939777

SDMS US EPA REGION V -1

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SAUGET AREA 2
ILD000605790

Reference No. 5

150742

Volume 2
Sauget Area 2
Data Tables/Maps

ARCS Contract No. 68-W8-0086
Work Assignment No. 47-5N60

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Prepared for:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 5
Office of Superfund
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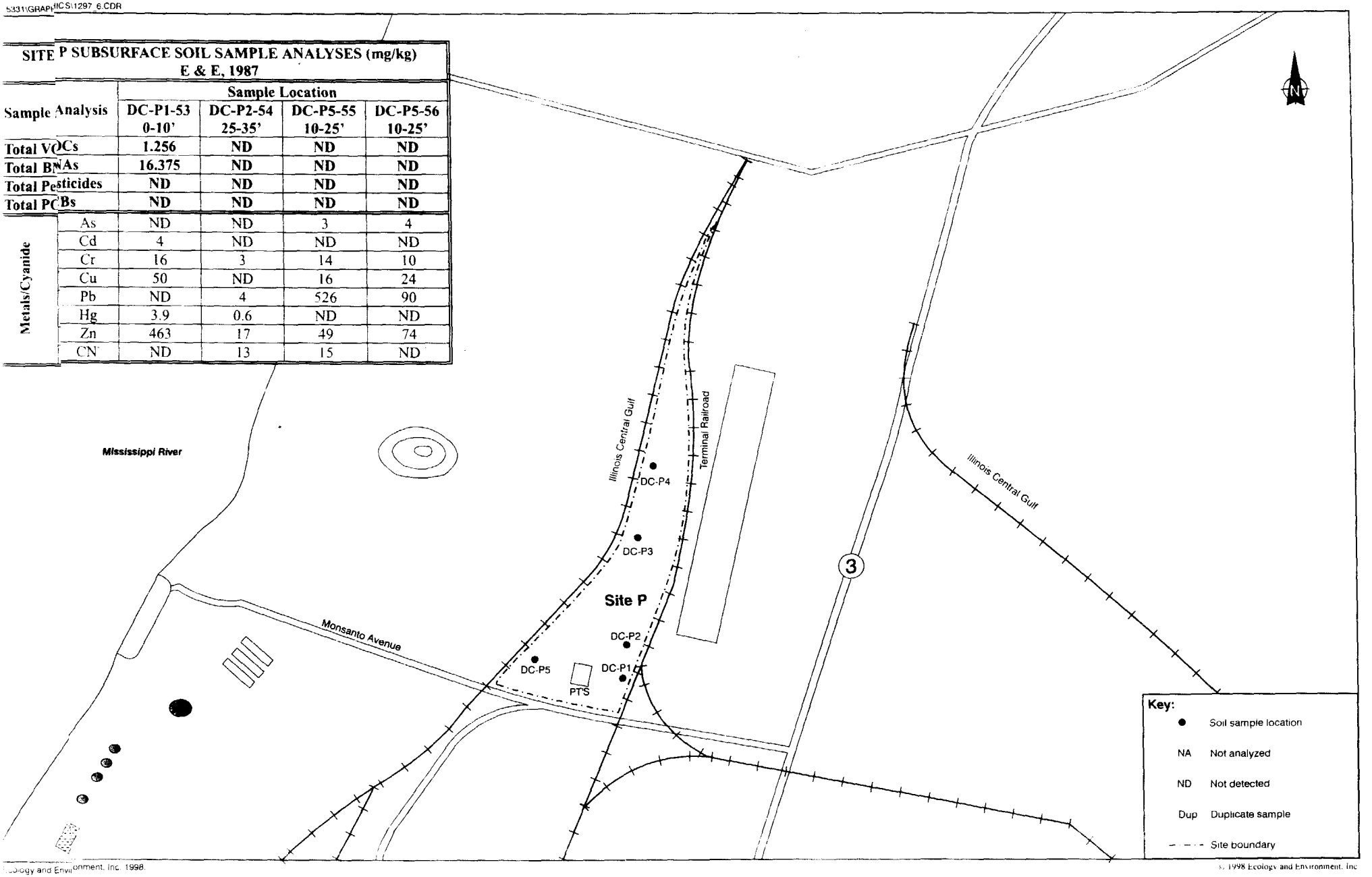
Site P

5331\GRAPHICS\1297_6.CDR

SITE P SUBSURFACE SOIL SAMPLE ANALYSES (mg/kg)
E & E, 1987

Sample	Analysis	Sample Location			
		DC-P1-53 0-10'	DC-P2-54 25-35'	DC-P5-55 10-25'	DC-P5-56 10-25'
Total VOCs		1.256	ND	ND	ND
Total BNAs		16.375	ND	ND	ND
Total Pesticides		ND	ND	ND	ND
Total PCBs		ND	ND	ND	ND
Metals/Cyanide	As	ND	ND	3	4
	Cd	4	ND	ND	ND
	Cr	16	3	14	10
	Cu	50	ND	16	24
	Pb	ND	4	526	90
	Hg	3.9	0.6	ND	ND
	Zn	463	17	49	74
	CN^-	ND	13	15	ND



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APPROXIMATE SCALE
0 ¼ ½ Mile

SAUGET AREA 2
SITE P
SAMPLING LOCATIONS/DATA

SITE NARRATIVE

SITE P

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SITE NARRATIVE - SAUGET AREA 2 / Site P

Sample Locations	Sampling Entity	Date Sampled	Data Source
DC-P1 thru DC-P5	E & E	2/87	"Expanded Site Investigation Dead Creek Project Sites" prepared for IEPA by Ecology and Environment, Inc., May 1988

Nature and Extent of Contamination:

VOCs were detected at a concentration of 1.3 mg/kg in 1 of the 4 subsurface soil samplescollected at Site P. BNAs were detected at 16.4 mg/kg in 1 of the 4 samples, and pesticides and PCBs were not detected in any of the four samples collected. Metals, particularly Pb and Hg were elevated in a few of the samples collected. The organic contaminants were all detected in a the sample collected from boring P-1 at the south end of the site from a depth of 0 to 10 feet BGS.

The extent of contamination is not very well defined for Site P given that onl four subsurface soil samples were collected from three boring locations across the site. Although, the contaminantion detected does appear to be present at low levels.

Containment and Integrity (if known):

There is no known containment for Site P other than the landfill cover materials which may be in place. The surface of the site is covered primarily with cinders and slag, and erosion is evident along the site perimeter. A business and parking lot is located on the southern portion of Site P and access to this site is unrestricted.

Other Comments: See the attached "Site Description" for more site details.

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SITE DESCRIPTION - Sauget Area 2/Site P

Site P is an inactive, IEPA-permitted landfill encompassing approximately 20 acres in the northern portion of the Sauget Area 2 sites. The site is bordered on the west by the Illinois Central Gulf Railroad, on the south by Monsanto Ave., and on the east by the Terminal Railroad. The two railroads converge to form the north end of the site. The site has steep slopes along the sides of the landfill, and access to the site is unrestricted. The following is a chronology of events for site P as discovered in the file information search:

1972

Sauget and Company entered into a lease agreement with Union Electric Company of St. Louis to operate a waste disposal facility.

January 1973

IEPA issues a permit to Sauget and Company to operate a landfill at Site P. The permitonly allowed non-chemical waste from Monsanto.

1974

Sauget and Company applied for and were granted a supplement permit for Site P. Thesupplement permit allowed the landfill to accept general waste and diatomaceous earth filter cake from Edwin Cooper (AKA the Ethyl Corporation). Routine IEPA inspections began at the facility.

October 1975

An IEPA inspector observed a small amount of yellowish tar-like liquid in an area next to drums labeled "Monsanto ACL-85, Chlorine Composition". Both Monsanto and Sauget and Company were notified of the violation and the issue wasthen "dropped".

December 1977

An IEPA inspection indicated the disposal of 25 barrels of phosphorus pentasulfide. Monsanto was required to remove this waste from the site.

1978-1979

IEPA inspections revealed unpermitted disposal of Monsanto ACL filter residues and packaging.

December 1981

IEPA issued a supplemental permit to Sauget and Company after a water line was discovered in the middle of the southern portion of the site.

February 1987

Four subsurface soil samples were taken at five boring locations onsite.

(Note: All information above was excerpted from a document with the heading of "Background" which was taken off microfiche from the IEPA file records)

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Site P Data

9000

SAUGET Analytical Data
Site P

SUBSURFACE SOIL SAMPLES
Volatile Organic Compounds (µg/kg)
Collected by Ecology & Environment, Inc. (2/87)

Sample Number	DC-P1-53	DC-P2-54	DC-P5-55	DC-P5-56	Maximum Concentration Detected
Sample Depth (ft)	0-10	25-35	10-25	10-25	
Date Collected	2/11/87	2/11/87	2/12/87	2/12/87	
VOC					
Chloromethane	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND
Methylene chloride	18 B	5 BJ	2 BJ	5 BJ	18 B
Acetone	1025 BE	1036 BE	333 BE	413 BE	1036 BE
Carbon Disulfide	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND
Chloroform	13	ND	ND	ND	13
1,2-Dichloroethane	ND	ND	ND	ND	ND
2-Butanone (MEK)	188 B	76 B	22 B	26 B	188 B
1,1,1-Trichloroethane	ND	ND	ND	ND	ND
Carbon Tetrachloride	ND	ND	ND	ND	ND
Vinyl Acetate	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND
Benzene	49	ND	ND	ND	49
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND
2-Chloroethyl Vinyl Ether	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	49	29 B	ND	ND	49
2-Hexanone	38	2 BJ	ND	ND	38
Tetrachloroethene	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND
Toluene	413	ND	ND	ND	413
Chlorobenzene	138	ND	ND	ND	138
Ethylbenzene	119	ND	ND	ND	119
Styrene	ND	ND	ND	ND	ND
Total Xylenes	450	ND	ND	ND	450

µg/kg - Micrograms per kilogram.
B - Compound detected in blank sample.
E - Estimated value. Concentration detected exceeds the calibrated range.
J - Estimated value.
ND - Not detected.

Filename: SBSITEP.XLS - Table: Soil VOCs

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SAUGET Analytical Data
Site P

SUBSURFACE SOIL SAMPLES
Base Neutrals/Acids (μg/kg)
Collected by Ecology & Environment, Inc. (2/87)

Sample Number	DC-P1-53	DC-P2-54	DC-P5-55	DC-P5-56	Maximum
Sample Depth (ft)	0-10	25-35	10-25	10-25	Concentration
Date Collected	02/11/87	02/11/87	02/12/87	02/12/87	Detected
BNAs					
Phenol	3875 J	ND	ND	ND	3875 J
bis(2-Chloroethyl)ether	ND	ND	ND	ND	ND
2-Chlorophenol	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	8875 J	ND	ND	ND	8875 J
Benzyl Alcohol	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	3625 J	ND	ND	ND	3625 J
2-Methylphenol	ND	ND	ND	ND	ND
bis(2-Chloroisopropyl)ether	ND	ND	ND	ND	ND
4-Methylphenol	ND	ND	ND	ND	ND
N-Nitroso-n-Dipropylamine	ND	ND	ND	ND	ND
Hexachloroethane	ND	ND	ND	ND	ND
Nitrobenzene	ND	ND	ND	ND	ND
Isophorone	ND	ND	ND	ND	ND
2-Nitrophenol	ND	ND	ND	ND	ND
2,4-Dichlorophenol	ND	ND	ND	ND	ND
Benzoic Acid	ND	ND	ND	ND	ND
bis-(2-Chloroethoxy)methane	ND	ND	ND	ND	ND
2,4-Dichlorophenol	ND	ND	ND	ND	ND
1,2,4-Trichlorophenol	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND
4-Chloroaniline	ND	ND	ND	ND	ND
Hexachlorobutadiene	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	ND	ND	ND	ND	ND
2-Methylnaphathalene	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	ND	ND	ND	ND	ND
2-Chloronaphthalene	ND	ND	ND	ND	ND
2-Nitroaniline	ND	ND	ND	ND	ND
Dimethyl Phthalate	ND	ND	ND	ND	ND
Acenaphthylene	ND	ND	ND	ND	ND
3-Nitroaniline	ND	ND	ND	ND	ND
Acenaphthene	ND	ND	ND	ND	ND

μg/kg - Micrograms per kilogram.
J - Estimated value.
ND - Not detected.

0003

SAUGET Analytical Data
Site P

SUBSURFACE SOIL SAMPLES
Base Neutrals/Acids (µg/kg)
Collected by Ecology & Environment, Inc. (2/87)

Sample Number	DC-P1-53	DC-P2-54	DC-P5-55	DC-P5-56	Maximum
Sample Depth (ft)	0-10	25-35	10-25	10-25	Concentration
Date Collected	02/11/87	02/11/87	02/12/87	02/12/87	Detected
BNAs					
2,4-Dinitrophenol	ND	ND	ND	ND	ND
4-Nitrophenol	ND	ND	ND	ND	ND
Dibenzofuran	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	ND	ND	ND	ND	ND
Diethylphthalate	ND	ND	ND	ND	ND
4-Chlorophenyl-Phenylether	ND	ND	ND	ND	ND
Fluorene	ND	ND	ND	ND	ND
4-Nitroaniline	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	ND	ND	ND	ND	ND
4-Bromophenyl-phenylether	ND	ND	ND	ND	ND
Hexachlorobenzene	ND	ND	ND	ND	ND
Pentachlorophenol	ND	ND	ND	ND	ND
Phenanthrene	ND	ND	ND	ND	ND
Anthracene	ND	ND	ND	ND	ND
Di-n-butly phthalate	16250 J	155 J	63 J	325 J	16250 J
Fluoranthene	ND	ND	ND	ND	ND
Pyrene	ND	ND	ND	ND	ND
Butyl Benzyl phthalate	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	ND	ND	ND	ND	ND
Benzo (a)anthracene	ND	ND	ND	ND	ND
bis(2-ethylhexyl)phthalate	ND	ND	ND	225 J	225 J
Chrysene	ND	ND	ND	ND	ND
Di-n-octyl phthalate	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	ND	ND	ND	ND	ND
Benzo (a)pyrene	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	ND	ND	ND	ND	ND

µg/kg - Micrograms per kilogram
J - Estimated value
ND - Not detected.

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SAUGET Analytical Data
Site P

SUBSURFACE SOIL SAMPLES
Pesticides/PCBs (μg/kg)
Collected by Ecology & Environment, Inc. (2/87)

0010

Sample Number	DC-P1-53	DC-P2-54	DC-P5-55	DC-P5-56	Maximum
Sample Depth (ft)	0-10	25-35	10-25	10-25	Concentration
Date Collected	2/11/87	2/11/87	2/12/87	2/12/87	Detected
Pesticides/PCBs					
Alpha-BHC	ND	ND	ND	ND	ND
Beta-BHC	ND	ND	ND	ND	ND
Delta-BHC	ND	ND	ND	ND	ND
Gamma-BHC (Lindane)	ND	ND	ND	ND	ND
Heptachlor	ND	ND	ND	ND	ND
Aldrin	ND	ND	ND	ND	ND
Heptachlor Epoxide	ND	ND	ND	ND	ND
Endosulfan I	ND	ND	ND	ND	ND
Dieldrin	ND	ND	ND	ND	ND
4,4'-DDE	ND	ND	ND	ND	ND
Endrin	ND	ND	ND	ND	ND
Endosulfan II	ND	ND	ND	ND	ND
4,4'-DDD	ND	ND	ND	ND	ND
Endosulfan sulfate	ND	ND	ND	ND	ND
4,4'-DDT	ND	ND	ND	ND	ND
Methoxychlor	ND	ND	ND	ND	ND
Endrin Ketone	ND	ND	ND	ND	ND
Chlordane	ND	ND	ND	ND	ND
Toxaphene	ND	ND	ND	ND	ND
Aroclor-1016	ND	ND	ND	ND	ND
Aroclor-1221	ND	ND	ND	ND	ND
Aroclor-1232	ND	ND	ND	ND	ND
Aroclor-1242	ND	ND	ND	ND	ND
Aroclor-1248	ND	ND	ND	ND	ND
Aroclor-1254	ND	ND	ND	ND	ND
Aroclor-1260	ND	ND	ND	ND	ND

μg/kg - Micrograms per kilogram
ND - Not detected

0011

SAUGET Analytical Data
Site P

SUBSURFACE SOIL SAMPLES
Total Metals (mg/kg)
Collected by Ecology & Environment, Inc. (2/87)

Sample Number	DC-P1-53	DC-P2-54	DC-P5-55	DC-P5-56	Maximum
Sample Depth (ft)	0-10	25-35	10-25	10-25	Concentration
Date Collected	02/11/87	02/11/87	02/12/87	02/12/87	Detected
Total Metals					
Aluminum	5013	1274	6136	5538	6136
Antimony	ND	ND	ND	ND	ND
Arsenic	ND	ND	3 R	4 R	4 R
Barium	126	ND	81	119	126
Beryllium	ND	ND	ND	ND	ND
Boron	ND	ND	ND	ND	ND
Cadmium	4	ND	ND	ND	4
Chromium	16	3	14	10	16
Cobalt	ND	ND	ND	ND	ND
Copper	50	ND	16	24	50
Iron	12750	4131	15309	13000	15309
Lead	ND	4 *	526 *	90 *	526 *
Manganese	201 *	93 *	623 *	710 *	710 *
Mercury	3.9	0.6	ND	ND	3.9
Nickel	25 *	ND	15 *	23 *	25 *
Selenium	ND	ND	ND	ND	ND
Silver	ND	ND	ND	ND	ND
Thallium	ND	ND	ND	ND	ND
Tin	ND	ND	ND	ND	ND
Vanadium	19	ND	22	16	22
Zinc	463 *	17 *	49 *	74 *	463 *
Cyanide	ND	13	15	ND	15

mg/kg - Milligrams per kilogram
ND - Not detected
R - Spike sample recovery not within control limits.
* - Duplicate analysis not within control limits.

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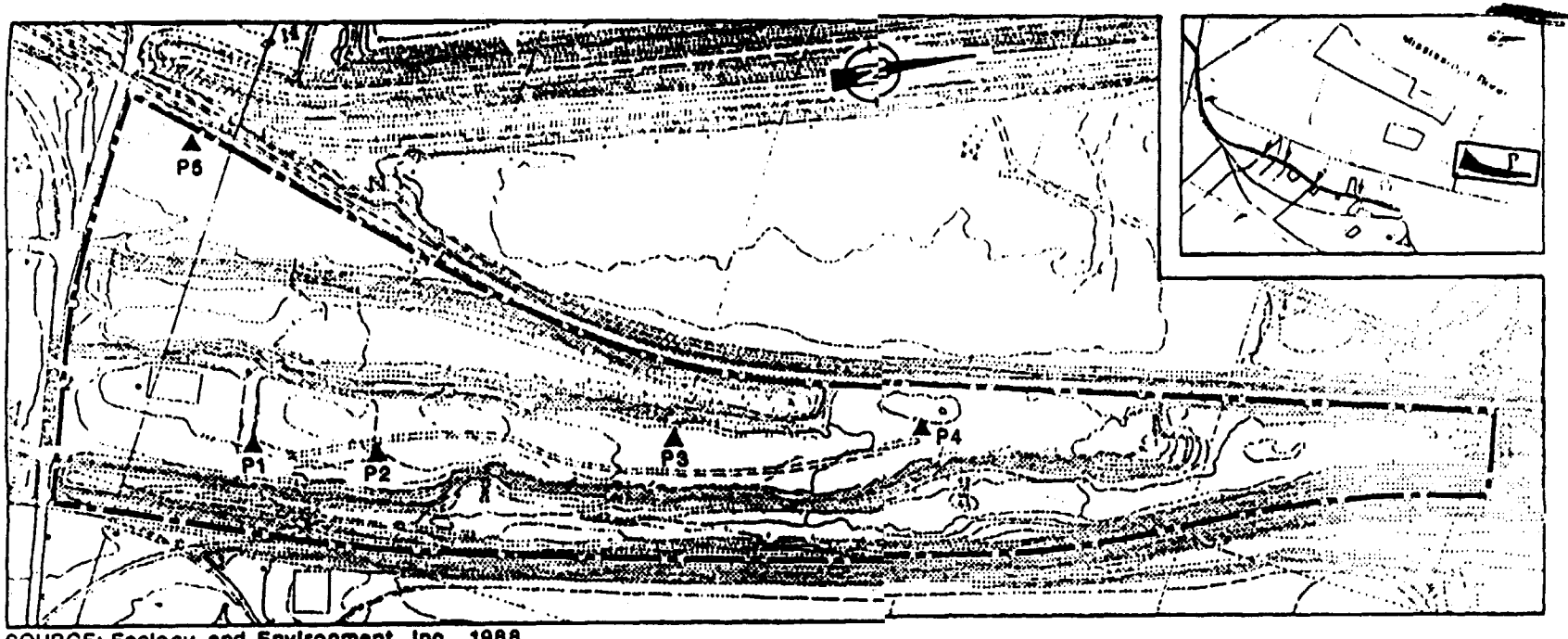

SOURCE: Ecology and Environment, Inc., 1988.

