophenol	980	U
85-01-8	Phenanthrene	410	
120-12-7	Anthracene	83	J
86-74-8	Carbazole	67	J
84-74-2	Di-n-butylphthalate	390	U
206-44-0	Fluoranthene	460	
129-00-0	Pyrene	430	
85-68-7	Butylbenzylphthalate	390	U
91-94-1	3,3'-Dichlorobenzidine	390	U
56-55-3	Benzo(a)anthracene	160	J
218-01-9	Chrysene	220	J
117-81-7	bis(2-Ethylhexyl)phthalate	400	
117-84-0	Di-n-octylphthalate	40	J
205-99-2	Benzo(b)fluoranthene	300	XJ
207-08-9	Benzo(k)fluoranthene	340	XJ
50-32-8	Benzo(a)pyrene	180	J
193-39-5	Indeno(1,2,3-cd)pyrene	130	J
53-70-3	Dibenzo(a,h)anthracene	390	U
191-24-2	Benzo(g,h,i)perylene	190	J

(1) - Cannot be separated from Diphenylamine

1G
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0358

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-5

Sample wt/vol: 30.4 (g/mL) G Lab File ID: E0354-5A66

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: 16 Decanted: (Y/N) N Date Extracted: 10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.9 Extraction: (Type) SONC

Number TICs found: 15 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	5.30	390	J
2.	UNKNOWN (BC)	5.54	420	~~J~~B4
3. 640-61-9	BENZENESULFONAMIDE, N,4-DIME	12.21	780	NJ
4.	UNKNOWN	16.00	210	J
5.	BENZANTHRACENONE	16.44	160	J
6. 239-35-0	BENZO[B]NAPHTHO[2,1-D]THIOPH	16.58	140	NJ
7.	UNKNOWN	16.64	180	J
8. 2498-77-3	BENZ[A]ANTHRACENE, 1-METHYL-	17.56	250	NJ
9.	UNKNOWN	18.29	520	J
10.	UNKNOWN PAH	18.64	410	J
11. 198-55-0	PERYLENE	18.88	580	NJ
12.	UNKNOWN	19.20	400	J
13.	UNKNOWN	19.35	340	J
14.	UNKNOWN	19.44	550	J
15. 53584-60-4	28-NOR-17.ALPHA.(H)-HOPANE	19.85	300	NJ
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FORM I SV-TIC OLM04.2

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0359

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-6

Sample wt/vol: 30.0(g/mL) G Lab File ID: E0354-6A66

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: 12 decanted: (Y/N) N Date Extracted: 10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.5 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	
100-52-7	Benzaldehyde	380	U
108-95-2	Phenol	380	U
111-44-4	bis(2-Chloroethyl)ether	380	U
95-57-8	2-Chlorophenol	380	U
95-48-7	2-Methylphenol	380	U
108-60-1	2,2'-oxybis(1-Chloropropane)	380	U
98-86-2	Acetophenone	380	U
106-44-5	4-Methylphenol	380	U
621-64-7	N-Nitroso-di-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	bis(2-Chloroethoxy)methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
91-20-3	Naphthalene	380	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
105-60-2	Caprolactam	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	380	U
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	940	U
92-52-4	1,1'-Biphenyl	380	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	940	U
131-11-3	Dimethylphthalate	380	U
606-20-2	2,6-Dinitrotoluene	380	U
208-96-8	Acenaphthylene	380	U
99-09-2	3-Nitroaniline	940	U
83-32-9	Acenaphthene	380	U

1D
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0359

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-6

Sample wt/vol: 30.0(g/mL) G Lab File ID: E0354-6A66

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: 12 decanted: (Y/N) N Date Extracted: 10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.5 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	940	U
100-02-7	4-Nitrophenol	940	U
132-64-9	Dibenzofuran	380	U
121-14-2	2,4-Dinitrotoluene	380	U
84-66-2	Diethylphthalate	380	U
86-73-7	Fluorene	380	U
7005-72-3	4-Chlorophenyl-phenylether	380	U
100-01-6	4-Nitroaniline	940	U
534-52-1	4,6-Dinitro-2-methylphenol	940	U
86-30-6	N-nitrosodiphenylamine (1)	380	U
101-55-3	4-Bromophenyl-phenylether	380	U
118-74-1	Hexachlorobenzene	380	U
1912-24-9	Atrazine	380	U
87-86-5	Pentachlorophenol	940	U
85-01-8	Phenanthrene	460	
120-12-7	Anthracene	95	J
86-74-8	Carbazole	79	J
84-74-2	Di-n-butylphthalate	380	U
206-44-0	Fluoranthene	670	
129-00-0	Pyrene	600	
85-68-7	Butylbenzylphthalate	380	U
91-94-1	3,3'-Dichlorobenzidine	380	U
56-55-3	Benzo(a)anthracene	250	J
218-01-9	Chrysene	320	J
117-81-7	bis(2-Ethylhexyl)phthalate	360	J
117-84-0	Di-n-octylphthalate	59	J
205-99-2	Benzo(b)fluoranthene	410	X
207-08-9	Benzo(k)fluoranthene	460	X
50-32-8	Benzo(a)pyrene	260	J
193-39-5	Indeno(1,2,3-cd)pyrene	190	J
53-70-3	Dibenzo(a,h)anthracene	57	J
191-24-2	Benzo(g,h,i)perylene	260	J

(1) - Cannot be separated from Diphenylamine

1G
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0359

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-6

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E0354-6A66

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: 12 Decanted: (Y/N) N Date Extracted:10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.5 Extraction: (Type) SONC

Number TICs found: 18

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 243-17-4	11H-BENZO[B]FLUORENE	15.65	240	NJ
2.	UNKNOWN	15.84	200	J
3. 2381-21-7	PYRENE, 1-METHYL-	15.98	310	NJ
4. 103-23-1	HEXANEDIOIC ACID, BIS(2-ETHY	16.31	350	NJ
5.	UNKNOWN	16.45	160	J
6. 239-35-0	BENZO[B]NAPHTHO[2,1-D]THIOPH	16.57	180	NJ
7.	UNKNOWN	17.36	240	J
8. 3697-24-3	CHRYSENE, 5-METHYL-	17.55	410	NJ
9.	UNKNOWN	17.99	570	J
10.	UNKNOWN	18.16	250	J
11.	UNKNOWN	18.21	370	J
12.	UNKNOWN	18.30	250	J
13.	UNKNOWN PHTHALATE	18.40	300	J
14.	UNKNOWN	18.65	280	J
15. 192-97-2	BENZO[E]PYRENE	18.87	500	NJ
16.	UNKNOWN	19.72	230	J
17. 53584-60-4	28-NOR-17.ALPHA.(H)-HOPANE	19.85	210	NJ
18.	UNKNOWN	20.41	180	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0360

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-7

Sample wt/vol: 30.0(g/mL) G Lab File ID: E0354-7A66

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: 14 decanted: (Y/N) N Date Extracted: 10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.7 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	380	U
108-95-2	Phenol	380	U
111-44-4	bis(2-Chloroethyl)ether	380	U
95-57-8	2-Chlorophenol	380	U
95-48-7	2-Methylphenol	380	U
108-60-1	2,2'-oxybis(1-Chloropropane)	380	U
98-86-2	Acetophenone	380	U
106-44-5	4-Methylphenol	380	U
621-64-7	N-Nitroso-di-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	bis(2-Chloroethoxy)methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
91-20-3	Naphthalene	58	J
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
105-60-2	Caprolactam	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	73	J
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	970	U
92-52-4	1,1'-Biphenyl	380	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	970	U
131-11-3	Dimethylphthalate	380	U
606-20-2	2,6-Dinitrotoluene	380	U
208-96-8	Acenaphthylene	380	U
99-09-2	3-Nitroaniline	970	U
83-32-9	Acenaphthene	150	J

1D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0360

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-7

Sample wt/vol: 30.0(g/mL) G Lab File ID: E0354-7A66

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: 14 decanted: (Y/N) N Date Extracted: 10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.7 Extraction: (Type) SONC

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		
51-28-5	2,4-Dinitrophenol	970	U
100-02-7	4-Nitrophenol	970	U
132-64-9	Dibenzofuran	260	J
121-14-2	2,4-Dinitrotoluene	380	U
84-66-2	Diethylphthalate	380	U
86-73-7	Fluorene	190	J
7005-72-3	4-Chlorophenyl-phenylether	380	U
100-01-6	4-Nitroaniline	970	U
534-52-1	4,6-Dinitro-2-methylphenol	970	U
86-30-6	N-nitrosodiphenylamine (1)	380	U
101-55-3	4-Bromophenyl-phenylether	380	U
118-74-1	Hexachlorobenzene	380	U
1912-24-9	Atrazine	380	U
87-86-5	Pentachlorophenol	970	U
85-01-8	Phenanthrene	2500	
120-12-7	Anthracene	510	
86-74-8	Carbazole	380	J
84-74-2	Di-n-butylphthalate	380	U
206-44-0	Fluoranthene	2100	
129-00-0	Pyrene	2100	
85-68-7	Butylbenzylphthalate	380	U
91-94-1	3,3'-Dichlorobenzidine	380	U
56-55-3	Benzo(a)anthracene	1000	
218-01-9	Chrysene	1200	
117-81-7	bis(2-Ethylhexyl)phthalate	740	
117-84-0	Di-n-octylphthalate	60	J
205-99-2	Benzo(b)fluoranthene	1300	X
207-08-9	Benzo(k)fluoranthene	1500	X
50-32-8	Benzo(a)pyrene	720	
193-39-5	Indeno(1,2,3-cd)pyrene	520	
53-70-3	Dibenzo(a,h)anthracene	200	J
191-24-2	Benzo(g,h,i)perylene	490	

(1) - Cannot be separated from Diphenylamine

1G
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0360

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-7

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E0354-7A66

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: 14 Decanted: (Y/N) N Date Extracted:10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.7 Extraction: (Type) SONC

Number TICs found: 22

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 110-13-4	2,5-HEXANEDIONE	5.30	520	NJ
2.	UNKNOWN (BC)	5.56	570	~~J~~B 4
3.	UNKNOWN	13.89	590	J
4.	UNKNOWN	15.82	340	J
5. 243-17-4	11H-BENZO[B]FLUORENE	15.99	240	NJ
6. 82-05-3	7H-BENZ[DE]ANTHRACEN-7-ONE	16.44	400	NJ
7. 239-35-0	BENZO[B]NAPHTHO[2,1-D]THIOPH	16.58	330	NJ
8.	UNKNOWN	16.63	530	J
9. 82-05-3	7H-BENZ[DE]ANTHRACEN-7-ONE	16.77	560	NJ
10.	UNKNOWN	17.36	440	J
11. 2422-79-9	BENZ[A]ANTHRACENE, 12-METHYL	17.56	490	NJ
12.	UNKNOWN	17.63	390	J
13.	UNKNOWN	17.87	630	J
14.	UNKNOWN	18.10	720	J
15.	UNKNOWN	18.24	440	J
16.	UNKNOWN	18.31	680	J
17.	BENZOFLUORANTHENE	18.66	450	J
18. 207-08-9	BENZO[K]FLUORANTHENE	18.90	820	NJ
19.	UNKNOWN	19.47	270	J
20.	UNKNOWN	19.86	290	J
21.	UNKNOWN	20.42	230	J
22. 0-00-0	1,2:3,4-DIBENZPYRENE	24.37	270	NJ
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0361