SCALE

0 200 400 600 800 1000 FEET

FIGURE 3-12 BORING LOCATIONS AT SITE P

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Site O, Q, R and S

0012

SDMS US EPA REGION V
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COMMENT(S)			
REFERENCE # 5			

SURFACE SOIL SAMPLY ANALYSES (mg/kg)
E & E, 1987

Sample Location							
04-62 10'	DC-05-63 8.5-20'	DC-05-64 8.5-20'	DC-06-66 15-25'	DC-09-72 0-10'	DC-09-73 15-20'	DC-010-74 5-10'	DC-010-75 10-15'
.872	0.355	0.49	ND	25.524	0.309	103.698	2.705
6.646	0.963	1.951	ND	652.315	10.099	654.532	16.317
ND	ND	ND	ND	ND	ND	ND	ND
1.795	32.317	34.268	ND	634.146	24.691	461.539	11.364
ND	3	3	2	6	3	7	3
31	ND	ND	ND	4	ND	11	ND
18	7	6	5	13	6	22	4
05	7	ND	ND	59	ND	341	15
47	7	9	4	18	5	71	6
5.3	ND	ND	ND	1.7	0.3	1.9	ND
398	37	35	17	277	30	688	43
ND	ND	ND	ND	ND	ND	ND	ND

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SAUGET AREA 2
SITE O, Q, R, AND S
SAMPLING LOCATIONS/DATA

NON-RESPONSIVE

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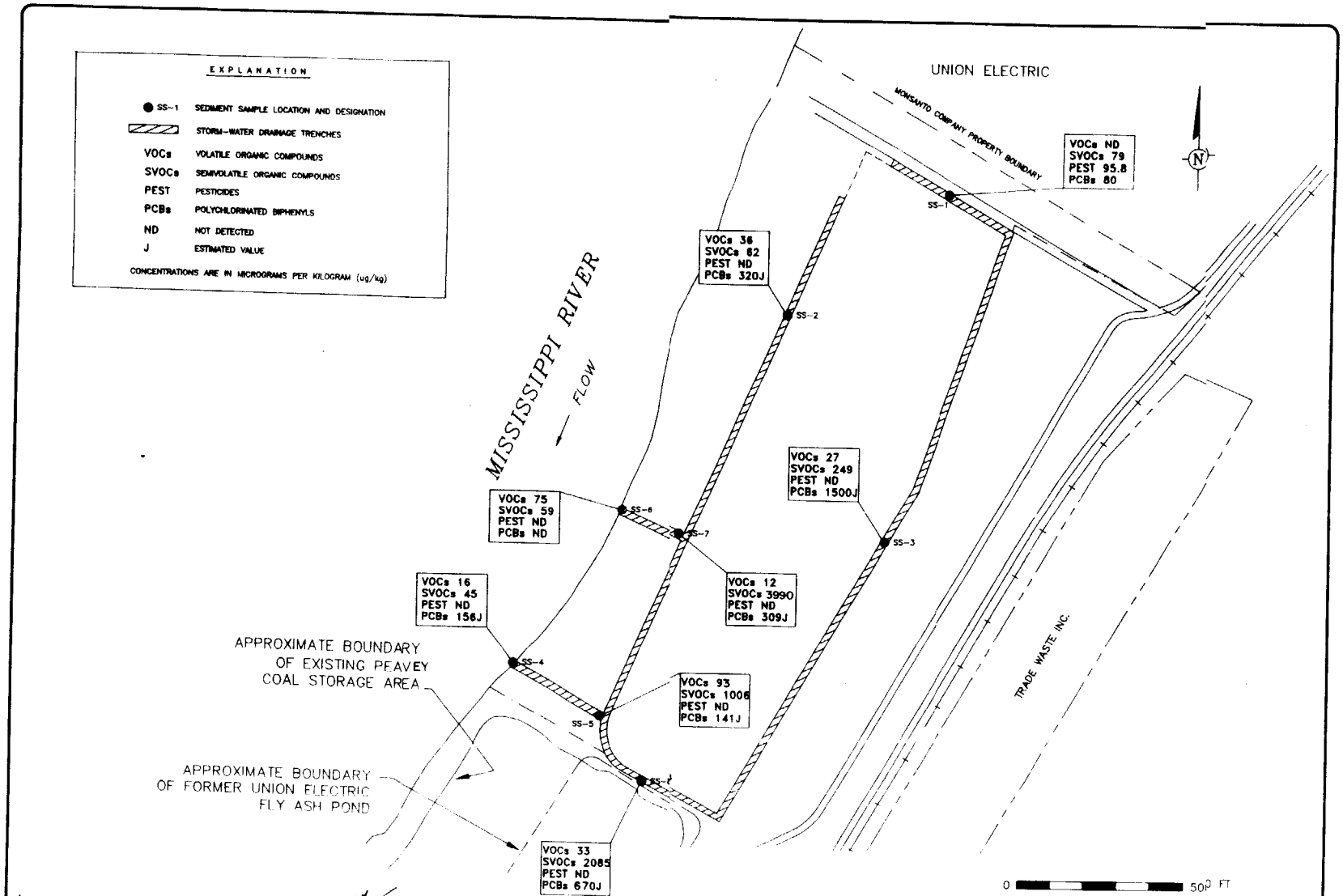
APPROVED BY:	L.M.	DATE:	

WELLS, BORINGS, AND SAMPLING LOCATIONS FROM PRE-RI/FS INVESTIGATIONS AND LINES OF CROSS SECTION, SAUGET SITE R

MONSANTO COMPANY
SAUGET, ILLINOIS

FIGURE
1-2



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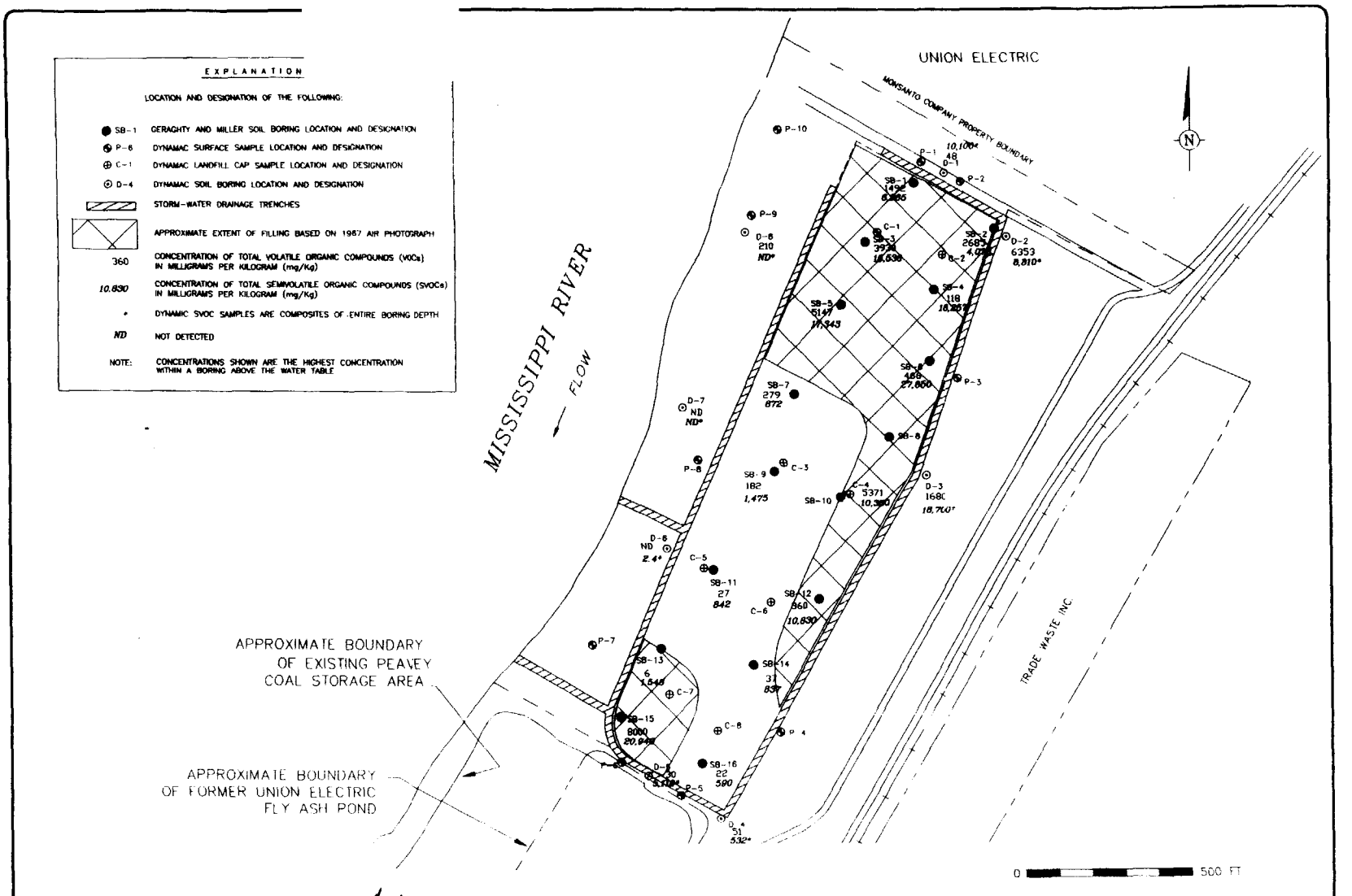
PLOT SIZE:	1"=200'
DATE:	11/12/92
DATE:	
DATE:	

CONCENTRATIONS OF TARGET COMPOUND LIST ORGANIC COMPOUNDS IN SEDIMENT SAMPLES, SAUGET SITE P

MONSANTO COMPANY
SAUGET, ILLINOIS

FIGURE
5-1



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APPROVED BY: D. COLTON	DATE:

REMEDIAL INVESTIGATION SOIL SAMPLING LOCATIONS, SAUGET SITE R

MONSANTO COMPANY
SAUGET, ILLINOIS

FIGURE
5-4

SCANNED
MM

SITE NARRATIVE

SITE O

SITE NARRATIVE - SAUGET AREA 2 / Site O

Sample Locations	Sampling Entity	Date Sampled	Data Source
DC-01 thru DC-10	E & E	2/87	"Expanded Site Investigation Dead Creek Project Sites" prepared for IEPA by Ecology and Environment, Inc., May 1988
#1, #2	Russel & Axon	7/20/84	"Description of Current Situation at the Dead Creek Project Sites" prepared for IEPA by Ecology and Environment, Inc., July 1986
1 through 16	IEPA/EEI	2/83 to 3/83	"Description of Current Situation at the Dead Creek Project Sites" prepared for IEPA by Ecology and Environment, Inc., July 1986
STS-Series Borings EFM-Series Borings DSM-Series Borings	Russell & Axon	9/83	"Assessment of Groundwater Conditions at the Village of Sauget Treatment Plant Sites" Sauget, Illinois, prepared by Geraghty & Miller, December, 1986 (Table 9)
BG-1 thru BG-12	Geraghty & Miller	8/84	"Assessment of Groundwater Conditions at the Village of Sauget Treatment Plant Sites" Sauget, Illinois, prepared by Geraghty & Miller, December, 1986 (Table 10)

Nature and Extent of Contamination:

The following description of the nature and extent of contamination refers to samples collected in and adjacent to the closed lagoons at Site O. Samples 1 thru 16, collected adjacent to Clayton Chemical property, are presented on the Site O figure and in summary table format, but are not included in this discussion of the lagoon area samples.

VOC concentrations in soil samples collected at Site O ranged from 0.001 to 889.9 mg/kg for 10 of the 12 samples collected. BNAs were detected at concentrations ranging from 0.28 to 1916 mg/kg in 9 of the 12 samples collected. Pesticides were not detected in any of the 12 samples collected. PCB concentrations ranged from 11.4 to 1,871 mg/kg for 9 of the 12 samples collected. Metals, particlaurly Cu, Hg, and Zn, were elevated in a few samples collected. The greatest contaminant concentrations in subsurface soils were detected at depths between 0 to 10 feet BGS.

The extent of soil contamination at Site O is fairly well defined through the 12 samples collected at various depths, both within and adjacent to the lagoons. The lagoons are unlined, and were excavated into the Henry Formation sands. The lateral boundary of the lagoons is well-defined, and is readily evident in historical aerial photos.

Containment and Integrity (if known):

The lagoons at Site O are closed, covered, and vegetated. Therefore, there is some containment of the wastes within the lagoons, but the quality and amount of cover is unknown. The lagoons are unlined, and were excavated into the Henry Formation sands. Access to Site O is somewhat restricted, only by the fact that the entrance road to the lagoon area is posted as a private drive; otherwise the site access is unrestricted.

Other Comments: See the attached "Site Description" for more site details.

SITE DESCRIPTION - Sauget Area 2/Site O

Site O consists of four inactive sludge dewatering lagoons associated with the Sauget Wastewater Treatment Plant (WWTP). The site is located on Mobile Avenue in Sauget. The site covers approximately 20 acres to the northeast of the American Bottoms WWTP. The lagoons have been covered with clay and vegetated, and no waste material is present at the surface. An access road to the American Bottoms WWTP runs through the middle of the site. The history of Site O includes activities at the Sauget WWTP. The Sauget WWTP began operation in approximately 1952. The plant treated waste from area industries and residents. Approximately 10 million gallon per day of wastewater was treated, more than 95% was from area industries. Industries which contributed wastewater to the plant include Monsanto, Cerro Copper, Sterling Steel Foundry, Amax Zinc, Rogers Cartage, Edwin Cooper, and Midwest Rubber. Effluent from the plant was discharged to the Mississippi River under NPDES permit. The Sauget WWTP had many past violations of the NPDES permit, mainly due to chemical quality of the plant effluent. Mercury, PCBs and organic solvents had been detected at levels which violated the set permit levels on several occasions. A 1982 USEPA study concluded that the effluent from the Sauget WWTP contributed a substantial volume of priority pollutants annually to the river. The lagoons which comprise Site O were usedas sludge drying beds for the original Sauget WWTP. It is not known if sludge was removed from the lagoons prior to closure and capping.

The following is a chronology of events for site O as discovered in the file information search:

Circa 1952

Sauget Water Treatment Plant has been in operation in some form.

1965 to approx. 1978

The former lagoons were used for disposal of clarified sludges.

1981

The Village of Sauget submitted a Notification of Hazardous Waste Site Form to USEPA in June. The form stated that the lagoons were used for disposal of clarified sludges. The lagoons were designed to drain liquids from the sludge. The lagoons were not lined and were excavated into the Henry Formation Sand. In March, following a long history of effluent problems, the Sauget WWTP submitted specifications for a pretreatment program to increase the treatment efficiency in their waste streams.

December 1982

IEPA collected soils around the Bliss Waste Oil tanks at Clayton Chemical. This area is near site O. High levels of PCBs and pentachlorophenol were detected. Dioxin, especially 2,3,7,8-TCDD was suspected since Russel Bliss had been connected to dioxin-contaminated waste oil in the past.

January 1983

Construction began on the new American Bottoms WWTP which will replace the old Sauget WWTP. The Illinois Attorney General filed suit against Russel Bliss and Clayton Chemical for an alleged water pollution hazard.

February 1983

IEPA and Envirodyne Engineers soil samples reveal PCBs and 2,3,7,8,-TCDD contamination in an area northwest of Site O.

April 1983

Clean-up plan submitted for dioxin contaminated soils. USEPA and IEPA approve the plan.

June 1983

IEPA ordered the excavation of an underground storage tank owned by Russel Bliss on Clayton Chemical property. The tank was found to be ruptured - soil and waste samples were collected by IEPA.

August 1983

IEPA ordered the excavation of additional soil from the Bliss underground storage tank. This was done based on the results of previous IEPA samples.

May 1984

A trench was dug in the area of the lagoons to bury a water pipe. Wastes were encountered during trenching, and the trench was covered and the water line laid above ground.

July 1984

A hydrogeologic investigation was initiated by Geraghty & Miller.

August 1984

Excavation for the construction of a transfer sewer at Site O uncovered contaminated soils.

December 1986

Geraghty & Miller completed their report on investigations at Site O. The report outlined the extent of groundwater contamination from the former sludge lagoons.

December 1986 - March 1987

Nine subsurface soil samples were taken at Site O. An additional two subsurface samples were taken in areas just off-site.

July 1987

Two groundwater monitoring wells were sampled on site. Three monitoring wells located just off-site were sampled by E & E.

March 1994

Surface and subsurface soil samples are expected to be taken by IEPA.

(Note: All information above was excerpted from a document with the heading of "Background" which was taken off microfiche from the IEPA file records)

SITE NARRATIVE

SITE Q

SITE NARRATIVE - SAUGET AREA 2 / Site Q

Sample Locations	Sampling Entity	Date Sampled	Data Source
X101 - X111	IEPA	11/9 to 11/10/94	Memo to M. Rebbe (IDPH) from P. Takacs (IEPA) dated 12/30/94 Re: November Sampling with maps and data
QD1 - QD3	E & E	5/27/94	Removal Action Report for Sauget Area 2: Site Q prepared by Ecology and Environment 7/29/94
Pit #1, Pit #2	Riedel	9/89	Ltr. to Carol Ropski (EPA) from R. Burke (Eagle Marine) dated 1/19/95 Re: Response of Eagle Marine Industries to Information Request
B-1 through B-18	E & E	7/93	"Description of Current Situation at the Dead Creek Project Sites" prepared for IEPA by Ecology and Environment, Inc., July 1986
L-1, P-1	IEPA	10/17/72	"Description of Current Situation at the Dead Creek Project Sites" prepared for IEPA by Ecology and Environment, Inc., July 1986
P-2	IEPA	4/10/73	"Description of Current Situation at the Dead Creek Project Sites" prepared for IEPA by Ecology and Environment, Inc., July 1986
L-1, L-2	IEPA	10/28/81	"Description of Current Situation at the Dead Creek Project Sites" prepared for IEPA by Ecology and Environment, Inc., July 1986
L101 - L103	IEPA	9/29/83	"Description of Current Situation at the Dead Creek Project Sites" prepared for IEPA by Ecology and Environment, Inc., July 1986
Q201 - Q208	USEPA	1997	Preliminary Ecological Risk Assessment for Sauget Area 2: Site Q prepared by USEPA 1997

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SITE NARRATIVE - SAUGET AREA 2 / Site Q

Nature and Extent of Contamination:

Southern Portion of Site Q (samples X101-X111 and Q203-Q208):
VOC concentrations in soils ranged from 0.008 to 0.29 mg/kg for 5 of the 11 samples analyzed for these parameters. BNA concentrations ranged from 0.38 to 1.9 mg/kg for 5 of the 11 samples collected. Pesticides were not detected in any of the 11 samples analyzed for these parameters. PCB concentrations ranged from 0.06 to 223 mg/kg for 14 of 17 samples collected.

The samples collected from the southern portion of Site Q are collected from depressional areas. These depressional areas have been identified by IEPA as apparent disposal areas and not all of the property south of the Alton & Southern Railroad has been sampled or characterized. The extent of surficial contamination in the southern portion of Site Q (south of the Alton & Southern Railroad) is fairly well defined laterally. However, there are no subsurface soils to help delineate the extent of vertical contamination.

Northern Portion of Site Q (all samples north of the Alton & Southern Railroad):
Waste samples (QD1 to QD3) collected in drums adjacent to the river at Site Q revealed a BNA concentration of 534 mg/kg in one sample, and PCB concentrations ranged from 180,000 to 260,000 mg/kg for the drum samples collected.

Surface water samples (P1 and P2) collected on Site Q did not contain appreciably high concentrations of metals. These samples were not analyzed for organic parameters. Pond sediments (Q201 and Q202) collected in the center of Site Q had PCB concentrations which ranged from 1.8 to 4.6 mg/kg for the two samples.