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-8

Sample wt/vol: 30.3(g/mL) G Lab File ID: E0354-8A66

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: 42 decanted: (Y/N) N Date Extracted: 10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.9 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	
100-52-7	Benzaldehyde	560	U
108-95-2	Phenol	560	U
111-44-4	bis(2-Chloroethyl)ether	560	U
95-57-8	2-Chlorophenol	560	U
95-48-7	2-Methylphenol	560	U
108-60-1	2,2'-oxybis(1-Chloropropane)	560	U
98-86-2	Acetophenone	560	U
106-44-5	4-Methylphenol	560	U
621-64-7	N-Nitroso-di-n-propylamine	560	U
67-72-1	Hexachloroethane	560	U
98-95-3	Nitrobenzene	560	U
78-59-1	Isophorone	560	U
88-75-5	2-Nitrophenol	560	U
105-67-9	2,4-Dimethylphenol	560	U
111-91-1	bis(2-Chloroethoxy)methane	560	U
120-83-2	2,4-Dichlorophenol	560	U
91-20-3	Naphthalene	560	U
106-47-8	4-Chloroaniline	560	U
87-68-3	Hexachlorobutadiene	560	U
105-60-2	Caprolactam	560	U
59-50-7	4-Chloro-3-methylphenol	560	U
91-57-6	2-Methylnaphthalene	560	U
77-47-4	Hexachlorocyclopentadiene	560	U
88-06-2	2,4,6-Trichlorophenol	560	U
95-95-4	2,4,5-Trichlorophenol	1400	U
92-52-4	1,1'-Biphenyl	560	U
91-58-7	2-Chloronaphthalene	560	U
88-74-4	2-Nitroaniline	1400	U
131-11-3	Dimethylphthalate	560	U
606-20-2	2,6-Dinitrotoluene	560	U
208-96-8	Acenaphthylene	560	U
99-09-2	3-Nitroaniline	1400	U
83-32-9	Acenaphthene	560	U

1D
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0361

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-8

Sample wt/vol: 30.3(g/mL) G Lab File ID: E0354-8A66

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: 42 decanted: (Y/N) N Date Extracted: 10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.9 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1400	U
100-02-7	4-Nitrophenol	1400	U
132-64-9	Dibenzofuran	560	U
121-14-2	2,4-Dinitrotoluene	560	U
84-66-2	Diethylphthalate	560	U
86-73-7	Fluorene	560	U
7005-72-3	4-Chlorophenyl-phenylether	560	U
100-01-6	4-Nitroaniline	1400	U
534-52-1	4,6-Dinitro-2-methylphenol	1400	U
86-30-6	N-nitrosodiphenylamine (1)	560	U
101-55-3	4-Bromophenyl-phenylether	560	U
118-74-1	Hexachlorobenzene	560	U
1912-24-9	Atrazine	560	U
87-86-5	Pentachlorophenol	1400	U
85-01-8	Phenanthrene	330	J
120-12-7	Anthracene	61	J
86-74-8	Carbazole	61	J
84-74-2	Di-n-butylphthalate	560	U
206-44-0	Fluoranthene	440	J
129-00-0	Pyrene	460	J
85-68-7	Butylbenzylphthalate	82	J
91-94-1	3,3'-Dichlorobenzidine	560	U
56-55-3	Benzo(a)anthracene	210	J
218-01-9	Chrysene	370	J
117-81-7	bis(2-Ethylhexyl)phthalate	460	J
117-84-0	Di-n-octylphthalate	560	U
205-99-2	Benzo(b)fluoranthene	510	XJ
207-08-9	Benzo(k)fluoranthene	580	X
50-32-8	Benzo(a)pyrene	260	J
193-39-5	Indeno(1,2,3-cd)pyrene	280	J
53-70-3	Dibenzo(a,h)anthracene	87	J
191-24-2	Benzo(g,h,i)perylene	300	J

(1) - Cannot be separated from Diphenylamine

1G

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0361

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-8

Sample wt/vol: 30.3 (g/mL) G Lab File ID: E0354-8A66

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: 42 Decanted: (Y/N) N Date Extracted:10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.9 Extraction: (Type) SONC

Number TICs found: 30 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 638-53-9	TRIDECANOIC ACID	13.05	840	NJ
2.	UNKNOWN	13.82	1900	J
3.	UNKNOWN	13.88	1000	J
4. 57-10-3	HEXADECANOIC ACID	13.98	5100	NJ
5. 112-80-1	OLEIC ACID	15.03	3500	NJ
6.	UNKNOWN	15.37	1100	J
7.	UNKNOWN CARBOXYLIC ACID	16.18	1500	J
8.	UNKNOWN CARBOXYLIC ACID	17.19	1100	J
9.	UNKNOWN	18.13	1500	J
10. 56554-86-0	17-OCTADECENAL	18.40	4300	NJ
11. 528-63-2	FURAN, 2,5-BIS(3,4-DIMETHOXY	18.70	1700	NJ
12.	UNKNOWN	18.77	1300	J
13.	UNKNOWN	19.40	1300	J
14. 0-00-0	2-PENTACOSANONE	19.87	890	NJ
15. 57-88-5	CHOLESTEROL	20.29	1100	NJ
16. 56554-90-6	13-OCTADECENAL	20.73	2400	NJ
17.	UNKNOWN	21.16	2200	J
18.	UNKNOWN	21.44	1100	J
19.	UNKNOWN	22.02	9800	J
20.	UNKNOWN	22.10	2400	J
21.	UNKNOWN	22.63	4700	J
22.	UNKNOWN	22.90	3500	J
23.	UNKNOWN	23.17	1900	J
24.	UNKNOWN	23.24	960	J
25. 1058-61-3	STIGMAST-4-EN-3-ONE	23.49	13000	NJ
26.	UNKNOWN	23.73	2000	J
27.	UNKNOWN	23.81	1700	J
28.	UNKNOWN	24.07	1500	J
29.	UNKNOWN	24.29	3400	J
30.	UNKNOWN	24.90	3600	J

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0362

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-9

Sample wt/vol: 30.3(g/mL) G Lab File ID: E0354-9DA66

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: 23 decanted: (Y/N) N Date Extracted: 10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 7.5 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	2100	U
108-95-2	Phenol	2100	U
111-44-4	bis(2-Chloroethyl)ether	2100	U
95-57-8	2-Chlorophenol	2100	U
95-48-7	2-Methylphenol	2100	U
108-60-1	2,2'-oxybis(1-Chloropropane)	2100	U
98-86-2	Acetophenone	2100	U
106-44-5	4-Methylphenol	2100	U
621-64-7	N-Nitroso-di-n-propylamine	2100	U
67-72-1	Hexachloroethane	2100	U
98-95-3	Nitrobenzene	2100	U
78-59-1	Isophorone	2100	U
88-75-5	2-Nitrophenol	2100	U
105-67-9	2,4-Dimethylphenol	2100	U
111-91-1	bis(2-Chloroethoxy)methane	2100	U
120-83-2	2,4-Dichlorophenol	2100	U
91-20-3	Naphthalene	360	J
106-47-8	4-Chloroaniline	2100	U
87-68-3	Hexachlorobutadiene	2100	U
105-60-2	Caprolactam	2100	U
59-50-7	4-Chloro-3-methylphenol	2100	U
91-57-6	2-Methylnaphthalene	270	J
77-47-4	Hexachlorocyclopentadiene	2100	U
88-06-2	2,4,6-Trichlorophenol	2100	U
95-95-4	2,4,5-Trichlorophenol	5300	U
92-52-4	1,1'-Biphenyl	2100	U
91-58-7	2-Chloronaphthalene	2100	U
88-74-4	2-Nitroaniline	5300	U
131-11-3	Dimethylphthalate	2100	U
606-20-2	2,6-Dinitrotoluene	2100	U
208-96-8	Acenaphthylene	470	J
99-09-2	3-Nitroaniline	5300	U
83-32-9	Acenaphthene	980	J

1D
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0362

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-9

Sample wt/vol: 30.3(g/mL) G Lab File ID: E0354-9DA66

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: 23 decanted: (Y/N) N Date Extracted: 10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 7.5 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	
51-28-5	2,4-Dinitrophenol	5300	U
100-02-7	4-Nitrophenol	5300	U
132-64-9	Dibenzofuran	590	J
121-14-2	2,4-Dinitrotoluene	2100	U
84-66-2	Diethylphthalate	2100	U
86-73-7	Fluorene	1100	J
7005-72-3	4-Chlorophenyl-phenylether	2100	U
100-01-6	4-Nitroaniline	5300	U
534-52-1	4,6-Dinitro-2-methylphenol	5300	U
86-30-6	N-nitrosodiphenylamine (1)	2100	U
101-55-3	4-Bromophenyl-phenylether	2100	U
118-74-1	Hexachlorobenzene	2100	U
1912-24-9	Atrazine	2100	U
87-86-5	Pentachlorophenol	5300	U
85-01-8	Phenanthrene	8100	
120-12-7	Anthracene	2300	
86-74-8	Carbazole	1300	J
84-74-2	Di-n-butylphthalate	2100	U
206-44-0	Fluoranthene	10000	
129-00-0	Pyrene	9100	
85-68-7	Butylbenzylphthalate	240	J
91-94-1	3,3'-Dichlorobenzidine	2100	U
56-55-3	Benzo(a)anthracene	4700	
218-01-9	Chrysene	5900	
117-81-7	bis(2-Ethylhexyl)phthalate	870	J
117-84-0	Di-n-octylphthalate	2100	U
205-99-2	Benzo(b)fluoranthene	7200	X
207-08-9	Benzo(k)fluoranthene	8100	X
50-32-8	Benzo(a)pyrene	4500	
193-39-5	Indeno(1,2,3-cd)pyrene	3200	
53-70-3	Dibenzo(a,h)anthracene	1100	J
191-24-2	Benzo(g,h,i)perylene	2800	

(1) - Cannot be separated from Diphenylamine

1G

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0362

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-9

Sample wt/vol: 30.3 (g/mL) G Lab File ID: E0354-9DA66

Level: (low/med) LOW Date Received: 10/25/00

% Moisture: 23 Decanted: (Y/N) N Date Extracted:10/27/00

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/30/00

Injection Volume: 2.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 7.5 Extraction: (Type) SONC

Number TICs found: 23

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 57-10-3	HEXADECANOIC ACID	13.91	1700	NJ
2.	UNKNOWN	16.31	1700	J
3. 239-35-0	BENZO[B]NAPHTHO[2,1-D]THIOPH	16.58	1500	NJ
4.	BENZANTHRACENONE	16.77	1600	J
5.	UNKNOWN	17.14	2200	J
6.	UNKNOWN	17.29	1400	J
7. 239-01-0	BENZO(A)CARBAZOLE	17.36	1700	NJ
8. 1705-84-6	TRIPHENYLENE, 2-METHYL-	17.57	2100	NJ
9. 929-77-1	DOCOSANOIC ACID, METHYL ESTE	17.87	3700	NJ
10. 1090-13-7	5,12-NAPHTHACENEDIONE	18.07	2700	NJ
11.	UNKNOWN	18.33	2600	J
12.	UNKNOWN	18.36	1300	J
13. 198-55-0	PERYLENE	18.65	2400	NJ
14. 638-66-4	OCTADECANAL	19.34	4600	NJ
15.	UNKNOWN	19.73	3800	J
16.	UNKNOWN	19.95	1400	J
17.	UNKNOWN	20.22	1500	J
18.	UNKNOWN	20.43	1700	J
19. 638-66-4	OCTADECANAL	20.66	3000	NJ
20.	UNKNOWN	21.31	2500	J
21.	UNKNOWN	21.80	2000	J
22. 1058-61-3	STIGMAST-4-EN-3-ONE	23.24	1900	NJ
23. 0-00-0	1,2:4,5-DIBENZPYRENE	24.37	1800	NJ
24.				
25.				
26.				
27.				
28.				
29.				
30.				