BNA concentrations in leachate samples (from samples L-1, L-2, L101, L102, and L103) were 5 μg/L for 2 of the 5 samples collected. The leachate samples were not analyzed for VOCs, and pesticides were not detected in any of the 5 samples. PCB concentrations ranged from 0.1 to 1.0 μg/L for 4 of the 5 samples collected. Metals, particularly As, Cr, Cu, Pb, and Zn, were elevated in a few of these samples.

VOC concentrations in the subsurface soils (from borings B-1 to B-18 and Pits 1 & 2) ranged from 0.02 to 5,855 mg/kg for 28 of the 36 samples collected. BNA concentrations ranged from 3.8 to 15,190 mg/kg for 34 of the 36 samples collected. Pesticide concentrations were 0.1 and 3.3 mg/kg for 2 of the 35 samples collected. PCB concentrations ranged from 0.002 to 16,000 mg/kg for 32 of the 36 samples collected. Dioxin (2,3,7,8-TCDD) concentrations in subsurface soil samples ranged from 0.0001 to 0.0033 mg/kg in two of the 35 samples analyzed for this parameter.

The extent of contamination in the southern portion of Site Q (south of the Alton & Southern Railroad) is fairly well defined laterally in and around the depressional areas identified by IEPA. However, there are no subsurface soils to help delineate the extent of vertical contamination. The extent of contamination in the central portion of Site Q is poorly defined. Wastes have been initially identified through sampling of drum samples and leachate but surface and subsurface soil samples are lacking in this area. The extent of contamination in the northern portion of Site Q, adjacent to Site R is well defined through multiple soil borings and subsurface soil samples.

Containment and Integrity (if known):

There is no known containment for site Q. Wastes are present at the surface in the southern portion of Site Q. The northern portion is covered primarily with cinders. Access to this site is unrestricted.

Other Comments: See the attached "Site Description" for more site details.

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SITE DESCRIPTION - Sauget Area 2/Site Q

Site Q is an inactive waste disposal facility in Sauget and Cahokia. The facility, which was operated by Sauget & Company between 1966 and 1973, covers approximately 90 acres. The site is located on the east bank of the Mississippi River and is on the river side of the flood control levee. Most of Site Q is occupied by the Pillsbury Company, which operates a coal and grain unloading and transfer facility. The northern half of the site contains coal and cinders while the southern portion is unoccupied. A railroad spur divides the site and several ponds exist on site. Site Q was operated without a permit. The north side was registered with the IDPH in 1967, prior to formation of IEPA. The site is presently covered with black cinders which makes it highly permeable. Site Q is presently being leased to the Pillsbury Co. by its owners the Riverport Terminal and Fleeting Co.

The following is a chronology of events for site Q as discovered in the file information search:

1966

Disposal operations began in the northern most portion of site Q. A flyash pond operated by Union Electric existed at the area immediately south of the Monsanto Chemical dump (Site R).

1968 - 1972

Septic tank pumping and general municipal refuse were accepted at the site.

Early 1970s

IEPA inspections documented several violations of the Illinois Environmental Protection Act, including open burning, using unsuitable cover materials (cinders and flyash), and disposal of liquid chemical wastes.

April 1971

IEPA filed a complaint against Sauget & Co.. The company was ordered to cease open burning, using flyash and cinders for cover materials, and accepting liquid chemical wastes.

May 1971

The Illinois Pollution Control Board issued an order to Sauget & Company to discontinue the use of cinders and flyash for final cover.

September 1971 - August 1971

IEPA conducted monthly inspections at the site. During this time they cited inadequate daily and final cover, and the disposal of liquid wastes.

July 1972

An IEPA inspection revealed a smoldering underground fire.

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August 1972

Leach tests of the cinder cover was performed by IEPA. The material was found to be inadequate in terms of permeability of material and its high metal content.

October 1972

The fire which began in July 1972, finally went out. The fire smouldered continuously from July to October despite repeated attempts to extinguish it.

1972

Sauget & Company applied for a permit to extend the existing landfill to an area south ofthe Alton & Southern Railroad. IEPA denied all permit applications to the southern site extension. Approval was never issued by IEPA, however Sauget & Company used this area for disposal.

October 1972

IEPA collected two soil samples from Site Q. One was from ponded water, the other was a leachate sample. Results indicated the presence of metals including lead andmercury.

January 1973

Groundwater samples were collected from two monitoring wells.

March 1973

Mississippi River flood waters inundated Site Q. The flood conditions lasted until May 1973.

April 1973

Samples of ponded water collected by IEPA on two separate occasions.

November 1973

The Illinois Secretary of State revoked the authority of Sauget & Co. to transact business in the State of Illinois.

January 1975

Disposal activities were completed at Site Q by this time.

September 1976

An IEPA inspection of Site Q revealed and underground fire at the site. The fire smoldered for approximately 1 month.

May 1977

The Illinois Pollution Control Board filed suit #77-84 against Sauget & Co. and Paul Sauget. A monetary penalty was invoked and Sauget & Co. was ordered to put a two foot layer of suitable cover material to cap the entire site by February 1981.

May 1980

IEPA was notified that drums and chemical wastes were uncovered during excavation along a railroad spur.

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May 1981

In response to Sauget's failure to comply with order #77-84 and alleging several violations of the Illinois Environmental Protection Act, the Illinois Attorney General filed suit against Sauget & Co.

October 1981

IEPA sampled leachate seeps from the banks of the river. Results indicated high levels of organic contaminants.

June 1983

A subsurface investigation at Site Q was initiated by a USEPA FIT Contractor. Over half of the organics analyzed for in the samples were detected including 2,3,7,8-TCDD in two samples. A geophysical investigation was completed by Technos of Miami, Florida.

September 1983

IEPA took more leachate seep samples from the bank of the river. The results weresimilar to the results in October 1981.

March 1985

The Illinois Attorney Generals' office reentered a suit against Sauget & Company. TheIAG's office ordered final cover to be applied at the site and also requested a civil penalty.

March 1987

E & E took nine samples from eight monitoring wells at site Q. Monitoring wells were also sampled in area adjacent to site Q.

Subsequent to 1987, several investigative and significant environmental events have taken place. In 1992, Monsanto conducted sampling at the south end of Site R, on the Site Q property. In 1994, most of site Q was innundated by the Mississippi River flood waters. IEPA and USEPA conducted sampling in the depressional areas at the southern portion of Site Q in 1994 and 1997, respectively. In addition to sampling activities, construction of offices and storeage areas for a landscaping firm has taken place in the northern and central portions of Site Q.

(Note: All information above was excerpted from a document with the heading of "Background" which was taken off microfiche from the IEPA file records)

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SITE NARRATIVE

SITE R

SITE NARRATIVE - SAUGET AREA 2 / Site R			
Sample Locations	**Sampling Entity**	**Date Sampled**	**Data Source**
X112, X113	IEPA	11/11/94	Memo to M. Rebbe (IDPH) from P. Takacs (IEPA) dated December 30, 1994. Re: Nov. sampling with maps and data sheets.
X101D, X103D, X104D, S101D, S103D, S104D	IEPA	2/89	Ltr. to A. Weinart (USEPA) from P. Takacs (IEPA) dated 1/22/90. Re: Dioxin results and sample map.
A, B, C	IEPA	10/2/81	"Description of Current Situation at the Dead Creek Project Sites" prepared for IEPA by Ecology and Environment, Inc., July 1986
S01 - S06, M02, M04, M06	E & E	11/12/81	"Description of Current Situation at the Dead Creek Project Sites" prepared for IEPA by Ecology and Environment, Inc., July 1986
D1 - D7, P1 - P10, C1 - C8	Dynamac	3/89	"Remedial Investigation at Sauget Site R" prepared for Monsanto Co. by Geraghty & Miller, August 1994
SS-1 to SS-8, SB-1 to SB16	Geraghty & Miller	1992	"Remedial Investigation at Sauget Site R" prepared for Monsanto Co. by Geraghty & Miller, August 1994
SB-17 to SB-19	Geraghty & Miller	4/92	"Remedial Investigation for the Expanded Study Area" prepared for Monsanto Co. by Geraghty & Miller, August 1994
Up River 1 - 4 Down River 1 - 4	IEPA	1981	Ltr. to R. Sinise (Monsanto) from A. Holoska (USEPA) dated March 30,1982. Re: 11/12/81 sampling
CWS-1 to CWS-5	USEPA	11/12/81	Ltr. to R. Sinise (Monsanto) from A. Holoska (USEPA) dated March 30,1982. Re: 11/12/81 sampling

SITE NARRATIVE - SAUGET AREA 2 / Site R

Nature and Extent of Contamination: The Site R landfill and adjacent areas have been studied extensively by the USEPA, IEPA, and Monsanto since the early 1980's. Below is a brief synopsis of the nature and extent of soil/sediment contamination identified at Site R.

RI Report Data - Geraghty & Miller, 1994.

Eight sediment samples (SS-1 through SS-8) were collected from storm water drainage ditches surrounding the Site R landfill. VOC concentrations in sediment samples collected from the drainage ditches ranged from 0.002 to 0.035 mg/kg. Constituents detected in these sediment samples were similar to those detected in the landfill soil samples, although the detected concentrations were orders of magnitude lower. SVOC concentrations in sediments ranged from 0.045 to 3.99 mg/kg. Pesticides were only detected in one of the sediment samples at a concentration of 0.096 mg/kg. PCBs were detected at concentrations ranging from 0.08 to 1.5 mg/kg. Metals, particularly Al, Fe, Ca,and Mg were elevated in some samples.

Soil samples were collected from 16 borings (SB-1 through SB-16) within the landfill during the RI conducted by Geraghty & Miller. In addition, Dynamac completed an investigation in 1989 which included 8 borings (D-1 through D-8) around the perimeter onf the landfill, 8 surface samples (C-1 through C-8) collected from the landfill cap, and 10 surface samples collected from the perimeter (P-1 through P-10). VOC concentrations in subsurface soil samples collected from the RI borings ranged from 0.15 to 4,100 mg/kg. VOC concentrations in subsurface soil samples collected by Dynamac ranged from 0.51 to 5,800 mg/kg. SVOC concentrations in subsurface soil samples collected from borings SB-1 through SB-16 ranged from 0.017 to 11,000 mg/kg. SVOC concentrations in subsurface soil samples collected by Dynamac ranged from 0.37 to 19,000 mg/kg. Pesticide concentrations in subsurface soil samples collected from the borings SB-1 through SB-16 ranged from 0.011 to 99 mg/kg. Pesticides were not detected in any borings conducted by Dynamac. PCB concentrations in subsurface soil samples collected from borings SB-1 through SB-16 ranged from 0.075 to 4,800 mg/kg. PCBs were only detected in three of the borings conducted by Dynamac. Some metals, including As, Cr, Pb, Ni and Hg, were slightly elevated in most samples.

Expanded Study Area RI Report Data - Geraghty & Miller, 1994.

Soil samples were collected from 3 borings (SB-17 through SB-19) drilled along the southern portion of the landfill. This area is actually part of Site Q but was investigated as part of the Site R RI by Geraghty & Miller. VOC concentrations in subsurface soil samples collected from these borings ranged from 0.002 to 1,640 mg/kg. SVOC concentrations in subsurface soil samples collected from borings SB-17 through SB-19 ranged from 0.041 to 185 mg/kg. Pesticide concentrations in subsurface soil samples collected from the borings SB-17 through SB-19 ranged from 0.016 to 0.18 mg/kg. PCB concentrations in subsurface soil samples collected from borings SB-17through SB-19 ranged from 0.36 to 6.6 mg/kg.

SITE NARRATIVE - SAUGET AREA 2 / Site R

IEPA and USEPA File Information - Pre-1992

Information presented here pertains to the sample locations presented on the figure for Sites O, Q, R, and S. These sample locations are situated adjacent to the river on the west side of Site R. Nine sediment samples (A, B, C, S02, S04, S06, M02, M04, M06) were collected from 6 locations adjacent to the river to the west of Site R. VOCs were not detected in any of the three sediment samples analyzed for this parameter group. SVOC concentrations in sediments to the west of Site R ranged from 0.001 to 7.7 mg/kg for 9 of the 9 sample collected. Pesticides were not analyzed in these sediment samples. PCB concentrations in the sediments ranged from 0.00001 to 0.23 mg/kg for 6 of the 9 samples collected. Metals were not elevated in most of the samples collected. However, cyanide was detected at concentrations ranging from 6.8 to 90 mg/kg for all three samples analyzed for this parameter.

Nine leachate samples (X101D, X103D, X104D, S01, S03, S05, M01, M03, M05) were collected from 6 locations adjacent to the river to the west of Site R. VOCs were not analyzed in any of the leachate samples. SVOC concentrations in leachate to the west of Site R ranged from 0.6 to 12.3 μg/L for the 3 samples analyzed for this parameter group. Pesticide concentrations ranged from 0.5 to 3.0 μg/L for the three samples analyzed for this parameter. PCBs were only detected in one leachate sample at a concentration of 0.08 μg/L. Sample X101D, X103D, and X104D were analyzed for dioxins/furans only.
Total dioxin/furan concentrations ranged from 0.0001 to 0.0014 ppm. Metals were slightly elevated in some samples collected. Cyanide was detected in one leachate sample at a concentration of 71 μg/L.

Surface water samples (S101D, S103D, and S104D) were collected from the Mississippi River and analyzed for dioxins/furans. The total dioxin/furan concentrations ranged from 0.0001 to 0.0007 ppm in the three samples collected.

Containment and Integrity (if known):

Site R is surrounded by a security fence and monitored by 24-hour surveillence. In addition to site security, the landfill has been capped and the riverbank to the west of the site has been stabilized.

Installation of Landfill Cap: In 1979, Monsanto installed a clay cap on the Site R landfill. The purpose of the cap was to cover waste, limit infiltration through the landfill, and prevent direct contact with fill material. The clay for the cover was obtained locally from several site in Cahokia and the cap thickness varies from 2 feet to approximately 8 feet. The permeability of the clay was determined to range from 3.9×10^{-7} cm/sec to 2.4×10^{-6} cm/sec based on laboratory analysis of undisturbed samples.

Riverbank Stabilization Project: In 1985, a 2,250 foot long rock revetment was installed by Monsanto along the east bank of the Mississippi River adjacent to Site R. The purpose of the stabilization project was to prevent further erosion of the riverbank and thereby minimize potential for release of waste material from the landfill. The riverbank was graded using rock and sand, covered with a geotextile fabric, and a fine, crushed rock filter blanket (1-foot thick) was placed over the fabric. A second geotextile fabric layer was placed over the crushed rock blanket. Finally, 2-foot of class C rip-rap was placed over the upper fabric layer. The rip-rap was placed from the top of the riverbank to 374 feet MSL, producing a revetment that extends from 150 to 290 feet into the river.

Other Comments: See the attached "Site Description" for more site detail

SITE DESCRIPTION - Sauget Area 2/Site R

Site R is a former industrial waste landfill situated adjacent to the Mississippi River in Sauget, Illinois. Early IEPA files list the site name as the Sauget Toxic Dump (aka: Krummerich Landfill). More recent reports and files list the site name as Monsanto Landfill or River's Edge Landfill. The site is owner by Monsanto Chemical Co. and was used by Monsanto for landfilling between 1957 and 1977. The site is located north and west of Site Q on the river side of a flood control levee. Site R is covered with a clay cap and is vegetated. Access to Site R is restricted by fencing and under 24-hour camera surveillance.

The following is a chronology of events for site R through 1987 as discovered in the file information search:

1957
The Sauget Toxic Dump began being used by Monsanto.

August 1968
IEPA begins making routine inspections at Site R.

April 1971
IEPA inspection of Site R revealed disposal of bulk chemical wastes and drums.

May 1971
The Illinois Pollution Control Board order #71-29 issued to Sauget & Co. to respond to a request for information.

June 1971
Monsanto responded to the Illinois Pollution Control Board order number 71-29. They indicated that 18,400 cubic yards of chemical wastes were disposed of at Site R for 1971.

December 1972
IEPA sampled monitoring wells at Site R. Phenols found in all samples.

January 1973
High concentrations of phenols were identified by IEPA in a limited analysis of samples taken from waste ponds.

February 1973
IEPA sampled monitoring wells at Site R and found high levels of phenol and COD in all samples.

March 1973
The Mississippi River flood waters inundated Sites R and Q.

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November 1973

The Illinois Secretary of State revoked the authority of Sauget & Co. to transact business in the State of Illinois.

1973

IEPA sent notices to Sauget & Co. and Monsanto, which outlined violations of the Environmental Protection Act at Site R. The violations included inadequate segregation of wastes, and a lack of the necessary permits to operate a disposal facility. These violations were reiterated several times in 1973 and again in 1974.

1973 - 1976

IEPA sampled the monitoring wells at Site R anually. Also a Monsanto Ranney well located in the northwest corner of the site was sampled.

1975

Records indicate a significant reduction in the amounts of chemicals disposed of on-site.

1976

Ranney well sample indicated PCB contamination.

October 1977

D'Appolonia Engineers, a consultant for Monsanto, conducted a subsurface investigation of Site R and proposed appropriate closure alternatives.

1977

Monsanto voluntarily ceases operations at Site R.

May 1978

Monsanto filed closure documents and plans with IEPA.

September 1978

Monsanto began closure operations which consisted of covering, grading, capping, and securing Site R.

October 1979

IEPA samples from monitoring wells indicated the presence of chlorophenols, chlorobenzenes, and analine derivatives. Closure of Site R was completed.

February 1980

Monsanto filed an affidavit of closure for Site R.

March 1981

Monitoring well samples indicated the presence of a variety of organic compounds.

May 1981

Monsanto filed a CERCLA notification for Site R.

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October 1981

IEPA collected leachate and sediment samples from Site R. The samples were collected from an area adjacent to the Mississippi River. Leachate was noted flowing into the river in at least three locations.

October 1981

The U.S Food and Drug Administration (USFDA) collected fish samples from both upstream and downstream river locations. The downstream fish contained several organic contaminants.

December 1981

A USEPA TAT contractor sampled the Site R seeps adjacent to the river. Analyses of these samples included higher chlorinated (hexa-through octa-) dioxins.

July 1982

The USEPA FIT contractor submitted an HRS score for Site R. The site scored 7.23 and did not qualify for the National Priorities List (NPL). This score was low because of a lack of a target population. Surface and groundwater contamination was observed, however there was not a target population for these releases. No air releases were observed.

1982

The IAG's office filed suit against Monsanto outlining several apparent violations of the Illinois Environmental Protection Act. Most of the complaint was regarding water pollution and the relief being sought included civil penalties and the issuance of an injunction to Monsanto to immediately prevent seepage from Site R from entering the river. The injunction also directed the defendant to remove all waste from the site.

October 1983

Geraghty and Miller, a contractor for Monsanto, conducted a hydrogeologic investigation on Monsanto property including Site R.

July 1984

Monsanto applied for a permit to construct a revetment along the bank of the Mississippi River.

1985

Revetment constructed along the bank of the Mississippi River.

September 1986

The initial Geraghty & Miller hydrogeologic investigation report estimated 77 pounds of organic compounds were leaching into the Mississippi River per day.

March 1987

E & & took one groundwater sample from an on-site location with an additional nine groundwater samples taken from seven wells located in areas adjacent to the site.

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Subsequent to 1987, Monsanto has continued groundwater monitoring and site characterization activities at the site. In 1989, Dynamac Corporation (Dynamac) conducted sediment, surface soil, and subsurface soil sampling to obtain information to be used in preparation of a site-specific risk assessment. In compliance with a consent order signed by Monsanto and IEPA in 1992, a remedial investigation was initiated by Monsanto in 1992, with oversight from IEPA. An RI report was submitted to IEPA in August 1994.

(Note: All information above was excerpted from a document with the heading of "Background" which was taken off microfiche from the IEPA file records)

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SITE NARRATIVE

SITE S

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SITE NARRATIVE - SAUGET AREA 2 / Site S

Sample Locations	Sampling Entity	Date Sampled	Data Source
X102 thru X106	IEPA	3/22/95	Handwritten notes with sample map and data sheets.

Nature and Extent of Contamination:

VOC concentrations in soil samples collected from Site S ranged from 0.007 to 2,181 mg/kg in all 6 of the samples collected. BNAs were detected at concentrations ranging from 0.8 to 250 mg/kg for 5 of the 6 samples. Pesticides ranged from 0.005 to 0.2 mg/kg for 5 of the 6 samples. PCBs were detected in all 6 samples at concentrations ranging from 0.04 to 195 mg/kg. Metals, particularly Cr, Cu, Pb, and Hg, were found at elevated concentrations in a few of the samples collected. At the time of sampling, surface leachate seeps were present at the southern portion of the site.