2F
SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

GC Column(1): CLPEST ID: 0.53(mm) GC Column(2): CLPEST2 ID:0.53 (mm)

	EPA SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLKNZ	92	85	75	75			0
02	E0356MS	94	138	381*	75			1
03	E0356MSD	100	156*	431*	88			2
04	E0354	113	144	331*	81			1
05	E0355	117	172*	150	72			1
06	E0356	150	394*	2250*	238*			3
07	E0357	63	88	200*	39			1
08	E0358	106	113	94	81			0
09	E0359	133	140	147	107			0
10	E0360	125	175*	150	88			1
11	E0361	96	91	109	91			0
12	E0362	94	88	1118*	706*			2
13	E0354DL	100	125	231D	113			0
14	E0361DL	74	70	104	70			0
15	E0356DL	100	369D	938D	188D			0
16	E0362DL	88	88	518D	588D			0
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

	QC LIMITS
TCX = Tetrachloro-m-xylene	(30-150)
DCB = Decachlorobiphenyl	(30-150)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix Spike - EPA Sample No.: E0356

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
gamma-BHC (Lindane)	20	0.0	13	65	46-127
Heptachlor	20	0.0	11	55	35-130
Aldrin	20	0.0	14	70	34-132
Dieldrin	40	8.1	28	50	31-134
Endrin	40	50	29	-53*	42-139
4,4'-DDT	40	0.0	35	88	23-134

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
gamma-BHC (Lindane)	20	12	60	8	50	46-127
Heptachlor	20	12	60	9	31	35-130
Aldrin	20	12	60	15	43	34-132
Dieldrin	40	27	47	6	38	31-134
Endrin	40	27	-58*	-9	45	42-139
4,4'-DDT	40	32	80	10	50	23-134

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 6 outside limits
Spike Recovery: 2 out of 12 outside limits

COMMENTS:

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLKNZ

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Lab Sample ID: WG6541-1 Lab File ID: _____

Matrix (soil/water) SOIL Extraction:(Type) SONC

Sulfur Cleanup (Y/N) N Date Extracted: 10/27/00

Date Analyzed (1): 10/30/00 Date Analyzed (2): 10/30/00

Time Analyzed (1): 1917 Time Analyzed (2): 1917

Instrument ID (1): TRACEGC82 Instrument ID (2): TRACEGC83

GC Column (1): CLPEST ID: 0.53(mm) GC Column (2): CLPEST2 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	E0356MS	WG6541-2	10/30/00	10/30/00
02	E0356MSD	WG6541-3	10/30/00	10/30/00
03	E0354	E0354-1	10/30/00	10/30/00
04	E0355	E0354-2	10/30/00	10/30/00
05	E0356	E0354-3	10/30/00	10/30/00
06	E0357	E0354-4	10/30/00	10/30/00
07	E0358	E0354-5	10/30/00	10/30/00
08	E0359	E0354-6	10/30/00	10/30/00
09	E0360	E0354-7	10/30/00	10/30/00
10	E0361	E0354-8	10/30/00	10/30/00
11	E0362	E0354-9	10/30/00	10/30/00
12	E0354DL	E0354-1	11/01/00	11/01/00
13	E0361DL	E0354-8	11/01/00	11/01/00
14	E0356DL	E0354-3	11/01/00	11/01/00
15	E0362DL	E0354-9	11/01/00	11/01/00
16				
17				
18				
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26				

COMMENTS: _____

1E
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0361

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-8

Sample wt/vol: 30.3(g/mL) G Lab File ID: _____

% Moisture: 42 Decanted: (Y/N) N Date Received: 10/25/00

Extraction: (Type) SONC Date Extracted: 10/27/00

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/30/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.9 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.9	U
319-85-7	beta-BHC	0.94	JP
319-86-8	delta-BHC	2.9	U
58-89-9	gamma-BHC (Lindane)	2.9	U
76-44-8	Heptachlor	2.9	U
309-00-2	Aldrin	2.9	U
1024-57-3	Heptachlor epoxide	7.3	PJ
959-98-8	Endosulfan I	29 ~~0.65~~	~~JP~~ 4
60-57-1	Dieldrin	5.6	U
72-55-9	4,4'-DDE	11	PJ
72-20-8	Endrin	5.6	U
33213-65-9	Endosulfan II	5.6	U
72-54-8	4,4'-DDD	3.6	JP
1031-07-8	Endosulfan sulfate	5.6	U
50-29-3	4,4'-DDT	9.3	PJ
72-43-5	Methoxychlor	29	J
3494-70-5	Endrin ketone	5.6	U
7421-93-4	Endrin aldehyde	5.6	U
5103-71-9	alpha-Chlordane	43	PJ
5103-74-2	gamma-Chlordane	24	
8001-35-2	Toxaphene	290	U
12674-11-2	Aroclor-1016	56	U
11104-28-2	Aroclor-1221	110	U
11141-16-5	Aroclor-1232	56	U
53469-21-9	Aroclor-1242	56	U
12672-29-6	Aroclor-1248	56	U
11097-69-1	Aroclor-1254	56	U
11096-82-5	Aroclor-1260	56	U