The extent of contamination at Site S is poorly defined due to the limited number of sampling locations and associated analytical data. Samples were collected from locations X102 thru X106 using a hand auger, and the sample depths ranged from 0 to 5 feet BGS. High VOC, BNA and PCB contamination present in samples X105 and X106 indicate that the extent of contamination at Site S has not been completely defined, either laterally or vertically.

Containment and Integrity (if known):

The containment for Site S is in the form of topsoil and vegetation on the northernmost portion of the site area, and gravel cover for the southern portions of the site area. The southern portion of the site, which is covered with gravel, is also fenced.

Other Comments: See the attached "Site Description" for more site details.

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SITE DESCRIPTION - Sauget Area 2/Site S

Site S is depicted up on the USGS topographic map as a low-lying feature located to the west of the American Bottoms WWTP. This location appeared to be a drum disposal area based upon a review of historical aerial photographs. The site is currently part of the American Bottoms WWTP property which is situated to the west-southwest of the Site O lagoons. The northern portion of Site S is grassed with no apparent features of waste disposal, and the southern portion is covered with gravel and fenced. Disposal boundaries have not been delineated. Slag material was encountered in every boring attempted at Site S. Access to the northern, grassed portion of Site S is partially restricted in that the Site is located on private property, and access to the southern portion of Site S is restricted by fencing.

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Site O Data

0034

SAUGET Analytical Data
Site O

SUBSURFACE SOIL SAMPLES
Volatile Organic Compounds (µg/kg)
Collected by Ecology & Environment, Inc. (2/87)

Sample Number	DC-O1-59	DC-O2-60	DC-O3-61	DC-O4-62	DC-O5-63	DC-O5-64	DC-O8-65	DC-O6-66	DC-O9-72	DC-O9-73
Sample Depth (ft)	15-25	20-30	10-20	0-10	8.5-20	8.5-20	NA	15-25	0-10	15-20
Date Collected	02/16/87	02/17/87	02/17/87	02/17/87	02/17/87	2/17/87	2/18/87	2/18/87	2/26/87	2/26/87
							BLANK			
VOC										
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	ND	35	10 J	833 BJ	ND	18 J	139 B	4 J	878 BJ	519 BJ
Acetone	137 BE	9103 BE	4405 BE	7692 B	8659 BE	11463 BE	ND	457 B	ND	2593 B
Carbon Disulfide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	10 J	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	192	6 J	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	23	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	30 B	25641 BE	36 B	7179 B	244 B	171 B	ND	20 B	ND	4444 B
1,1,1-Trichloroethane	ND	ND	ND	1410	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	69	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ND	667	24	30769	ND	18 J	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloroethyl Vinyl Ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	ND	1244 B	ND	7692	ND	ND	ND	ND	ND	ND
2-Hexanone	ND	63	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	28	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	29487	ND	ND	ND	ND	293 J	ND
Chlorobenzene	ND	1667	62	38462	74	159	ND	ND	841 J	ND
Ethylbenzene	ND	46	167	166667 E	37 J	57 J	ND	ND	2439	74 J
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ND	141	976	615385 E	244	256	ND	ND	21951	235 J

µg/kg - Micrograms per kilogram
B - Compound detected in blank sample
E - Estimated value Concentration detected exceeds the calibrated range
J - Estimated value
ND - Not detected

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Ecology and Environment

SAUGET Analytical Data
Site O

SUBSURFACE SOIL SAMPLES
Volatile Organic Compounds (µg/kg)
Collected by Ecology & Environment, Inc. (2/87)

Sample Number	DC-O10-74	DC-O10-75	Maximum Concentration Detected
Sample Depth (ft)	5-10	10-15	
Date Collected	02/26/87	02/26/87	
VOC			
Chloromethane	ND	ND	ND
Bromomethane	ND	ND	ND
Vinyl chloride	ND	ND	ND
Chloroethane	ND	ND	ND
Methylene chloride	731 BJ	341 BJ	878 BJ
Acetone	3846 B	2514 B	11463 BE
Carbon Disulfide	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND
1,1-Dichloroethane	ND	ND	10 J
trans-1,2-Dichloroethene	ND	ND	192
Chloroform	ND	ND	ND
1,2-Dichloroethane	ND	ND	23
2-Butanone (MEK)	7436 B	6705 B	25641 BE
1,1,1-Trichloroethane	ND	ND	1410
Carbon Tetrachloride	ND	ND	ND
Vinyl Acetate	ND	ND	ND
Bromodichloromethane	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND
Trichloroethene	ND	ND	69
Dibromochloromethane	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND
Benzene	1795	ND	30769
cis-1,3-Dichloropropene	ND	ND	ND
2-Chloroethyl Vinyl Ether	ND	ND	ND
Bromoform	ND	ND	ND
4-Methyl-2-pentanone	ND	ND	7692
2-Hexanone	ND	ND	63
Tetrachloroethene	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	28
Toluene	4339	ND	29487
Chlorobenzene	58974	1250	58974
Ethylbenzene	9103	341 J	166667 E
Styrene	ND	ND	ND
Total Xylenes	29487	1114 J	615385 E

µg/kg - Micrograms per kilogram
B - Compound detected in blank sample
E - Estimated value Concentration detected exceeds the calibrated range
J - Estimated value
ND - Not detected

0032

SAUGET Analytical Data
Site O

SUBSURFACE SOIL SAMPLES
Base Neutrals/Acids (µg/kg)
Collected by Ecology & Environment, Inc. (2/87)

Sample Number	DC-O1-59	DC-O2-60	DC-O3-61	DC-O4-62	DC-O5-63	DC-O5-64	DC-O8-65	DC-O6-66	DC-O9-72	DC-O9-73
Sample Depth (ft)	15-25	20-30	10-20	0-10	8.5-20	8.5-20	NA	15-25	0-10	15-20
Date Collected	02/16/87	02/17/87	02/17/87	02/17/87	02/17/87	02/17/87	02/18/87	02/18/87	02/26/87	02/26/87
BNAs							BLANK			
Phenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroethyl)ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	**4634 J**	ND
Benzyl Alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	**24339 J**	ND	ND	ND	ND	**32927**	ND
2-Methylphenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroisopropyl)ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitroso-n-Dipropylamine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitrophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzoic Acid	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis-(2-Chloroethoxy)methane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	**26923 J**	ND	ND	ND	ND	**25610**	ND
Naphthalene	ND	ND	ND	**34615 J**	ND	ND	ND	ND	**6707 J**	ND
4-Chloroaniline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphathalene	ND	ND	ND	**160256**	ND	ND	ND	ND	**31707**	ND
Hexachlorocyclopentadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitroaniline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl Phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	ND	ND	ND	ND	ND	ND	ND	ND	**2561 J**	ND

µg/kg - Micrograms per kilogram
B - Compound detected in blank sample
E - Estimated value Concentration detected exceeds the calibrated range
J - Estimated value
ND - Not detected

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SAUGET Analytical Data
Site O

SUBSURFACE SOIL SAMPLES
Base Neutrals/Acids (µg/kg)
Collected by Ecology & Environment, Inc. (2/87)

	Sample Number	DC-01-59	DC-02-60	DC-03-61	DC-04-62	DC-05-63	DC-05-64	DC-08-65	DC-06-66	DC-09-72	DC-09-73
	Sample Depth (ft)	15-25	20-30	10-20	0-10	8.5-20	8.5-20	NA	15-25	0-10	15-20
	Date Collected	02/16/87	02/17/87	02/17/87	02/17/87	02/17/87	02/17/87	02/18/87	02/18/87	02/26/87	02/26/87
BNAs								BLANK			
2,4-Dinitrophenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran		ND	ND	ND	ND	ND	ND	ND	ND	1463 J	ND
2,4-Dinitrotoluene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl-Phenylether		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene		ND	ND	ND	ND	ND	ND	ND	ND	3049 J	ND
4-Nitroaniline		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine		ND	ND	ND	50000 J	ND	ND	ND	ND	10244 J	ND
4-Bromophenyl-phenylether		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol		ND	ND	22619	474359 J	ND	ND	ND	ND	329268	6420 J
Phenanthrene		ND	ND	ND	217949	963 J	ND	ND	ND	21951	469 J
Anthracene		ND	ND	5357	ND	ND	ND	ND	ND	4146 J	ND
Di-n-butly phthalate		ND	ND	ND	ND	3780 J	ND	2785 J	ND	7195 J	6049
Fluoranthene		ND	ND	ND	43590 J	ND	ND	ND	ND	7317 J	ND
Pyrene		ND	ND	ND	282051	ND	ND	ND	ND	62195	1605 J
Butyl Benzyl phthalate		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo (a)anthracene		ND	ND	ND	121795	ND	ND	ND	ND	25610	ND
bis(2-ethylhexyl)phthalate		ND	ND	1905 BJ	ND	ND	2439 JB	ND	ND	ND	914 J
Chrysene		ND	ND	ND	282051	ND	1951 J	ND	ND	62195	1605 J
Di-n-octyl phthalate		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene		ND	ND	ND	79487 J	ND	ND	ND	ND	17073 J	ND
Benzo(k)fluoranthene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo (a)pyrene		ND	ND	ND	66667 J	ND	ND	ND	ND	19512	ND
Indeno(1,2,3-cd)pyrene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene		ND	ND	ND	52564 J	ND	ND	ND	ND	17073 J	ND
Dibenzo(a,h)anthracene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

µg/kg - Micrograms per kilogram
B - Compound detected in blank sample
E - Estimated value Concentration detected exceeds the calibrated range
J Estimated value
ND - Not detected

SAUGET Analytical Data
Site O

SUBSURFACE SOIL SAMPLES
Base Neutrals/Acids (µg/kg)
Collected by Ecology & Environment, Inc. (2/87)

Sample Number	DC-O10-74	DC-O10-75	Maximum
Sample Depth (ft)	5-10	10-15	Concentration
Date Collected	02/26/87	02/26/87	Detected
BNAs			
Phenol	ND	ND	ND
bis(2-Chloroethyl)ether	ND	ND	ND
2-Chlorophenol	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND
1,4-Dichlorobenzene	112821	ND	112821
Benzyl Alcohol	ND	ND	ND
1,2-Dichlorobenzene	100000	ND	100000
2-Methylphenol	ND	ND	ND
bis(2-Chloroisopropyl)ether	ND	ND	ND
4-Methylphenol	ND	ND	ND
N-Nitroso-n-Dipropylamine	ND	ND	ND
Hexachloroethane	ND	ND	ND
Nitrobenzene	ND	ND	ND
Isophorone	ND	ND	ND
2-Nitrophenol	ND	ND	ND
2,4-Dichlorophenol	ND	ND	ND
Benzoic Acid	ND	ND	ND
bis-(2-Chloroethoxy)methane	ND	ND	ND
2,4-Dichlorophenol	ND	ND	ND
1,2,4-Trichlorophenol	ND	ND	26923 J
Naphthalene	ND	ND	34615 J
4-Chloroaniline	ND	ND	ND
Hexachlorobutadiene	ND	ND	ND
4-Chloro-3-methylphenol	ND	ND	ND
2-Methylnaphathalene	7308	ND	160256
Hexachlorocyclopentadiene	ND	ND	ND
2,4,6-Trichlorophenol	ND	ND	ND
2,4,5-Trichlorophenol	ND	ND	ND
2-Chloronaphthalene	ND	ND	ND
2-Nitroaniline	ND	ND	ND
Dimethyl Phthalate	ND	ND	ND
Acenaphthylene	ND	ND	ND
3-Nitroaniline	ND	ND	ND
Acenaphthene	ND	ND	2561 J

µg/kg - Micrograms per kilogram

B - Compound detected in blank sample

E - Estimated value. Concentration detected exceeds the calibrated range.

J - Estimated value

ND - Not detected

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0039

SAUGET Analytical Data
Site O

SUBSURFACE SOIL SAMPLES
Base Neutrals/Acids (µg/kg)
Collected by Ecology & Environment, Inc. (2/87)

Sample Number	DC-O10-74	DC-O10-75	Maximum
Sample Depth (ft)	5-10	10-15	Concentration
Date Collected	02/26/87	02/26/87	Detected
BNAs			
2,4-Dinitrophenol	ND	ND	ND
4-Nitrophenol	ND	ND	ND
Dibenzofuran	ND	ND	1463 J
2,4-Dinitrotoluene	ND	ND	ND
2,6-Dinitrotoluene	ND	ND	ND
Diethylphthalate	ND	ND	ND
4-Chlorophenyl-Phenylether	ND	ND	ND
Fluorene	ND	ND	3049 J
4-Nitroaniline	ND	ND	ND
4,6-Dinitro-2-methylphenol	ND	ND	ND
N-Nitrosodiphenylamine	ND	ND	50000 J
4-Bromophenyl-phenylether	ND	ND	ND
Hexachlorobenzene	ND	ND	ND
Pentachlorophenol	112821 J	7159 J	474359 J
Phenanthrene	42308	863 J	217949
Anthracene	ND	ND	5357
Di-n-butly phthalate	ND	5000 J	7195 J
Fluoranthene	11026 J	ND	43590 J
Pyrene	82051	1477 J	282051
Butyl Benzyl phthalate	3846154 E	67045	3846154 E
3,3'-Dichlorobenzidine	ND	ND	ND
Benzo (a)anthracene	ND	ND	121795
bis(2-ethylhexyl)phthalate	ND	1080 J	2439 JB
Chrysene	82051	1818 J	282051
Di-n-octyl phthalate	ND	ND	ND
Benzo(b)fluoranthene	ND	ND	79487 J
Benzo(k)fluoranthene	ND	ND	ND
Benzo (a)pyrene	ND	ND	66667 J
Indeno(1,2,3-cd)pyrene	ND	ND	ND
Benzo(g,h,i)perylene	ND	ND	52564 J
Dibenzo(a,h)anthracene	ND	ND	ND

µg/kg - Micrograms per kilogram
B - Compound detected in blank sample
E - Estimated value. Concentration detected exceeds the calibrated range
J - Estimated value
ND - Not detected

SAUGET Analytical Data
Site O

SUBSURFACE SOIL SAMPLES
Pesticides/PCBs (µg/kg)
Collected by Ecology & Environment, Inc. (2/87)

Sample Number	DC-O1-59	DC-O2-60	DC-O3-61	DC-O4-62	DC-O5-63	DC-O5-64	DC-O8-65	DC-O6-66	DC-O9-72	DC-O9-73
Sample Depth (ft)	15-25	20-30	10-20	0-10	8.5-20	8.5-20	NA	15-25	0-10	15-20
Date Collected	02/16/87	02/17/87	02/17/87	02/17/87	02/17/87	02/17/87	02/18/87	02/18/87	02/26/87	02/26/87
Pesticides/PCBs							BLANK			
Alpha-BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Beta-BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delta-BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gamma-BHC (Lindane)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aldrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan I	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan sulfate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methoxychlor	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Ketone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlordane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1221	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1232	ND	ND	ND	ND	**26829 C**	**30366**	ND	ND	ND	ND
Aroclor-1242	ND	ND	ND	**1871795**	ND	ND	ND	ND	**634146**	**24691**
Aroclor-1248	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1254	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1260	ND	ND	ND	ND	**5488 JC**	**3902 J**	ND	ND	ND	ND

µg/kg - Micrograms per kilogram
C - Result confirmed by GC/MS
J - Estimated value
ND - Not detected

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SAUGET Analytical Data
Site O

SUBSURFACE SOIL SAMPLES
Pesticides/PCBs (μg/kg)
Collected by Ecology & Environment, Inc. (2/87)

	Sample Number	DC-O10-74	DC-O10-75	Maximum
	Sample Depth (ft)	5-10	10-15	Concentration
	Date Collected	02/26/87	02/26/87	Detected
Pesticides/PCBs				
Alpha-BHC		ND	ND	ND
Beta-BHC		ND	ND	ND
Delta-BHC		ND	ND	ND
Gamma-BHC (Lindane)		ND	ND	ND
Heptachlor		ND	ND	ND
Aldrin		ND	ND	ND
Heptachlor Epoxide		ND	ND	ND
Endosulfan I		ND	ND	ND
Dieldrin		ND	ND	ND
4,4'-DDE		ND	ND	ND
Endrin		ND	ND	ND
Endosulfan II		ND	ND	ND
4,4'-DDD		ND	ND	ND
Endosulfan sulfate		ND	ND	ND
4,4'-DDT		ND	ND	ND
Methoxychlor		ND	ND	ND
Endrin Ketone		ND	ND	ND
Chlordane		ND	ND	ND
Toxaphene		ND	ND	ND
Aroclor-1016		ND	ND	ND
Aroclor-1221		ND	ND	ND
Aroclor-1232		ND	ND	30366
Aroclor-1242		461539	11364	1871795
Aroclor-1248		ND	ND	ND
Aroclor-1254		ND	ND	ND
Aroclor-1260		ND	ND	5488 JC

μg/kg - Micrograms per kilogram

C - Result confirmed by GC/MS

J - Estimated value

ND - Not detected

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SAUGET Analytical Data
Site O

SUBSURFACE SOIL SAMPLES
Total Metals (mg/kg)
Collected by Ecology & Environment, Inc. (2/87)

Sample Number	DC-O1-59	DC-O2-60	DC-O3-61	DC-O4-62	DC-O5-63	DC-O5-64	DC-O8-65	DC-O6-66	DC-O9-72	DC-O9-73
Sample Depth (ft)	15-25	20-30	10-20	0-10	8 5-20	8 5-20	NA	15-25	0-10	15-20
Date Collected	02/16/87	02/17/87	02/17/87	02/17/87	02/17/87	02/17/87	02/18/87	02/18/87	02/26/87	02/26/87
Total Metals							BLANK			
Aluminum	2023	1923	3786	5885	3232	3061	6215	2148	4902	3346
Antimony	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	ND	ND	4 R	ND	3 R	3 R	8 R	2 R	6 R	3 R
Barium	57	ND	131	214	106	101	411	ND	165	125
Beryllium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Boron	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	ND	ND	ND	31	ND	ND	2	ND	4	ND
Chromium	5	6	9	18	7	6	10	5	13	6
Cobalt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	ND	ND	8	205	7	ND	33	ND	59	ND
Iron	5230	5705	9548	11859	8902	8232	12658	4815	11793	7580
Lead	3 *	6 *	7 *	147 *	7 *	9 *	54 *	4 *	18 *	5 *
Manganese	106 *	108 *	233 *	329 *	207 *	187 *	357 *	79 *	190 *	152 *
Mercury	ND	ND	ND	6.3	ND	ND	ND	ND	1.7	0.3
Nickel	ND	ND	ND	45 *	11 *	10 *	15 *	ND	38	ND
Selenium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	ND	ND	13	18	ND	ND	15	ND	19	ND
Zinc	18 *	18 *	54 *	1398	37 *	35 *	181 *	17 *	277	30 *
Cyanide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

mg/kg - Milligrams per kilogram
B - Compound detected in blank sample
R - Spike sample recovery not within control limits
* - Duplicate analysis not within control limits

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SAUGET Analytical Data
Site O

SUBSURFACE SOIL SAMPLES
Total Metals (mg/kg)
Collected by Ecology & Environment, Inc. (2/87)

	Sample Number	DC-O10-74	DC-O10-75	Maximum
	Sample Depth (ft)	5-10	10-15	Concentration
	Date Collected	02/26/87	02/26/87	Detected
Total Metals				
Aluminum		5038	2114	6215
Antimony		ND	ND	ND
Arsenic		7 R	3 R	8 R
Barium		158	45	411
Beryllium		ND	ND	ND
Boron		ND	ND	ND
Cadmium		11	ND	31
Chromium		22	4	22
Cobalt		ND	ND	ND
Copper		341	15	341
Iron		11910	5648	12658
Lead		71 *	6 *	147 *
Manganese		206 *	101 *	357 *
Mercury		1.9	ND	6.3
Nickel		136 *	11 *	136
Selenium		ND	ND	ND
Silver		ND	ND	ND
Thallium		ND	ND	ND
Tin		ND	ND	ND
Vanadium		15	ND	19
Zinc		688 *	43 *	1398
Cyanide		ND	ND	ND

mg/kg - Milligrams per kilogram
B - Compound detected in blank sample
R - Spike sample recovery not within control limits
* - Duplicate analysis not within control limits