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0361DL

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-8

Sample wt/vol: 30.3(g/mL) G Lab File ID: _____

% Moisture: 42 Decanted: (Y/N) N Date Received: 10/25/00

Extraction: (Type) SONC Date Extracted: 10/27/00

Concentrated Extract Volume: 5000(uL) Date Analyzed: 11/01/00

Injection Volume: 1.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 7.9 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		
319-84-6	alpha-BHC	5.8	U
319-85-7	beta-BHC	5.8	U
319-86-8	delta-BHC	5.8	U
58-89-9	gamma-BHC (Lindane)	5.8	U
76-44-8	Heptachlor	5.8	U
309-00-2	Aldrin	5.8	U
1024-57-3	Heptachlor epoxide	6.2	DPJ
959-98-8	Endosulfan I	5.8	U
60-57-1	Dieldrin	11	U
72-55-9	4,4'-DDE	10	DJ
72-20-8	Endrin	11	U
33213-65-9	Endosulfan II	11	U
72-54-8	4,4'-DDD	11	U
1031-07-8	Endosulfan sulfate	11	U
50-29-3	4,4'-DDT	7.2	DJP
72-43-5	Methoxychlor	58	U
53494-70-5	Endrin ketone	11	U
7421-93-4	Endrin aldehyde	2.3	~~DJP~~ U
5103-71-9	alpha-Chlordane	37	DPJ
5103-74-2	gamma-Chlordane	20	D
8001-35-2	Toxaphene	580	U
12674-11-2	Aroclor-1016	110	U
11104-28-2	Aroclor-1221	230	U
11141-16-5	Aroclor-1232	110	U
53469-21-9	Aroclor-1242	110	U
12672-29-6	Aroclor-1248	110	U
11097-69-1	Aroclor-1254	110	U
11096-82-5	Aroclor-1260	110	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0362

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-9

Sample wt/vol: 30.0(g/mL) G Lab File ID: _____

% Moisture: 23 Decanted: (Y/N) N Date Received: 10/25/00

Extraction: (Type) SONC Date Extracted: 10/27/00

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/30/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.5 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	3.4	PJ
319-85-7	beta-BHC	4.0	PJ
319-86-8	delta-BHC	4.2	PJ
58-89-9	gamma-BHC (Lindane)	2.2	U
76-44-8	Heptachlor	2.2	U
309-00-2	Aldrin	2.2	U
1024-57-3	Heptachlor epoxide	2.4	PJ
959-98-8	Endosulfan I	0.59	JP
60-57-1	Dieldrin	5.2	PJ
72-55-9	4,4'-DDE	11	PJ
72-20-8	Endrin	4.3	U
33213-65-9	Endosulfan II	4.3	U
72-54-8	4,4'-DDD	7.2	PJ
1031-07-8	Endosulfan sulfate	9.0	PJ
50-29-3	4,4'-DDT	28	PJ
72-43-5	Methoxychlor	53	PJ
3494-70-5	Endrin ketone	14	PJ
7421-93-4	Endrin aldehyde	6.4	
5103-71-9	alpha-Chlordane	3.9	PJ
5103-74-2	gamma-Chlordane	5.2	PJ
8001-35-2	Toxaphene	220	U
12674-11-2	Aroclor-1016	43	U
11104-28-2	Aroclor-1221	87	U
11141-16-5	Aroclor-1232	43	U
53469-21-9	Aroclor-1242	43	U
12672-29-6	Aroclor-1248	43	U
11097-69-1	Aroclor-1254	43	U
11096-82-5	Aroclor-1260	43	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0362DL

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-9

Sample wt/vol: 30.0(g/mL) G Lab File ID: _____

% Moisture: 23 Decanted: (Y/N) N Date Received: 10/25/00

Extraction: (Type) SONC Date Extracted: 10/27/00

Concentrated Extract Volume: 5000(uL) Date Analyzed: 11/01/00

Injection Volume: 1.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.5 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND		
319-84-6	alpha-BHC	22	U
319-85-7	beta-BHC	22	U
319-86-8	delta-BHC	22 ~~4.7~~	~~DJP~~ U
58-89-9	gamma-BHC (Lindane)	22	U
76-44-8	Heptachlor	22	U
309-00-2	Aldrin	22	U
1024-57-3	Heptachlor epoxide	22	U
959-98-8	Endosulfan I	22	U
60-57-1	Dieldrin	43 ~~4.9~~	~~DJP~~ U
72-55-9	4,4'-DDE	15	DJ
72-20-8	Endrin	43	U
33213-65-9	Endosulfan II	43	U
72-54-8	4,4'-DDD	43	U
1031-07-8	Endosulfan sulfate	43 2.8	~~DJP~~ U
50-29-3	4,4'-DDT	18	DJP
72-43-5	Methoxychlor	220	U
53494-70-5	Endrin ketone	15	DJP
7421-93-4	Endrin aldehyde	43	U
5103-71-9	alpha-Chlordane	22	U
5103-74-2	gamma-Chlordane	6.0	DJP
8001-35-2	Toxaphene	2200	U
12674-11-2	Aroclor-1016	430	U
11104-28-2	Aroclor-1221	870	U
11141-16-5	Aroclor-1232	430	U
53469-21-9	Aroclor-1242	430	U
12672-29-6	Aroclor-1248	430	U
11097-69-1	Aroclor-1254	430	U
11096-82-5	Aroclor-1260	430	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0356MSD

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: WG6541-3

Sample wt/vol: 30.3(g/mL) G Lab File ID: _____

% Moisture: 17 Decanted: (Y/N) N Date Received: 10/25/00

Extraction: (Type) SONC Date Extracted: 10/27/00

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/30/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	6.2	PJ
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	12	
76-44-8	Heptachlor	12	PJ
309-00-2	Aldrin	12	PJ
1024-57-3	Heptachlor epoxide	1.7	JP
959-98-8	Endosulfan I	2.0	U
60-57-1	Dieldrin	27	
72-55-9	4,4'-DDE	3.8	J
72-20-8	Endrin	27	
33213-65-9	Endosulfan II	3.9	U
72-54-8	4,4'-DDD	2.2	JP
1031-07-8	Endosulfan sulfate	3.5	JP
50-29-3	4,4'-DDT	32	PJ
72-43-5	Methoxychlor	20	U
3494-70-5	Endrin ketone	3.6	JP
7421-93-4	Endrin aldehyde	1.1	JP
5103-71-9	alpha-Chlordane	0.85	JP
5103-74-2	gamma-Chlordane	1.2	JP
8001-35-2	Toxaphene	200	U
12674-11-2	Aroclor-1016	39	U
11104-28-2	Aroclor-1221	80	U
11141-16-5	Aroclor-1232	39	U
53469-21-9	Aroclor-1242	39	U
12672-29-6	Aroclor-1248	39	U
11097-69-1	Aroclor-1254	39	U
11096-82-5	Aroclor-1260	39	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLKNZ

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: WG6541-1

Sample wt/vol: 30.0(g/mL) G Lab File ID: _____

% Moisture: 0 Decanted: (Y/N) N Date Received: _____

Extraction: (Type) SONC Date Extracted: 10/27/00

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/30/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: ____ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	
319-84-6	alpha-BHC	1.7	U
319-85-7	beta-BHC	1.7	U
319-86-8	delta-BHC	1.7	U
58-89-9	gamma-BHC (Lindane)	1.7	U
76-44-8	Heptachlor	1.7	U
309-00-2	Aldrin	1.7	U
1024-57-3	Heptachlor epoxide	1.7	U
959-98-8	Endosulfan I	1.7	U
60-57-1	Dieldrin	3.3	U
72-55-9	4,4'-DDE	3.3	U
72-20-8	Endrin	3.3	U
33213-65-9	Endosulfan II	3.3	U
72-54-8	4,4'-DDD	3.3	U
1031-07-8	Endosulfan sulfate	3.3	U
50-29-3	4,4'-DDT	3.3	U
72-43-5	Methoxychlor	17	U
53494-70-5	Endrin ketone	3.3	U
7421-93-4	Endrin aldehyde	3.3	U
5103-71-9	alpha-Chlordane	1.7	U
5103-74-2	gamma-Chlordane	1.7	U
8001-35-2	Toxaphene	170	U
12674-11-2	Aroclor-1016	33	U
11104-28-2	Aroclor-1221	67	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	33	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0356MS

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: WG6541-2

Sample wt/vol: 30.3(g/mL) G Lab File ID: _____

% Moisture: 17 Decanted: (Y/N) N Date Received: 10/25/00

Extraction: (Type) SONC Date Extracted: 10/27/00

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/30/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	12	PJ
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	13	
76-44-8	Heptachlor	11	PJ
309-00-2	Aldrin	14	PJ
1024-57-3	Heptachlor epoxide	1.1	JP
959-98-8	Endosulfan I	2.0	U
60-57-1	Dieldrin	28	
72-55-9	4,4'-DDE	4.7	
72-20-8	Endrin	29	
33213-65-9	Endosulfan II	3.9	U
72-54-8	4,4'-DDD	5.7	PJ
1031-07-8	Endosulfan sulfate	2.9	JP
50-29-3	4,4'-DDT	35	PJ
72-43-5	Methoxychlor	20	U
3494-70-5	Endrin ketone	13	
7421-93-4	Endrin aldehyde	3.9	U
5103-71-9	alpha-Chlordane	0.76	JP
5103-74-2	gamma-Chlordane	0.87	JP
8001-35-2	Toxaphene	200	U
12674-11-2	Aroclor-1016	39	U
11104-28-2	Aroclor-1221	80	U
11141-16-5	Aroclor-1232	39	U
53469-21-9	Aroclor-1242	39	U
12672-29-6	Aroclor-1248	39	U
11097-69-1	Aroclor-1254	39	U
11096-82-5	Aroclor-1260	39	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0354

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-1

Sample wt/vol: 30.0(g/mL) G Lab File ID: _____

% Moisture: 19 Decanted: (Y/N) N Date Received: 10/25/00

Extraction: (Type) SONC Date Extracted: 10/27/00

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/30/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.6 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		
319-84-6	alpha-BHC	2.1	U
319-85-7	beta-BHC	8.1	PJ
319-86-8	delta-BHC	0.86	JP
58-89-9	gamma-BHC (Lindane)	2.1	U
76-44-8	Heptachlor	2.1	U
309-00-2	Aldrin	2.1	U
1024-57-3	Heptachlor epoxide	0.70	JP
959-98-8	Endosulfan I	2.1	U
60-57-1	Dieldrin	2.2	JP
72-55-9	4,4'-DDE	3.7	JP
72-20-8	Endrin	11	PJ
33213-65-9	Endosulfan II	4.1	U
72-54-8	4,4'-DDD	2.2	JP
1031-07-8	Endosulfan sulfate	9.0	PJ
50-29-3	4,4'-DDT	4.1	U
72-43-5	Methoxychlor	21	U
53494-70-5	Endrin ketone	7.3	PJ
7421-93-4	Endrin aldehyde	2.3	JP
5103-71-9	alpha-Chlordane	2.1	U
5103-74-2	gamma-Chlordane	1.1	JP
8001-35-2	Toxaphene	210	U
12674-11-2	Aroclor-1016	41	U
11104-28-2	Aroclor-1221	83	U
11141-16-5	Aroclor-1232	41	U
53469-21-9	Aroclor-1242	41	U
12672-29-6	Aroclor-1248	41	U
11097-69-1	Aroclor-1254	41	U
11096-82-5	Aroclor-1260	41	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0357