SAUGET Analytical Data
Site O

Soil Samples
PCB and TCDD (ng/g)
Split Samples collected by IEPA and EEI

Sample Number	1	2A	2B	3A	3B	4A	4A Dup EEI	4B	5A	5A Dup IEPA
Depth (inch)	0 - F	0 - F	7 - 13	0 - 7	7 - 13	0 - 6	0 - 6	6 - 13	0 - 6	0 - 6
Date Collected	2/19/83	2/19/83	2/19/83	2/19/83	2/19/83	2/19/83	2/19/83	2/19/83	2/19/83	2/19/83
PCB and TCDD										
PCBs - IEPA	**1500**	**7600**	**390**	**9100**	**40**	**20000**	NA	**54000**	**32000**	NA
PCBs - EEI	**3690**	**5350**	**716**	**137250**	**28**	**21020**	**15510**	**149600**	**112930**	NA
TCDD - IEPA	ND	ND	ND	ND	ND	ND	ND	ND	**18**	**17**
TCDD - EEI	ND	ND	ND	ND	ND	ND	ND	ND	**28**	NA

Sample Number	5B	6	7A	7B	8A	8B	8C	8D Dup	8D	9A
Depth (inch)	6 - 14	0 - 8	0 - 6	8 - 16	0 - 6	6 - 12	13 - 18	18 - 25	18 - 25	0 - 6
Date Collected	2/19/83	2/19/83	30387	30387	30387	30387	30387	30387	30387	30387
PCB and TCDD										
PCBs - IEPA	**20000**	**120**	NA	NA	NA	NA	NA	NA	NA	NA
PCBs - EEI	**12050**	**90**	NA	NA	NA	NA	NA	NA	NA	NA
TCDD - IEPA	**4.1**	ND	ND	**1.8**	**77**	*	ND	ND	ND	**1.3**
TCDD - EEI	**5.1**	ND	ND	**44**	Interferences	**19**	**37**	**56**	ND	ND

Sample Number	9B	9C	9D	10A	10B	11A	11B	12	13A	13B
Depth (inch)	6 - 12	14 - 21	22 - 28			0 - 6	G - 18	10 - 19	0 - 7	7 - 18
Date Collected	2/19/83	2/19/83	30387	30387	30387	30387	30387	30387	30387	30387
PCB and TCDD										
PCBs - IEPA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs - EEI	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TCDD - IEPA	*	ND	**0.92**	**12**	*	ND	*	*	ND	**13**
TCDD - EEI	ND	ND	ND	ND	13	ND	ND	ND	ND	**13**

Sample Number	14	15	16	**Maximum**
Depth (inch)	0 - 6	0 - 16	0 - 18	**Concentration**
Date Collected	2/19/83	2/19/83	30387	**Detected**
PCB and TCDD				
PCBs - IEPA	NA	NA	NA	**54000**
PCBs - EEI	NA	NA	NA	**149600**
TCDD - IEPA	**25**	ND	ND	**77**
TCDD - EEI	**170**	ND	ND	**170**

ng/g - Nanograms per gram
NA - Parameter not analyzed
ND - Not detected
* - Sample not collected by IEPA
PCB - Polychlorinated biphenyl
TCDD - Tetrachlorodibenzo-p-dioxin

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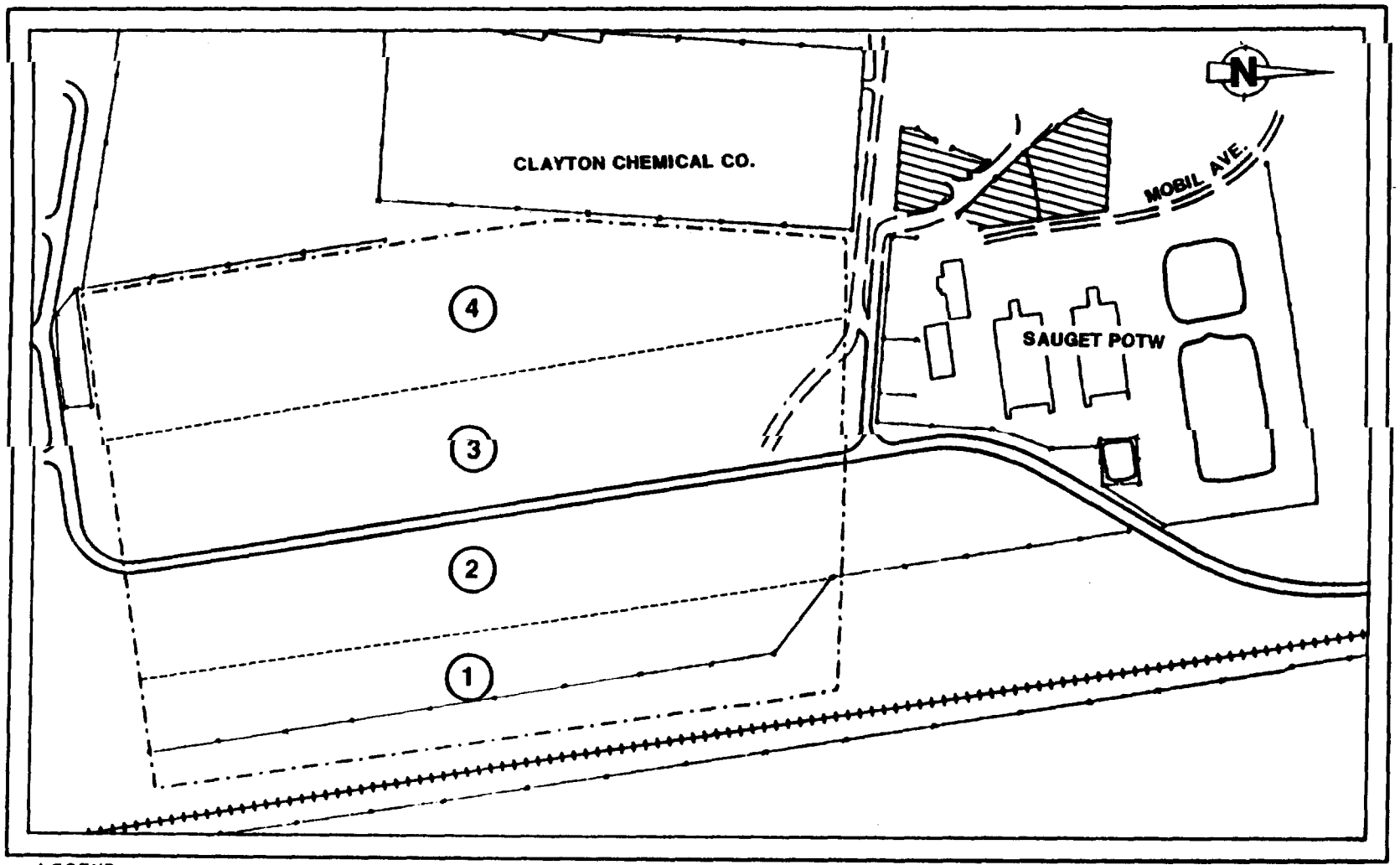

LEGEND

(2) FORMER SLUDGE LAGOON

APPROXIMATE LAGOON BOUNDARY

AREA OF INDENTIFIED SOIL CONTAMINATION

SCALE

0 100 500 1000 FEET

FIGURE O-1

FORMER SLUDGE LAGOONS AND CONTAMINATED SOIL AREAS AT SITE O

SAUGET Analytical Data
Site O

SOIL SAMPLES
Organic (mg/kg)
Collected by Russell and Axon (July 20, 1984)

Sample Number	1	2	BLANK	Maximum
Organics				**Concentration**
2,4-Dichlorophenol	**50.1**	ND	ND	**50.1**
Pentachlorophenol	**3600**	**159**	ND	**3600**
2,4,6-Trichlorophenol	**39.3**	ND	ND	**39.3**
Crysene	**123**	**2.2**	ND	**123**
Benzo-k-Fluoranthene	**15.9**	**0.45**	ND	**15.9**
Bis(2-Ethylhexyl) Phthalate	**10.9**	ND	**0.098**	**10.9**
1,2-Chlorobenzene	ND	**12.2**	ND	**12.2**
1,4-Dichlorobenzene	ND	**8.01**	ND	**8.01**
Di-Butyl Phthalate	ND	**5.06**	**0.1**	**5.06**
Phenanthrene	**100**	**1.6**	ND	**100**
Pyrene	**102**	**2.1**	ND	**102**
1,2,4-Trichlorobenzene	**65.3**	**1.6**	ND	**65.3**
PCBs	*	*	ND	ND
Benzo(a)Pyrene	**4.2**	**1**	ND	**4.2**

mg/kg - Milligrams per kilogram
ND - Not detected
* - identified, but values cannot be verified

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SAUGET Analytical Data
Site O

SOIL SAMPLES
Misc. (MG/KG)
Collected by Clayton Environmental Consultants 7/31/84

	Sample Number	Sample No 1	Sample No 2	Maximum
	Date Collected	7/31/84	7/31/84	Concentration
Misc.				Detected
Total PCBs		477	653	653
Benzene (ug/kg)		1	1	1
Phenol		0.28	12	12
Oil and Grease (%)		29	35	35
Solids (%)		82.2	87.3	87.3

NOTE: THE DATA PRESENTED IN THIS SECTION IS PRESENTED IN THE ORIGINAL REPORT FORMAT.

SOURCE: "Assessment of Ground-Water Conditions at the Village of Sauget Treatment Plant Sites", Sauget, Illinois, prepared by Geraghty & Miller, December 1986

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Table 9. Results of Soil Sample Analyses for Photoionization-Sensitive Compounds from Selected Depths and Locations Collected by Russell and Axon in September 1983, Sauget Sanitary Development and Research Association, Sauget, Illinois.

Soil Boring No.	Depth of Sample (feet below land surface)	Photoionization Sensitive Compounds (ppm)
STS-3	0 - 4	0
	4 - 9	0
STS-1	0 - 4	0
	4 - 9	0
	9 - 11	0
	11 - 13 1/2	0
	13 1/2 - 18 1/2	
TS-7	0 - 4	0
	4 - 9	0
	9 - 14 1/2	0
EFM-7	0 - 4	0
	4 - 8	0
	8 - 14	0
EFM-6	0 - 4	0
	4 - 9	0
	9 - 14	0
EFM-5	0 - 4	0
	4 - 8	0
	8 - 14	0
STS-4	0 - 4	18
	4 - 9	0
	9 - 14	6
STS-5	0 - 4	110
	4 - 8	20 - 40
	8 - 14	0 - 20
STS-6	0 - 1.3	110
	1.3 - 4	60
	4 - 6.5	40 - 80
	7.5 - 8.5	0 - 20
	9 - 14	0

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Table 9. (continued)

Soil Boring No.	Depth of Sample (feet below land surface)	Photoionization Sensitive Compounds (ppm)
STS-7	0 - 4	0
	4 - 9	0
	9 - 14	0
STS-8	0 - 4	10
	4 - 9	0
	9 - 14	0
DSM-2	0 - 4	110
	4 - 8	25
	8 - 11	85
	11 - 14	25
DSM-3	0 - 4	110
	4 - 9	20
DSM-4	0 - 4	80
	4 - 8	20 - 40
EFM-8	0 - 4	0 - 20
	4 - 9	0 - 10
EFM-9	0 - 4	20
	4 - 9	0 - 20
EFM-10	0 - 4	0
	4 - 9	0
EFM-11	0 - 4	0
	4 - 9	0
EFM-Para 1	0 - 4	0
	4 - 9	0
EFM-Para 2	0 - 4	0 - 20
	4 - 5	0 - 20
	5 - 9	0
EFM-Para 3	0 - 4	0
	4 - 9	0

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Table 9. (continued)

Soil Boring No.	Depth of Sample (feet below land surface)	Photoionization Sensitive Compounds (ppm)
EFM-15	0 - 4	0
	4 - 9	0
EFM-13	0 - 4	0
	4 - 9	0
EFM-14	0 - 4	0
	4 - 9	0
EFM-Para 4	0 - 4	0
	4 - 9	0
EFM-Para 5	0 - 4	0
	4 - 9	0
WLS-1	0 - 4	0
	4 - 9	0
WLS-2	0 - 4	0
	4 - 9	0
MH-3	23 1/2	30
EFM-#1	0 - 1	40
	3 1/2	90
	19	90
	24	32
EFM-#3	0 - 3	32
	3 - 7	18
	7 - 14	18
EFM-#2	0 - 3 1/2	30
	3 1/2 - 8	30
	8 - 13	32
	13 - 14	40
EFM-#4	1 - 4	58
	4 - 7	58
	9 - 12	60

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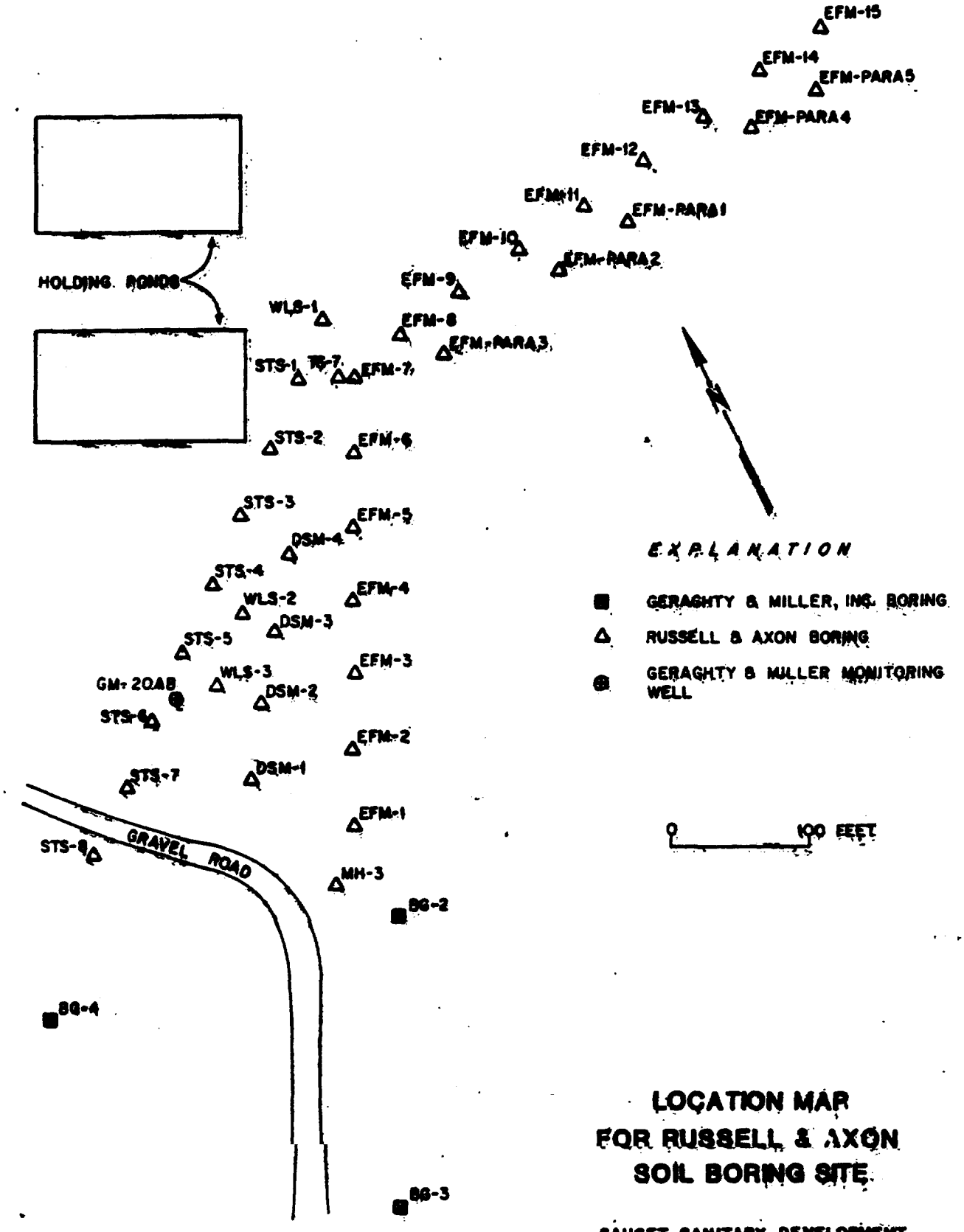

LOCATION MAP FOR RUSSELL & AXON SOIL BORING SITE

SAUGET SANITARY DEVELOPMENT AND RESEARCH ASSOCIATION
SAUGET, ILLINOIS

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FIGURE 3

GERAGHTY & MILLER, INC.
Ground-Water Consultants

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NOTE: THE DATA PRESENTED IN THIS SECTION IS PRESENTED IN THE ORIGINAL REPORT FORMAT AND A PORTION IS PRESENTED IN THE E & E SUMMARY TABLE FORMAT.

SOURCE: "Assessment of Ground-Water Conditions at the Village of Sauget Treatment Plant Sites", Sauget, Illinois, prepared by Geraghty & Miller, December 1986

SAUGET Analytical Data
Area 2 - Monsanto

SOIL SAMPLES
Volatile Organic Compounds (ug/kg)
Collected by Geraghty & Miller (8/21-23/84)

	Sample Number	BG-2	BG-3	BG-10	BG-12							Maximum
	Sample Depth (ft)	3-4 5	6-7 5	0 5-1 5	5.5-6							
VOC												Max
Acrolein		ND	ND	ND	ND							ND
Acrylonitrile		ND	ND	ND	ND							ND
Benzene		b)	b)	1,000	1,700							1700
Bis (chloromethyl)ether		ND	ND	ND	ND							ND
Bromoform		ND	ND	ND	ND							ND
Carbon Tetrachloride		b)	b)	ND	ND							ND
Chlorobenzene		ND	ND	ND	ND							ND
Chlorodibromomethane		ND	ND	ND	ND							ND
Chloroethane		ND	ND	ND	ND							ND
2-Chloroethylvinyl ether		ND	ND	ND	ND							ND
Chloroform		ND	ND	ND	ND							ND
Dichlorobromomethane		ND	ND	ND	ND							ND
Dichlorodifluoromethane		ND	ND	ND	ND							ND
1,1-Dichloroethane		ND	ND	ND	ND							ND
1,2-Dichloroethane		ND	ND	ND	ND							ND
1,1-Dichloroethylene		ND	ND	ND	ND							ND
1,2-Dichloropropane		ND	ND	ND	ND							ND
cis-1,3-Dichloropropylene		ND	ND	ND	ND							ND
trans-1,3-Dichloroproy;ene		ND	ND	ND	ND							ND
Ethylbenzene		b)	b)	1,600	440							1600
Methyl Bromide		ND	ND	ND	ND							ND
Methyl Chloride		ND	ND	ND	ND							ND
Methylene Chloride		ND	ND	25,900	15,400							25900
1,1,2,2-Tetrachloroethane		ND	ND	ND	ND							ND
Tetrachloroethylene		ND	ND	ND	ND							ND
Toluene		b)	b)	6,900	4,800							6900
1,2-trans-dichloroethylene		ND	ND	ND	ND							ND
1,1,1-Trichloroethane		ND	ND	ND	ND							ND
1,1,2-Trichloroethane		ND	ND	ND	ND							ND
Trichloroethylene		ND	ND	ND	ND							ND
Trichlorofluoromethane		ND	ND	ND	ND							ND
Vinyl Chloride		ND	ND	ND	ND							ND

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SAUGET Analytical Data

Area 2 - Monsanto

SOIL SAMPLES

Base/Neutral Extractable Compounds (ug/kg)

Collected by Geraghty & Miller (8/21-23/84)

Sample Number	BG-2	BG-3	BG-10	BG-12							Maximum
Sample Depth (ft)	3-4 5	6-7 5	0 5-1 5	5.5-6							Detected
Base/Neutral											
Acenaphthene	ND	ND	ND	ND							ND
Acenapthylene	ND	ND	ND	ND							ND
Anthracene	ND	ND	ND	ND							ND
Benzidine	ND	ND	ND	ND							ND
Benzo(a)anthracene	10,400	8,000	ND	41,600							41600
Benzo(a)pyrene	9,650	8,000	ND	42,400							42400
Benzo(a)fluoranthene	ND	ND	ND	ND							ND
Benzo(ghi)perylene	4,660	5,000	ND	63,000							63000
Benzo(k)fluoranthene	9,600	6,000	ND	40,500							40500
Bis(2-chloroethoxy)methane	ND	ND	ND	ND							ND
Bis(2-chloroethyl)ether	ND	ND	ND	ND							ND
Bis(2-chloroisopropyl)ether	ND	ND	ND	ND							**ND**
Bis(2-ethylhexyl)phthalate	ND	7,000	7,610	ND							**7610**
4-Bromophenyl phenyl ether	ND	ND	ND	ND							**ND**
Butyl benzyl phthalate	342,000	ND	ND	206,000							342000
2-Chloronaphthalene	ND	ND	ND	ND							ND
4-Chlorophenyl phenyl ether	ND	ND	ND	ND							ND
Chrysene	18,400	15,000	ND	87,000							**87000**
Dibenzo(a,h)anthracene	5,170	ND	ND	34,800							**34800**
1,2-Dichlorobenzene	606,000	595,000	4,380	247,000							**606000**
1,3-Dichlorobenzene	ND	ND	ND	ND							ND
1,4-Dichlorobenzene	1,030,000	795,000	3,430	364,000							1030000
3,3-Dichlorobenzidine	ND	ND	ND	ND							ND
Diethyl phthalate	ND	ND	ND	ND							**ND**
Dimethyl phthalate	ND	ND	ND	ND							ND
Di-n-buyl phthalate	ND	ND	ND	ND							**ND**
2,4-Dinitrotoluene	ND	ND	ND	ND							ND
2,6-Dinitrotoluene	ND	ND	ND	ND							ND
Di-n-octyl phthalate	ND	5,000	ND	ND							5000
1,2-Diphenylhydrazine	ND	ND	ND	ND							ND
Fluoranthene	ND	2,000	ND	74,600							74600
Fluorene	ND	7,000	ND	13,500							13500
Hexachlorobenzene	ND	ND	ND	ND							ND
Hexachlorobutadiene	ND	ND	ND	ND							ND
Hexachlorocyclopentadiene	ND	ND	ND	ND							ND
Hexachloroehtane	ND	ND	ND	ND							ND
Indeno(1,2,3-c,d)pyrene	ND	ND	ND	26,800							26800
Isophorone	ND	ND	ND	ND							ND
Naphthalene	ND	ND	ND	10,400							10400
Nitrobenzene	ND	ND	ND	ND							ND
n-Nitrosodimethylamine	ND	ND	ND	ND							ND
n-Nitrosodi-n-propylamine	ND	ND	ND	ND							ND
n-Nitrosodiphenylamine	ND	ND	ND	ND							**ND**
Phenanthrene	ND	ND	ND	230,000							230000
Pyrene	ND	ND	ND	ND							ND
1,2,4-Trichlorob[illegible]e	ND	ND	ND	5,920							5920

SAUGET Analytical Data
Area 2 - Monsanto

SOIL SAMPLES
Acid Extractable Organic Compounds (ug/kg)
Gilmetchny, Geraghty, & Millner (812) 22(84)

	Sample Number	BG-2	BG-3	BG-10	BG-12							Maximum
	Sample Depth (ft)	3-4.5	6-7.5	0.5-1.5	5.5-6							Detected
ACID EXTRACTABLE												
2-Chlorophenol		ND	ND	ND	ND							ND
2,4-Dichlorophenol		170,000	100,000	11,500	69,400							170000
2,4-Dimethylphenol		ND	ND	ND	ND							ND
4,6-Dinitro-o-cresol		ND	ND	ND	ND							ND
2,4-Dinitrophenol		ND	ND	ND	ND							ND
2-Nitrophenol		ND	ND	ND	ND							ND
4-Nitrophenol		ND	ND	ND	ND							ND
p-Chloro-m-cresol		ND	ND	ND	ND							ND
Pentachlorophenol		1,430,000	1,620,000	181,000	382,000							1620000
Phenol		151,000	ND	ND	104,000							151000
2,4,6-Trichlorophenol		214,000	108,000	11,500	32,900							214000

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SAUGET Analytical Data
Area 2 - Monsanto

SOIL SAMPLES
Pesticide/PCB Compounds (ug/kg)
Collected by Geraghty & Miller (8/21-23/84)

	Sample Number	BG-2	BG-3	BG-10	BG-12							Maximum
	Sample Depth (ft)	3-4 5	6-7 5	0 5-1 5	5 5-6							Detected
PESTICIDE/PCB												
Aldrin		8.58	10.5	8.58	ND							10 5
Alpha-BHC		34.4	16.5	34.4	ND							34 4
Beta-BHC		ND	ND	ND	ND							ND
Gamma-BHC		22.9	32.7	22.9	ND							32 7
Delta-BHC		ND	ND	ND	ND							ND
Chlordane		ND	ND	72.2	ND							72.2
4,4'-DDT		ND	ND	ND	ND							ND
4,4'-DDE		ND	ND	ND	ND							ND
4-4'-DDD		ND	ND	ND	ND							ND
Dieldrin		ND	ND	ND	ND							ND
Endosulfan I		ND	ND	ND	ND							ND
Endosulfan II		ND	ND	ND	ND							ND
Endosulfan sulfate		ND	ND	ND	ND							ND
Endrin		ND	ND	ND	ND							ND
Endrin aldehyde		ND	0.287	ND	ND							0 287
Heptachlor		28.4	29.8	28.4	ND							29.8
Heptachlor epoxide		ND	ND	ND	830							830
PCB-1016		1.9	1.22	1.9	ND							1 9
PCB-1221		ND	ND	ND	ND							ND
PCB-1232		ND	ND	ND	ND							ND
PCB-1242		ND	ND	ND	ND							ND
PCB-1248		ND	ND	ND	ND							ND
PCB-1254		ND	ND	43.2	ND							43.2
PCB-1260		ND	ND	ND	ND							ND
Toxaphene		ND	ND	ND	ND							ND

Table 10. Results of Soil Sample Analyses for Photoionization-Sensitive Compounds and PCBs From Selected Depths and Locations, Collected by Geraghty & Miller, Inc. Sauget Sanitary Development and Research Association, Sauget, Illinois.

Soil Boring No.	Sample Collection Date	Depth of Sample (feet below land surface)	Photoionization-Sensitive Compounds (ppm)	PCBs (ppm)
BG-1	8-21-84	0 - 1.5	0	NA[a)]
		1.5 - 3	0	NA
		3 - 4.5	0	NA
		4.5 - 6	0	NA
		6 - 7.5	0	NA
		7.5 - 9	0	NA
		9 - 10.5	0	NA
BG-2	8-21-84	0 - 1.5	0	NA
		1.5 - 3	75	NA
		3 - 4.5	150	NA
		4.5 - 6	150	NA
		6 - 7.5	50	NA
		7.5 - 9	75	NA
BG-3	8-21-84	0 - 1.5	10	NA
		3 - 4.5	125	NA
		4.5 - 6	250	88.10
		6 - 7.5	200	NA
		7.5 - 9	175	NA
		9 - 10.5	175	NA
BG-4	8-21-84	0 - 1.5	0	NA
		1.5 - 3	30	NA
		3 - 4.5	0	NA
		4.5 - 6	0	NA
		6 - 7.5	0	NA
		7.5 - 9	5	NA
BG-5	8-22-84	0 - 1.5	0	NA
		1.5 - 3	0	NA
		3 - 4.5	30	NA
		4.5 - 6	175	NA[b)]
		6 - 7.5	150	NA
		7.5 - 9	30	NA
		9 - 10.5	30	NA

a) Not analyzed
b) Black sticky lagoon sludge (3-inches thick) was detected at 5.75-6 feet. Insufficient recovery for analysis. It appeared to be the same material as was detected in BG-12.

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Table 10. (Continued)

Soil Boring No.	Sample Collection Date	Depth of Sample (feet below land surface)	Photoionization-Sensitive Compounds (ppm)	PCBs (ppm)
BG-6	8-22-84	0 - 1.5	0	NA
		1.5 - 3	0	NA
		3 - 4.5	0	NA
		4.5 - 6	185	NA
		6 - 7.5	195	NA
		7.5 - 9	10	NA
BG-7	8-22-84	0 - 1.5	0	NA
		1.5 - 3	150	NA
		3 - 4.5	0	NA
		4.5 - 6	0	NA
		6 - 7.5	0	NA
		8.5 - 10	0	NA
		10 - 11.5	0	NA
BG-8	8-22-84	0 - 1.5	0	NA
		1.5 - 3	0	NA
		3 - 4.5	0	NA
		4.5 - 6	0	NA
		6 - 7.5	0	NA
		7.5 - 9	0	NA
		9 - 10.5	0	NA
BG-9	8-22-84	0 - 1.5	0	NA
		1.5 - 3	0	NA
		3 - 4.5	0	NA
		4.5 - 6	0	NA
		6 - 7.5	0	NA
		7.5 - 9	0	NA
		9 - 10.5	0	NA
BG-10	8-22-84	0 - 1.5	10	NA
		1.5 - 3	10	12.47
		3 - 4.5	10	NA
		4.5 - 6	15	NA
		6 - 7.5	-[c]	NA
		7.5 - 9	-[c]	NA
		9 - 10.5	0	NA

c) No recovery of soil sample.

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Table 10. (Continued)

Soil Boring No.	Sample Collection Date	Depth of Sample (feet below land surface)	Photoionization-Sensitive Compounds (ppm)	PCBs (ppm)
BG-11	8-23-84	0 - 1.5	0	NA
		1.5 - 3	0	NA
		3 - 4.5	0	NA
		4.5 - 6	0	NA
		6 - 7.5	0	NA
		7.5 - 9	0	NA
BG-12	8-23-84	0 - 1.5	0	NA
		1.5 - 3	0	NA
		3 - 4.5	0	NA
		4.5 - 6	200	NA
		6 - 7.5	150	91.59[d)]
		7.5 - 9	5	NA
		9 - 10.5	5	NA

d) The zone of black sludge material is from 5.5 to 7.5 feet.

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LOCATION MAP - GERAGHTY & MILLER BORINGS BG-1 TO BG-12

Source: "Assessment of Groundwater Conditions at the village of Sauget Treatment Plant Sites", Geraghty & Miller, 1986

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SAUGET Analytical Data
Site 2

SURFACE SOIL SAMPLES
Volatile Organic Compounds (µg/kg)
Collected by IEPA (11/9-10/94)

Sample Number	X101	X102	X103	X104	X105	X106	X107	X108	X109	X110
VOC										
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	15	6 J	ND	ND	5 J	ND	ND	6 J	ND	12 J
Acetone	ND	ND	ND	ND	27	ND	ND	ND	ND	ND
Carbon Disulfide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	24	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethene (total)	240	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	10 J	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	10 J	ND	ND	ND	ND	18	ND	ND	ND	ND
Carbon Tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	6 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	5 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloroethyl Vinyl Ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	ND	ND	5 J	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	8 J	ND	ND	ND	14	ND	ND	ND	ND	8 J
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ND	ND	ND	ND	14	ND	ND	ND	ND	ND

µg/kg - Micrograms per kilogram
J - Estimated value
ND - Not detected

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SAUGET Analytical Data
Site Q

SURFACE SOIL SAMPLES
Volatile Organic Compounds (µg/kg)
Collected by IEPA (11/9-11/10/1994)

	Sample Number		X111	Maximum Detected
VOC				
Chloromethane			ND	ND
Bromomethane			ND	ND
Vinyl chloride			ND	ND
Chloroethane			ND	ND
Methylene chloride			ND	15
Acetone			ND	27
Carbon Disulfide			ND	ND
1,1-Dichloroethene			ND	ND
1,1-Dichloroethane			ND	24
1,2-Dichloroethene (total)			ND	240
Chloroform			ND	10 J
1,2-Dichloroethane			ND	ND
2-Butanone			ND	ND
1,1,1-Trichloroethane			ND	18
Carbon Tetrachloride			ND	ND
Vinyl Acetate			ND	ND
Bromodichloromethane			ND	ND
1,2-Dichloropropane			ND	ND
trans-1,3-Dichloropropene			ND	ND
Trichloroethene			ND	6 J
Dibromochloromethane			ND	ND
1,1,2-Trichloroethane			ND	ND
Benzene			ND	5 J
cis-1,3-Dichloropropene			ND	ND
2-Chloroethyl Vinyl Ether			ND	ND
Bromoform			ND	ND
4-Methyl-2-pentanone			ND	ND
2-Hexanone			ND	ND
Tetrachloroethene			ND	5 J
1,1,2,2-Tetrachloroethane			ND	ND
Toluene			ND	14
Chlorobenzene			ND	ND
Ethylbenzene			ND	ND
Styrene			ND	ND
Total Xylenes			ND	14

µg/kg - Micrograms per kilogram
J - Estimated value
ND - Not detected

SAUGET Analytical Data
Site Q

SURFACE SOIL SAMPLES
Base Neutrals/Acids (µg/kg)
Collected by IEPA (11/9-10/94)

Sample Number	X101	X102	X103	X104	X105	X106	X107	X108	X109	X110
BNAs										
Phenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroethyl)ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl Alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	ND	ND	ND	ND	ND	ND	270 J	ND	ND	ND
bis(2-Chloroisopropyl)ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	ND	ND	ND	ND	ND	ND	280 J	ND	ND	ND
N-Nitroso-n-Dipropylamine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone	ND	ND	ND	ND	ND	ND	210 J	ND	ND	ND
2-Nitrophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	ND	ND	ND	ND	ND	ND	270 J	ND	ND	ND
Benzoic Acid	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis-(2-Chloroethoxy)methane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	160 J	ND	ND
4-Chloro-3-methylphenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphathalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitroaniline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl Phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

µg/kg - Micrograms per kilogram.
B - Compound detected in blank sample.
J - Estimated value.
ND - Not detected.

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SAUGET Analytical Data
Site Q

SURFACE SOIL SAMPLES
Base Neutrals/Acids (μg/kg)
Collected by IEPA (11/9-10/94)

Sample Number	X101	X102	X103	X104	X105	X106	X107	X108	X109	X110
BNAs										
2,4-Dinitrophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl-Phenylether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitroaniline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Bromophenyl-phenylether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	ND	ND	ND	ND	ND	ND	ND	ND	76 J	ND
Anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbazole	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butly phthalate	ND	ND	ND	ND	ND	ND	ND	340 J	310 J	380 J
Fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND	160 J	ND
Pyrene	ND	ND	ND	ND	ND	ND	ND	ND	170 J	ND
Butyl Benzyl phthalate	ND	ND	ND	ND	ND	ND	120 J	ND	ND	ND
3,3'-Dichlorobenzidine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo (a)anthracene	ND	ND	ND	ND	ND	ND	ND	ND	89 J	ND
bis(2-ethylhexyl)phthalate	1200000 B	13000 B	9300 B	110000000 B	13000 B	120000 B	1900	3800 B	310 JB	1000 B
Chrysene	ND	ND	ND	ND	ND	ND	ND	ND	110 J	ND
Di-n-octyl phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND	87 J	ND
Benzo(k)fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND	96 J	ND
Benzo (a)pyrene	ND	ND	ND	ND	ND	ND	ND	ND	84 J	ND
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

μg/kg Micrograms per kilogram
B - Compound detected in blank sample
J - Estimated value
ND - Not detected

SAUGET Analytical Data
Site Q

SURFACE SOIL SAMPLES
Base Neutrals/Acids (μg/kg)
Collected by IEPA (11/9-10/94)

	Sample Number	X111	Maximum Detected
BNAs			
Phenol		ND	ND
bis(2-Chloroethyl)ether		ND	ND
2-Chlorophenol		ND	ND
1,3-Dichlorobenzene		ND	ND
1,4-Dichlorobenzene		ND	ND
Benzyl Alcohol		ND	ND
1,2-Dichlorobenzene		ND	ND
2-Methylphenol		ND	**270 J**
bis(2-Chloroisopropyl)ether		ND	ND
4-Methylphenol		ND	**280 J**
N-Nitroso-n-Dipropylamine		ND	ND
Hexachloroethane		ND	ND
Nitrobenzene		ND	ND
Isophorone		ND	**210 J**
2-Nitrophenol		ND	ND
2,4-Dimethylphenol		ND	**270 J**
Benzoic Acid		ND	ND
bis-(2-Chloroethoxy)methane		ND	ND
2,4-Dichlorophenol		ND	ND
1,2,4-Trichlorophenol		ND	ND
Naphthalene		ND	ND
4-Chloroaniline		ND	ND
Hexachlorobutadiene		ND	**160 J**
4-Chloro-3-methylphenol		ND	ND
2-Methylnaphathalene		ND	ND
Hexachlorocyclopentadiene		ND	ND
2,4,6-Trichlorophenol		ND	ND
2,4,5-Trichlorophenol		ND	ND
2-Chloronaphthalene		ND	ND
2-Nitroaniline		ND	ND
Dimethyl Phthalate		ND	ND
Acenaphthylene		ND	ND
3-Nitroaniline		ND	ND
Acenaphthene		ND	ND

μg/kg - Micrograms per kilogram.
B - Compound detected in blank sample.
J - Estimated value.
ND - Not detected.

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SAUGET Analytical Data
Site Q

SURFACE SOIL SAMPLES
Base Neutrals/Acids (μg/kg)
Collected by IEPA (11/9-10/94)

	Sample Number	X111	Maximum Detected
BNAs			
2,4-Dinitrophenol		ND	ND
4-Nitrophenol		ND	ND
Dibenzofuran		ND	ND
2,4-Dinitrotoluene		ND	ND
2,6-Dinitrotoluene		ND	ND
Diethylphthalate		ND	ND
4-Chlorophenyl-Phenylether		ND	ND
Fluorene		ND	ND
4-Nitroaniline		ND	ND
4,6-Dinitro-2-methylphenol		ND	ND
N-Nitrosodiphenylamine		ND	ND
4-Bromophenyl-phenylether		ND	ND
Hexachlorobenzene		ND	ND
Pentachlorophenol		ND	ND
Phenanthrene		73 J	76 J
Anthracene		62 J	62
Carbazole		ND	ND
Di-n-butly phthalate		250 J	380 J
Fluoranthene		140 J	160 J
Pyrene		140 J	170 J
Butyl Benzyl phthalate		ND	120 J
3,3'-Dichlorobenzidine		ND	ND
Benzo (a)anthracene		ND	89 J
bis(2-ethylhexyl)phthalate		1500	110000000 B
Chrysene		110 J	110 J
Di-n-octyl phthalate		ND	ND
Benzo(b)fluoranthene		110 J	110 J
Benzo(k)fluoranthene		88 J	96 J
Benzo (a)pyrene		ND	84 J
Indeno(1,2,3-cd)pyrene		ND	ND
Benzo(g,h,i)perylene		ND	ND
Dibenzo(a,h)anthracene		ND	ND

μg/kg - Micrograms per kilogram
B - Compound detected in blank sample
J - Estimated value.
ND - Not detected

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SAUGET Analytical Data
Site Q

SURFACE SOIL SAMPLES
Pesticides/PCBs/Herbicides (µg/kg)
Collected by IEPA (11/9-10/94)

Sample Number	X101	X102	X103	X104	X105	X106	X107	X108	X109	X110
Pesticides/PCBs										
Alpha-BHC	ND	ND	ND	ND	ND	ND	ND	DM	DM	DM
Beta-BHC	ND	ND	ND	ND	ND	ND	ND	DM	DM	DM
Delta-BHC	ND	ND	ND	ND	ND	ND	ND	DM	DM	DM
Gamma-BHC (Lindane)	ND	ND	ND	ND	ND	ND	ND	DM	DM	DM
Heptachlor	ND	ND	ND	ND	ND	ND	ND	DM	DM	DM
Aldrin	ND	ND	ND	ND	ND	ND	ND	DM	DM	DM
Heptachlor Epoxide	ND	ND	ND	ND	ND	ND	ND	DM	DM	DM
Endosulfan I	ND	ND	ND	ND	ND	ND	ND	DM	DM	DM
Dieldrin	ND	ND	ND	ND	ND	ND	ND	DM	DM	DM
4,4'-DDE	ND	ND	ND	ND	ND	ND	ND	DM	DM	DM
Endrin	ND	ND	ND	ND	ND	ND	ND	DM	DM	DM
Endosulfan II	ND	ND	ND	ND	ND	ND	ND	DM	DM	DM
4,4'-DDD	ND	ND	ND	ND	ND	ND	ND	DM	DM	DM
Endosulfan sulfate	ND	ND	ND	ND	ND	ND	ND	DM	DM	DM
4,4'-DDT	ND	ND	ND	ND	ND	ND	ND	DM	DM	DM
Methoxychlor	ND	ND	ND	ND	ND	ND	ND	DM	DM	DM
Endrin Ketone	ND	ND	ND	ND	ND	ND	ND	DM	DM	DM
Chlordane	ND	ND	ND	ND	ND	ND	ND	DM	DM	DM
Toxaphene	ND	ND	ND	ND	ND	ND	ND	DM	DM	DM
Aroclor-1016	ND	ND	ND	ND	ND	ND	ND	DM	DM	DM
Aroclor-1221	ND	ND	ND	ND	ND	ND	ND	DM	DM	DM
Aroclor-1232	ND	ND	ND	ND	ND	ND	ND	DM	DM	DM
Aroclor-1242	ND	ND	ND	ND	ND	ND	ND	DM	DM	DM
Aroclor-1248	ND	ND	**500**	ND	ND	ND	**4800 P**	DM	DM	DM
Aroclor-1254	**110000 P**	**1100 P**	**2300**	**14000 P**	**22000**	**1700 P**	**11000 E**	DM	DM	DM
Aroclor-1260	**83000**	**460**	**1500**	**12000**	**6500 P**	**2300**	**8800 PE**	DM	DM	DM

µg/kg - Micrograms per kilogram

DM - Data missing.