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-4

Sample wt/vol: 30.3(g/mL) G Lab File ID: _____

% Moisture: 14 Decanted: (Y/N) N Date Received: 10/25/00

Extraction: (Type) SONC Date Extracted: 10/27/00

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/30/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.9 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	3.9	PJ
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
76-44-8	Heptachlor	2.0	U
309-00-2	Aldrin	2.0	U
1024-57-3	Heptachlor epoxide	2.0	U
959-98-8	Endosulfan I	2.0	U
60-57-1	Dieldrin	3.8	U
72-55-9	4,4'-DDE	1.0	JP
72-20-8	Endrin	3.8	U
33213-65-9	Endosulfan II	3.8	U
72-54-8	4,4'-DDD	3.8	U
1031-07-8	Endosulfan sulfate	2.3	J
50-29-3	4,4'-DDT	3.8	U
72-43-5	Methoxychlor	20	U
3494-70-5	Endrin ketone	2.5	J
7421-93-4	Endrin aldehyde	1.2	JP
5103-71-9	alpha-Chlordane	2.0	U
5103-74-2	gamma-Chlordane	1.8	JP
8001-35-2	Toxaphene	200	U
12674-11-2	Aroclor-1016	38	U
11104-28-2	Aroclor-1221	77	U
11141-16-5	Aroclor-1232	38	U
53469-21-9	Aroclor-1242	38	U
12672-29-6	Aroclor-1248	38	U
11097-69-1	Aroclor-1254	38	U
11096-82-5	Aroclor-1260	38	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0358

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-5

Sample wt/vol: 30.3(g/mL) G Lab File ID: _____

% Moisture: 16 Decanted: (Y/N) N Date Received: 10/25/00

Extraction: (Type) SONC Date Extracted: 10/27/00

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/30/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.9 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	2.9	PJ
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
76-44-8	Heptachlor	2.0	U
309-00-2	Aldrin	2.0	U
1024-57-3	Heptachlor epoxide	2.0	U
959-98-8	Endosulfan I	2.0	U
60-57-1	Dieldrin	3.9	U
72-55-9	4,4'-DDE	1.5	J
72-20-8	Endrin	3.9	U
33213-65-9	Endosulfan II	3.9	U
72-54-8	4,4'-DDD	3.9	U
1031-07-8	Endosulfan sulfate	3.9	U
50-29-3	4,4'-DDT	3.9	U
72-43-5	Methoxychlor	20	U
53494-70-5	Endrin ketone	3.9	U
7421-93-4	Endrin aldehyde	3.9	U
5103-71-9	alpha-Chlordane	2.0	U
5103-74-2	gamma-Chlordane	0.52	JP
8001-35-2	Toxaphene	200	U
12674-11-2	Aroclor-1016	39	U
11104-28-2	Aroclor-1221	79	U
11141-16-5	Aroclor-1232	39	U
53469-21-9	Aroclor-1242	39	U
12672-29-6	Aroclor-1248	39	U
11097-69-1	Aroclor-1254	39	U
11096-82-5	Aroclor-1260	39	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0359

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-6

Sample wt/vol: 30.0(g/mL) G Lab File ID: _____

% Moisture: 12 Decanted: (Y/N) N Date Received: 10/25/00

Extraction: (Type) SONC Date Extracted: 10/27/00

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/30/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.5 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.9	U
319-85-7	beta-BHC	5.3	PJ
319-86-8	delta-BHC	1.9	U
58-89-9	gamma-BHC (Lindane)	1.9	U
76-44-8	Heptachlor	1.9	U
309-00-2	Aldrin	1.9	U
1024-57-3	Heptachlor epoxide	1.9	U
959-98-8	Endosulfan I	1.9	U
60-57-1	Dieldrin	1.6	JP
72-55-9	4,4'-DDE	8.6	
72-20-8	Endrin	3.8	U
33213-65-9	Endosulfan II	3.8	U
72-54-8	4,4'-DDD	1.7	JP
1031-07-8	Endosulfan sulfate	2.1	J
50-29-3	4,4'-DDT	3.8	U
72-43-5	Methoxychlor	19	U
53494-70-5	Endrin ketone	3.7	JP
7421-93-4	Endrin aldehyde	3.8	U
5103-71-9	alpha-Chlordane	1.9	U
5103-74-2	gamma-Chlordane	0.87	JP
8001-35-2	Toxaphene	190	U
12674-11-2	Aroclor-1016	38	U
11104-28-2	Aroclor-1221	76	U
11141-16-5	Aroclor-1232	38	U
53469-21-9	Aroclor-1242	38	U
12672-29-6	Aroclor-1248	38	U
11097-69-1	Aroclor-1254	38	U
11096-82-5	Aroclor-1260	38	U

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0360

Lab Name: COMPUCHEM Contract: 68W99071

Lab Code: LIBRTY Case No.: 28655 SAS No.: SDG No.: E0354

Matrix: (soil/water) SOIL Lab Sample ID: E0354-7

Sample wt/vol: 30.0(g/mL) G Lab File ID: _____

% Moisture: 14 Decanted: (Y/N) N Date Received: 10/25/00

Extraction: (Type) SONC Date Extracted: 10/27/00

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/30/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.7 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	1.3	JP
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
76-44-8	Heptachlor	2.0	U
309-00-2	Aldrin	2.0	U
1024-57-3	Heptachlor epoxide	2.0	U
959-98-8	Endosulfan I	2.0	U
60-57-1	Dieldrin	3.8	U
72-55-9	4,4'-DDE	1.2	JP
72-20-8	Endrin	3.8	U
33213-65-9	Endosulfan II	3.8	U
72-54-8	4,4'-DDD	3.8	U
1031-07-8	Endosulfan sulfate	1.4	JP
50-29-3	4,4'-DDT	3.8	U
72-43-5	Methoxychlor	20	U
53494-70-5	Endrin ketone	3.8	U
7421-93-4	Endrin aldehyde	3.8	U
5103-71-9	alpha-Chlordane	0.85	J
5103-74-2	gamma-Chlordane	0.54	JP
8001-35-2	Toxaphene	200	U
12674-11-2	Aroclor-1016	38	U
11104-28-2	Aroclor-1221	78	U
11141-16-5	Aroclor-1232	38	U
53469-21-9	Aroclor-1242	38	U
12672-29-6	Aroclor-1248	38	U
11097-69-1	Aroclor-1254	38	U
11096-82-5	Aroclor-1260	38	U