E - Estimated value. Concentration detected exceeds the calibrated range

P - Greater than 25% differnce exists for the detected concentrations between the two GC columns. The lower of the results is reported.

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SAUGET Analytical Data
Site Q

SURFACE SOIL SAMPLES
Pesticides/PCBs/Herbicides (μg/kg)
Collected by IEPA (11/9-10/94)

	Sample Number	X111	Maximum Detected
Pesticides/PCBs			
Alpha-BHC		DM	ND
Beta-BHC		DM	ND
Delta-BHC		DM	ND
Gamma-BHC (Lindane)		DM	ND
Heptachlor		DM	ND
Aldrin		DM	ND
Heptachlor Epoxide		DM	ND
Endosulfan I		DM	ND
Dieldrin		DM	ND
4,4'-DDE		DM	ND
Endrin		DM	ND
Endosulfan II		DM	ND
4,4'-DDD		DM	ND
Endosulfan sulfate		DM	ND
4,4'-DDT		DM	ND
Methoxychlor		DM	ND
Endrin Ketone		DM	ND
Chlordane		DM	ND
Toxaphene		DM	ND
Aroclor-1016		DM	ND
Aroclor-1221		DM	ND
Aroclor-1232		DM	ND
Aroclor-1242		DM	ND
Aroclor-1248		DM	**4800 P**
Aroclor-1254		DM	**110000 P**
Aroclor-1260		DM	**83000**

μg/kg - Micrograms per kilogram.
DM - Data missing.
E - Estimated value. Concentration detected exceeds the calibrated range.
P - Greater than 25% differnce exists for the detected concentrations between the two GC columns. The lower of the results is reported.

SAUGET Analytical Data
Site Q

SURFACE SOIL SAMPLES
Total Metals (mg/kg)
Collected by IEPA (11/9-10/94)

Sample Number	X101	X102	X103	X104	X105	X106	X107	X108	X109	X110
Total Metals										
Aluminum	10700 *	5710 *	3240 *	3500 *	237 *	3250 *	5630 *	3330 *	5590 *	1030 *
Antimony	157 N*	ND	17900 N*	ND	ND	ND	ND	ND	ND	47.6 N*
Arsenic	13.7 N*S	1.4 BN*S	216 N*S	1.6 BNW*	0.47 BN*	0.93 BN*	2.7 N*S	3.3 N*S	3 N*S	19.3 N*S
Barium	1220 N*	141 N*	1680 N*	63.3 N*	188 N*	3620 N*	103 N*	150 N*	123 N*	1120 N*
Beryllium	0.54 B	0.49 B	0.3 B	0.31 B	ND	ND	0.44 B	ND	0.47 B	ND
Cadmium	2280 *	3.9 *	8.7	1.1 B*	1.4 *	1.5 *	28.7 *	6 *	1.9 *	1.2 B
Calcium	13400	18000	10300	152000	456 B	1320	4360	2090	9070	413 B
Chromium	3650 *	12.1 *	142 *	5.8 *	3 *	7 *	287 *	43.9 *	10.4 *	40.8
Cobalt	18.7	7.4 B	13.3 B	2.9 B	ND	3.7 B	8.2 B	5.7 B	8 B	6.9 B
Copper	324	18.7	1630	7.6	2.8 B	9	32.8	166	21.6	226
Iron	63500 *	11600 *	80500 *	5450 *	469 *	2170 *	22500 *	7920 *	10900 *	65200 *
Lead	7690	152 *	195000 *	18100 *	62.2 *	41.1	191 *	571 *	52 *	5320 *
Magnesium	2940	4250	1350	4600	56.9 B	2350	2040	1230 B	2830	89.9 B
Manganese	606	372	1270	275	4	62.3	334	133	455	152
Mercury	4.9	ND	0.25	ND	ND	0.14	ND	0.3	ND	0.64
Nickel	153 N*	17.6 N*	101 N*	8.1 BN*	ND	6.5 BN*	23.1 N*	18.7 N*	18.9 N*	371 N*
Potassium	1310 B	1030 B	446 B	604 B	ND	301 B	898 B	598 B	940 B	2430
Selenium	59.9 *S	ND	ND	ND	2.1 B*	ND	1.5 *S	0.33 B*W	ND	ND
Silver	3.3 N	ND	30.2 N	ND	ND	ND	ND	ND	ND	28.9 N
Sodium	268 B	ND	ND	810 B	ND	ND	ND	ND	ND	476 B
Thallium	ND	ND	0.89 B	ND	ND	ND	ND	ND	ND	ND
Vanadium	7.3 B	16	ND	7.6 B	ND	10 B	13.8	9.1 B	13.6 B	ND
Zinc	7290 *	689	9520 *	95 *	10.8 *	66.1 *	2010 *	338 *	206 *	120 *
Cyanide	3.3	ND	2.8	ND	ND	ND	ND	ND	ND	ND
Sulfate	82.4	ND	55.9	ND	907	ND	76.1	170	4780	901
Sulfide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

mg/kg - Milligrams per kilogram

B - Estimated value The value is less than the CRDL, but greater than the instrument detection limit

N - Laboratory spike recoveries were outside QC protocols

ND - Not detected

S - Analysis performed using the method of standard additions

W - Laboratory post-digestion spike for furnace AA analysis exceeds QC limits

* - Laboratory duplicate analysis not within control limits

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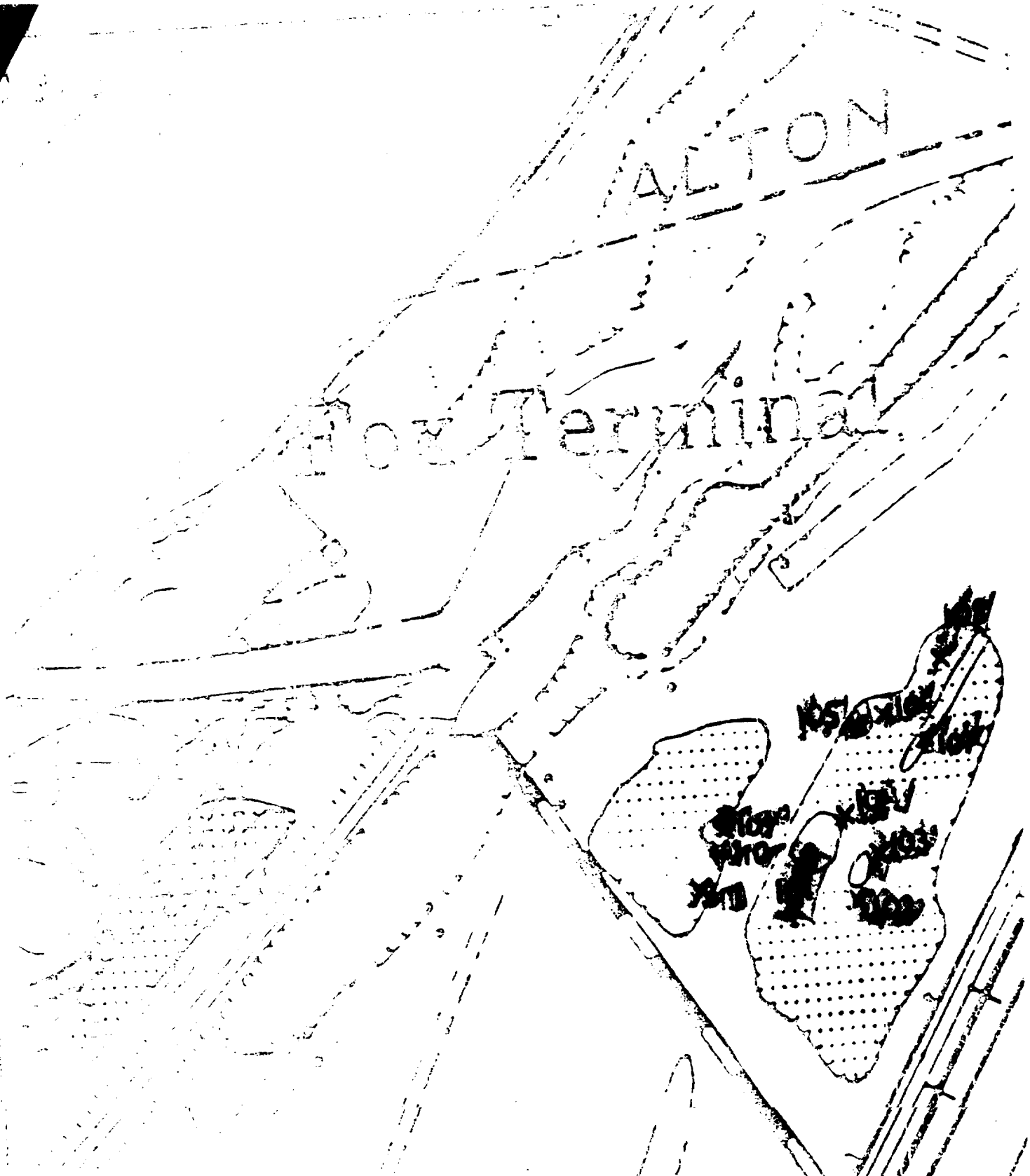
SAUGET Analytical Data
Site Q

SURFACE SOIL SAMPLES
Total Metals (mg/kg)
Collected by IEPA (11/9-10/94)

	Sample Number		X111	Maximum Detected
Total Metals				
Aluminum			10100 *	10700 *
Antimony			ND	17900 N*
Arsenic			4.4 BN*S	216 N*S
Barium			170 N*	3620 N*
Beryllium			0.73 B	0.73 B
Boron			1.9 *	2260 *
Cadmium			11500	152000
Chromium			15.6 *	3650 *
Cobalt			9.7 B	18.7
Copper			38	1630
Iron			17100 *	80500 *
Lead			58.1 *	195000 *
Magnesium			3990	4600
Manganese			597	1270
Mercury			ND	4.9
Nickel			25.9 N*	371 N*
Potassium			1520	2430
Selenium			ND	59.9 *S
Silver			ND	30.2 N
Sodium			ND	810 B
Thallium			ND	0.89 B
Vanadium			23.1 B	23.1
Zinc			216 *	9520 *
Cyanide			ND	3.3
Sulfate			300	4780
Sulfide			ND	ND

mg/kg - Milligrams per kilogram
B - Estimated value The value is less than the CRDL, but greater than the instrument detection limit
N - Laboratory spike recoveries were outside QC protocols
ND - Not detected
S - Analysis performed using the method of standard additions
W - Laboratory post-digestion spike for furnace AA analysis exceeds QC limits
* - Laboratory duplicate analysis not within control limits

00112



SAMPLE LOCATION MAP - SAMPLES X101 - X111

Source: Memo to M. Rebbe from P. Takacs, dated 12/30/94

SAUGET Analytical Data
Site Q

SOIL SAMPLES
Semi-Volatiles (µg/kg)
Collected by E&E (5/27/94)

	Sample Number	QD1	QD2	QD3	Maximum
Semi-Volatiles					**Concentration**
Phenol		**69000 JD**	ND	ND	**69000 JD**
2-Chlorophenol		**67000 JD**	ND	ND	**67000 JD**
1,4-Dichlorobenzene		**110000 JD**	ND	ND	**110000 JD**
N-Nitroso-di-n-propylamine		**42000 JD**	ND	ND	**42000 JD**
1,2,4-Trichlorobenzene		**51000 JD**	ND	ND	**51000 JD**
4-Chloro-3-Methylphenol		**67000 JD**	ND	ND	**67000 JD**
Acenaphthene		**44000 JD**	ND	ND	**44000 JD**
4-Nitrophenol		**24000 JD**	ND	ND	**24000 JD**
2,4-Dinitrotoluene		**40000 JD**	ND	ND	**40000 JD**
Pentachlorophenol		**20000 JD**	ND	ND	**20000 JD**

µg/kg - Micrograms per kilogram.
D - Compound concentration is at a secondary dilution factor.
J - Estimated value.
ND - Not detected.

SAUGET Analytical Data
Site Q

SOIL SAMPLES
TCLP Metals (μg/L)
Collected by E&E (5/27/94)

Sample Number	QD1	QD2	QD3	Maximum Concentration
Total Metals				
Arsenic	ND	ND	ND	ND
Barium	**320**	**440**	**390**	**440**
Cadmium	ND	ND	ND	ND
Chromium	ND	ND	ND	ND
Lead	ND	ND	ND	ND
Mercury	ND	ND	ND	ND
Lead	ND	ND	ND	ND
Selenium	ND	ND	ND	ND
Silver	ND	ND	ND	ND

μg/L - Micrograms per liter.
ND - Not detected

0015

SAUGET Analytical Data
Site Q

SOIL SAMPLES
TCLP Semi-Volatiles (μg/L) and PCBs (mg/kg)
Collected by E&E (5/27/94)

Sample Number	QD1	QD2	QD3	Maximum
TCLP and PCB				Concentration
2,4,6-Trichlorophenol	ND	6.3 J	ND	6.3 J
Pentachlorophenol	ND	16 J	ND	16 J
PCB - 1260 (mg/kg)	180000	260000	230000	260000

μg/L - Micrograms per liter
mg/kg - Milligrams per kilogram
J - estimated value
PCBs - polychlorinated biphenyls

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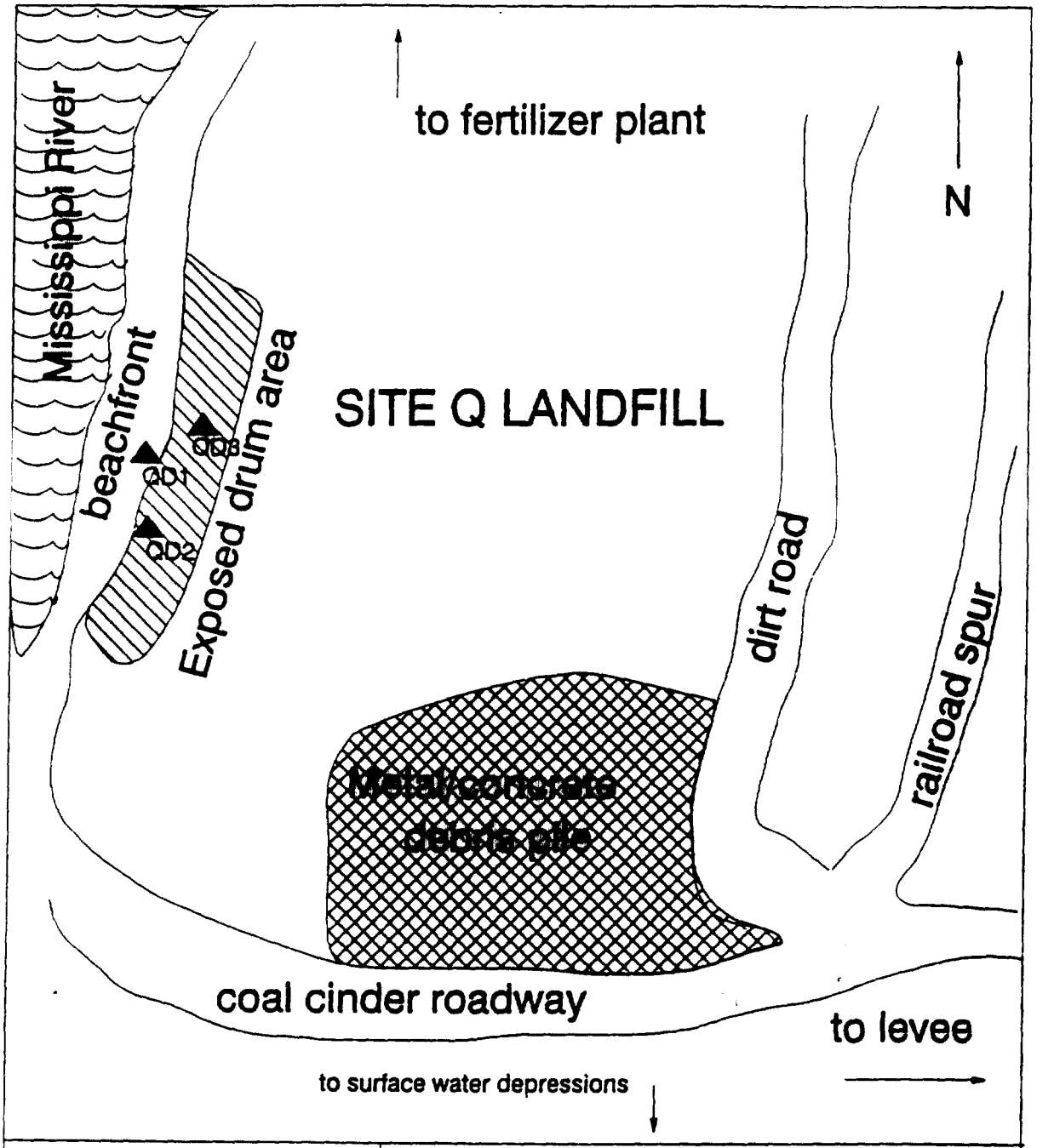

KEY

▲ Drum Sample

ecology and environment, inc.
Technical Assistance Team
Region V
111 West Jackson Blvd.
Chicago, IL 60604

TITLE: SAMPLE LOCATION MAP	FIGURE #: 3
SITE: SAUGET AREA 2 - SITE Q	SCALE: NOT TO SCALE
CITY: SAUGET / STATE: ILLINOIS	PAN: EIL0837SAA

recycled paper

SAUGET Analytical Data
Site Q

SOIL SAMPLES (Sampling date not known)
Volatile Organic Compounds (μg/kg)
Collected by Riedel Industrial Waste Management, Inc.

Sample Number	PIT #2	Maximum Concentration
VOC		
Chloromethane	ND	ND
Bromomethane	ND	ND
Vinyl chloride	ND	ND
Chloroethane	ND	ND
Methylene chloride	ND	ND
Carbon Disulfide	ND	ND
1,1-Dichloroethene	ND	ND
1,1-Dichloroethane	ND	ND
1,2-Dichloroethene (total)	ND	ND
Chloroform	69000	69000
1,2-Dichloroethane	ND	ND
2-Butanone	30200	30200
1,1,1-Trichloroethane	ND	ND
Carbon Tetrachloride	ND	ND
Vinyl Acetate	ND	ND
Bromodichloromethane	ND	ND
1,2-Dichloropropane	ND	ND
cis-1,3-Dichloropropene	ND	ND
Trichloroethene	ND	ND
Dibromochloromethane	ND	ND
1,1,2-Trichloroethane	ND	ND
Benzene	ND	ND
trans-1,3-Dichloropropene	ND	ND
Bromoform	ND	ND
4-Methyl-2-pentanone	ND	ND
2-Hexanone	ND	ND
Tetrachloroethene	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND
Toluene	5500	5500
Chlorobenzene	15700	15700
Ethylbenzene	2780	2780
Styrene	ND	ND
Total Xylenes	6300	6300

μg/kg - Micrograms per kilogram
ND - Not detected

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SAUGET Analytical Data
Site Q

SOIL SAMPLES (Sampling date not known)
Base Neutrals/Acids (μg/kg)
Collected by Riedel Industrial Waste Management, Inc.

	Sample Number	PIT #1	Maximum Concentration
BNAs			
Phenol		ND	ND
bis(2-Chloroethyl)ether		ND	ND
2-Chlorophenol		ND	ND
1,3-Dichlorobenzene		ND	ND
1,4-Dichlorobenzene		ND	ND
Benzyl Alcohol		ND	ND
1,2-Dichlorobenzene		ND	ND
2-Methylphenol		ND	ND
bis(2-Chloroisopropyl)ether		ND	ND
4-Methylphenol		ND	ND
N-Nitroso-n-Dipropylamine		ND	ND
Nitrobenzene		ND	ND
Isophorone		ND	ND
2-Nitrophenol		ND	ND
2,4-Dimethylphenol		ND	ND
Benzoic Acid		ND	ND
bis-(2-Chloroethoxy)methane		ND	ND
2,4-Dichlorophenol		ND	ND
1,2,4-Trichlorophenol		ND	ND
Naphthalene		ND	ND
4-Chloroaniline		ND	ND
Hexachlorobutadiene		ND	ND
4-Chloro-3-methylphenol		ND	ND
2-Methylnaphthalene		ND	ND
Hexachlorocyclopentadiene		ND	ND
2,4,6-Trichlorophenol		ND	ND
2,4,5-Trichlorophenol		ND	ND
2-Chloronaphthalene		ND	ND
2-Nitroaniline		ND	ND
Dimethyl Phthalate		ND	ND
Acenaphthylene		ND	ND
3-Nitroaniline		[illegible]	ND
Acenaphthene		[illegible]	ND

μg/kg - Micrograms per kilogram
ND - Not detected

SAUGET Analytical Data
Site Q

SOIL SAMPLES (Sampling date not known)
Base Neutrals/Acids (μg/kg)
Collected by Riedel Industrial Waste Management, Inc.

	Sample Number	PIT #1	Maximum Concentration
BNAs			
2,4-Dinitrophenol		ND	ND
4-Nitrophenol		ND	ND
Dibenzofuran		ND	ND
2,4-Dinitrotoluene		ND	ND
2,6-Dinitrotoluene		ND	ND
Diethylphthalate		ND	ND
4-Chlorophenyl-Phenylether		ND	ND
Fluorene		ND	ND
4-Nitroaniline		ND	ND
4,6-Dinitro-2-methylphenol		ND	ND
N-Nitrosodiphenylamine		ND	ND
4-Bromophenyl-phenylether		ND	ND
Hexachlorobenzene		ND	ND
Pentachlorophenol		ND	ND
Phenanthrene		ND	ND
Anthracene		ND	ND
Di-n-butly phthalate		ND	ND
Fluoranthene		ND	ND
Pyrene		ND	ND
Butyl Benzyl phthalate		ND	ND
3,3'-Dichlorobenzidine		ND	ND
Benzo (a)anthracene		ND	ND
bis(2-ethylhexyl)phthalate		ND	ND
Chrysene		ND	ND
Di-n-octyl phthalate		ND	ND
Benzo(b)fluoranthene		ND	ND
Benzo(k)fluoranthene		ND	ND
Benzo (a)pyrene		ND	ND
Indeno(1,2,3-cd)pyrene		ND	ND
Benzo(g,h,i)perylene		ND	ND
Dibenzo(a,h)anthracene		ND	ND

μg/kg - Micrograms per kilogram
ND - Not detected

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0080

SAUGET Analytical Data
Site Q

SOIL SAMPLES (Sampling date not known)

Collected by Riedel Industrial Waste Management, Inc.

	Sample Number	PIT #2	Maximum Detected
Test Performed			
EP Extraction		ND	ND
RCRA Metals (mg/kg)			ND
Arsenic		<0.4	ND
Barium		27.8	27.8
Cadmium		<0.5	ND
Chromium		<0.5	ND
Lead		<0.5	ND
Mercury		<0.1	ND
Selenium		<0.2	ND
Silver		<0.5	ND
Ignitability (setflash)		--	--
Corrosivity (pH)		--	--
Cyanide		--	--
Sulfides		--	
Phenols		--	--
PCB Contamination (mg/kg)		342	342

mg/kg - Milligrams per kilogram
ND - Not detected

0031

SAUGET Analytical Data
Site Q

SOIL SAMPLES
Organics (µg/kg)
Collected by Ecology & Environment, Inc. (7/83)

Sample Number	B1A	B1B	B2A	B2B	B3A	B3B	B4A	B4B
Sample Depth(ft)	10 - 11.5	17.5 - 19	13.5 - 15.5	17 - 19	10 - 12	13.5 - 15.5	10 - 12	13.5 - 15.5
Organics								
2, 3, 7, 8-TCDD	ND	ND	ND	ND	ND	ND	ND	3.31
2, 4, 6-trichlorophenol	2500	170000	22000	520	1400	1500	ND	94000
2-chlorophenol	24000	65000	800	ND	1500	LT	57000	360000
2, 4-dichlorophenol	66000	3100000	31000	1700	760	4500	ND	370000
2, 4-dimethylphenol	ND	ND	500	ND	ND	ND	ND	72000
4, 6-dinitro-2-methylphenol	ND	ND	ND	ND	ND	ND	ND	ND
pentachlorophenol	ND	86000	5400	LT	ND	11000	ND	100000
phenol	24000	55000	45000	4400	3200	100000	98000	88000
2-methylphenol	ND	ND	ND	ND	ND	ND	ND	ND
4-methylphenol	ND	ND	LT	ND	560	LT	ND	330000
2, 4, 5-trichlorophenol	ND	ND	ND	LT	ND	ND	ND	ND
acenaphthene	ND	ND	1200	2800	ND	ND	ND	ND
1, 2, 4-trichlorobenzene	ND	ND	ND	480	ND	ND	LT	100000
1, 2-dichlorobenzene	LT	ND	LT	ND	ND	LT	ND	20000
1, 4-dichlorobenzene	ND	ND	1800	720	LT	760	LT	66000
fluoranthene	ND	ND	ND	1200	ND	ND	ND	LT
isophorone	ND	ND	ND	ND	ND	ND	ND	ND
naphthalene	ND	ND	11000	8300	ND	ND	ND	LT
nitrobenzene	ND	8800	400	ND	ND	ND	ND	56000
N-nitrosodiphenylamine	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-ethylhexyl)phthalate	ND	ND	ND	LT	ND	ND	ND	62000
butyl benzyl phthalate	ND	ND	ND	ND	ND	ND	ND	ND
di-n-butyl phthalate	ND	ND	ND	ND	ND	ND	ND	LT
di-n-octyl phthalate	ND	ND	ND	ND	ND	ND	ND	ND
diethyl phthalate	ND	ND	ND	ND	ND	ND	ND	ND
benzo(a)anthracene	ND	ND	ND	ND	ND	ND	ND	ND
benzo(a)pyrene	ND	ND	ND	ND	ND	ND	ND	ND
benzo(b)fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND
benzo(k)fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND
chrysene	ND	ND	ND	ND	ND	ND	ND	ND
anthracene	ND	ND	ND	400	ND	ND	ND	ND
benzo(ghi)perylene	ND	ND	ND	ND	ND	ND	ND	ND
fluorene	ND	ND	600	2000	ND	ND	ND	ND
phenanthrene	ND	ND	1000	2700	ND	ND	ND	LT
dibenzo(a,h)anthracene	ND	ND	ND	ND	ND	ND	ND	ND
indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	ND	ND	ND	ND
pyrene	ND	ND	LT	LT	ND	ND	ND	LT
aniline	ND	ND	ND	ND	ND	ND	ND	ND
4-chloroaniline	ND	ND	LT	ND	ND	ND	ND	ND
dibenzofuran	ND	ND	1000	3000	ND	ND	ND	ND
2-methylnaphthalene	ND	ND	2000	2300	ND	ND	ND	ND
3-nitroaniline	ND	ND	4600	ND	ND	ND	ND	ND
benzene	ND	ND	ND	ND	ND	ND	ND	ND

µg/kg - Micrograms per kilogram
ND - Not Detected
LT - Present, but lower than the detection limit for low hazard analyses

SAUGET Analytical Data
Site Q

SOIL SAMPLES
Organics (µg/kg)
Collected by Ecology & Environment, Inc. (7/83)

Sample Number	B1A	B1B	B2A	B2B	B3A	B3B	B4A	B4B
Sample Depth(ft)	10 - 11.5	17.5 - 19	13.5 - 15.5	17 - 19	10 - 12	13.5 - 15.5	10 - 12	13.5 - 15.5
Organics								
chlorobenzene	ND	ND	ND	ND	ND	ND	**10000**	**40000**
1,2-dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND
1,2-trans-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND
ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND
methylene chloride	ND	ND	**7.4**	**3.7**	LM	**8**	ND	ND
tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND
toluene	ND	ND	ND	ND	ND	ND	ND	ND
trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND
acetone	ND	ND	**960**	ND	ND	**977**	ND	LM
2-butanone	ND	ND	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone	ND	ND	ND	ND	ND	LT	ND	ND
styrene	ND	ND	ND	ND	ND	ND	ND	ND
o-xylene	ND	ND	ND	ND	ND	ND	ND	**5100**
PCB-1242	ND	ND	ND	**2**	ND	ND	--	--
PCB-1254	ND	ND	ND	ND	ND	ND	--	--
PCB-1248	**1000**	ND	ND	ND	ND	ND	--	--
PCB-1260	ND	ND	**485.2**	ND	**69.6**	ND	--	--
PCB-1016	ND	ND	**2120.6**	ND	ND	ND	--	--
Total PCB	NR	NR	NR	NR	NR	NR	**68000**	**1000000**

µg/kg - Micrograms per kilogram
ND - Not Detected
LT - Present, but lower than the detection limit for low hazard analyses
LM - Present, but lower than the detection limit for medium hazard analyses
NR - Total PCBs not reported
-- Only PCB Total was reported

SAUGET Analytical Data
Site Q

SOIL SAMPLES
Organics (µg/kg)
Collected by Ecology & Environment, Inc. (7/83)

	Sample Number	B5A	B5B	B6A	B6B	B7A	B7B	B8A	B8B
	Sample Depth(ft)	13.5-15.5	17.0-19.0	10.0-12.0	13.5-15.5	10.0-12.0	13.5-15.5	13.5-15.5	17.5-19.5
Organics									
2, 3, 7, 8-TCDD		ND	ND	ND	ND	ND	ND	ND	**0.11**
2, 4, 6-trichlorophenol		**130000**	**26000**	**2700**	**4800**	**2700**	ND	**480000**	**10000**
2-chlorophenol		**31000**	**8400**	**1600**	**1600**	LT	ND	ND	ND
2, 4-dichlorophenol		**560000**	**260000**	**17000**	**15000**	**6100**	ND	**1500000**	**64000**
2, 4-dimethylphenol		ND	ND	**2000**	ND	ND	ND	ND	ND
4, 6-dinitro-2-methylphenol		ND	ND	ND	ND	ND	ND	ND	ND
pentachlorophenol		ND	ND	ND	**16000**	**25000**	**31000**	ND	ND
phenol		**140000**	**250000**	**45000**	**11000**	**1800**	ND	ND	ND
2-methylphenol		ND	ND	**1400**	**600**	ND	ND	ND	ND
4-methylphenol		ND	**36000**	**7000**	**1400**	ND	ND	ND	ND
2, 4, 5-trichlorophenol		ND	ND	ND	ND	ND	ND	ND	ND
acenaphthene		ND	ND	ND	ND	ND	ND	ND	ND
1, 2, 4-trichlorobenzene		**86000**	**13000**	ND	ND	ND	ND	**120000**	ND
1, 2-dichlorobenzene		**190000**	**28000**	LT	ND	ND	ND	**180000**	ND
1, 4-dichlorobenzene		ND	ND	**3100**	**800**	ND	ND	LT	ND
fluoranthene		ND	ND	ND	ND	ND	ND	ND	ND
isophorone		ND	ND	ND	ND	ND	ND	ND	ND
naphthalene		ND	LT	**800**	LT	ND	ND	**380000**	LT
nitrobenzene		**27000**	**11000**	LT	ND	ND	ND	**52000**	ND
N-nitrosodiphenylamine		ND	ND	ND	ND	ND	ND	ND	ND
bis(2-ethylhexyl)phthalate		ND	ND	ND	ND	ND	ND	ND	ND
butyl benzyl phthalate		ND	ND	ND	ND	ND	ND	ND	ND
di-n-butyl phthalate		ND	ND	**400**	LT	ND	ND	ND	ND
di-n-octyl phthalate		ND	ND	ND	ND	ND	ND	ND	ND
diethyl phthalate		ND	ND	ND	ND	ND	ND	ND	ND
benzo(a)anthracene		ND	ND	ND	ND	ND	ND	ND	ND
benzo(a)pyrene		ND	ND	ND	ND	ND	LT	ND	ND
benzo(b)fluoranthene		ND	ND	ND	ND	ND	LT	ND	ND
benzo(k)fluoranthene		ND	ND	ND	ND	ND	LT	ND	ND
chrysene		ND	ND	ND	ND	ND	LT	ND	ND
anthracene		ND	ND	ND	ND	ND	ND	ND	ND
benzo(ghi)perylene		ND	ND	ND	ND	ND	ND	ND	ND
fluorene		ND	ND	ND	ND	ND	ND	ND	ND
phenanthrene		ND	ND	ND	ND	ND	ND	ND	ND
dibenzo(a,h)anthracene		ND	ND	ND	ND	ND	ND	ND	ND
indeno(1,2,3-cd)pyrene		ND	ND	ND	ND	ND	ND	ND	ND
pyrene		ND	ND	ND	ND	ND	ND	ND	ND
aniline		ND	ND	ND	ND	ND	ND	ND	ND
4-chloroaniline		ND	ND	**9000**	ND	ND	ND	ND	ND
dibenzofuran		ND	ND	ND	ND	ND	ND	ND	ND
2-methylnaphthalene		ND	ND	ND	ND	ND	ND	ND	ND
3-nitroaniline		ND	ND	ND	ND	ND	ND	ND	ND
benzene		ND	ND	ND	ND	ND	**3.2**	LM	ND

µg/kg - Micrograms per kilogram
ND - Not Detected
LT - Present, but lower than the detection limit for low hazard analyses
LM - Present, but lower than the detection limit for medium hazard analyses

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SAUGET Analytical Data
Site Q

SOIL SAMPLES
Organics (µg/kg)
Collected by Ecology & Environment, Inc. (7/83)

	Sample Number	B5A	B5B	B6A	B6B	B7A	B7B	B8A	B8B
	Sample Depth(ft)	13.5-15.5	17.0-19.0	10.0-12.0	13.5-15.5	10.0-12.0	13.5-15.5	13.5-15.5	17.5-19.5
Organics									
chlorobenzene		18000	27000	100000	8.4	ND	4.2	7100	ND
1,2-dichloroethane		ND	ND	12000	3.4	ND	ND	ND	ND
1,1-dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-tetrachloroethane		ND	ND	ND	ND	ND	ND	ND	ND
1,2-trans-dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND
ethylbenzene		ND	ND	46000	3.8	ND	4.5	ND	ND
methylene chloride		ND	ND	ND	15	86	45	LT	ND
tetrachloroethane		ND	ND	ND	ND	ND	LT	ND	ND
toluene		ND	ND	50000	LT	ND	6.1	ND	ND
trichloroethane		ND	ND	ND	ND	ND	LT	ND	ND
acetone		ND	ND	ND	330	200	2600	ND	LM
2-butanone		ND	ND	ND	ND	ND	ND	ND	ND
4-methyl,2-pentanone		ND	ND	ND	LT	LT	LT	ND	ND
styrene		ND	ND	ND	ND	ND	ND	ND	ND
o-xylene		ND	ND	140000	13	LT	22	ND	ND
PCB-1242		170000	ND	ND	ND	ND	ND	1700	2700
PCB-1254		360000	ND	ND	ND	ND	ND	ND	ND
PCB-1248		ND	ND	ND	4700	ND	ND	ND	ND
PCB-1260		ND	ND	ND	ND	590	13000	880	1500
PCB-1016		ND	ND	ND	ND	2300	46000	ND	ND
Total PCB		NR	66000	NR	NR	NR	NR	NR	NR

µg/kg - Micrograms per kilogram
ND - Not Detected
LT - Present, but lower than the detection limit for low hazard analyses
NR - Total PCBs not reported

SAUGET Analytical Data
Site Q

SOIL SAMPLES
Organics (µg/kg)
Collected by Ecology & Environment, Inc. (7/83)

Sample Number	B9A	B9B	B10A	B10B	B11A	B11B	B12A	B12B
Sample Depth(ft)	15.0-17.0	17.0-19.0	17.0-19.0	19.0-21.0	17.0-19.0	19.0-21.0	17.0-19.0	19.0-21.0
Organics								
2, 3, 7, 8-TCDD	ND	ND	P	ND	P	P	ND	ND
2, 4, 6-trichlorophenol	LT	600	48000	640	ND	ND	4400	9400
2-chlorophenol	640	1100	1700	LT	ND	ND	1200	520
2, 4-dichlorophenol	7400	9800	170000	9600	3200	20000	6800	4200
2, 4-dimethylphenol	ND	LT	ND	ND	ND	ND	ND	ND
4, 6-dinitro-2-methylphenol	ND	ND	ND	ND	ND	ND	ND	ND
pentachlorophenol	ND	4800	ND	2200	ND	ND	24000	920
phenol	7500	14000	32000	11000	6200	37000	17000	7500
2-methylphenol	ND	ND	ND	ND	ND	ND	ND	ND
4-methylphenol	1400	2300	2700	ND	ND	ND	1000	720
2, 4, 5-trichlorophenol	ND	ND	ND	ND	ND	ND	ND	ND
acenaphthene	ND	ND	ND	ND	ND	ND	ND	ND
1, 2, 4-trichlorobenzene	ND	ND	11000	ND	ND	ND	520	3600
1, 2-dichlorobenzene	ND	ND	11000	ND	LT	ND	ND	800
1, 4-dichlorobenzene	ND	LT	27000	ND	LT	ND	ND	1000
fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND
isophorone	ND	ND	ND	ND	17000	LT	ND	720
naphthalene	ND	ND	6500	ND	72000	35000	LT	640
nitrobenzene	ND	ND	ND	ND	ND	ND	ND	ND
N-nitrosodiphenylamine	ND	ND	ND	ND	ND	ND	LT	ND
bis(2-ethylhexyl)phthalate	440	ND	ND	ND	52000	34000	440	ND
butyl benzyl phthalate	ND	ND	ND	ND	LT	ND	ND	ND
di-n-butyl phthalate	ND	1500	LT	ND	23000	LT	ND	ND
di-n-octyl phthalate	ND	ND	ND	ND	ND	ND	ND	ND
diethyl phthalate	LT	840	ND	ND	ND	ND	ND	ND
benzo(a)anthracene	ND	ND	ND	ND	ND	ND	ND	ND
benzo(a)pyrene	ND	ND	ND	ND	ND	ND	ND	ND
benzo(b)fluoranthene	ND	ND	ND	ND	ND	ND	ND	1000
benzo(k)fluoranthene	ND	ND	ND	ND	ND	ND	ND	1000
chrysene	ND	ND	ND	ND	6400	ND	ND	ND
anthracene	ND	ND	ND	ND	ND	ND	ND	ND
benzo(ghi)perylene	ND	ND	ND	ND	ND	ND	ND	ND
fluorene	ND	ND	ND	ND	ND	ND	ND	ND
phenanthrene	ND	ND	ND	ND	5200	ND	ND	ND
dibenzo(a,h)anthracene	ND	ND	ND	ND	ND	ND	ND	ND
indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	ND	ND	ND	ND
pyrene	ND	ND	ND	ND	5600	ND	ND	ND
aniline	ND	ND	ND	ND	ND	ND	ND	ND
4-chloroaniline	ND	ND	ND	ND	ND	ND	ND	LT
dibenzofuran	ND	ND	ND	ND	ND	ND	ND	ND
2-methylnaphthalene	ND	ND	ND	ND	10000	ND	ND	ND
3-nitroaniline	ND	ND	ND	ND	ND	ND	ND	ND
benzene	ND	ND	LM	ND	ND	ND	ND	ND

µg/kg - Micrograms per kilogram
ND - Not Detected
LT - Present, but lower than the detection limit for low hazard analyses
LM - Present but lower than the detection limit for medium hazard analyses
P - The sample could not be cleaned up sufficiently to yeild TCDD results

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Site Q

SOIL SAMPLES
Organics (μg/kg)
Collected by Ecology & Environment, Inc. (7/83)

Sample Number	B9A	B9B	B10A	B10B	B11A	B11B	B12A	B12B
Sample Depth(ft)	15.0-17.0	17.0-19.0	15.0-17.0	17.0-19.0	15.0-17.0	17.0-19.0	15.0-17.0	17.0-19.0
Organics								
chlorobenzene	ND	ND	**5200**	ND	LM	ND	ND	ND
1,2-dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND
1,2-trans-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND
ethylbenzene	ND	ND	**6500**	ND	**220000**	ND	ND	ND
methylene chloride	**3.3**	**300**	**8700**	LT	ND	ND	LT	ND
tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND
toluene	ND	ND	**130000**	ND	**1300000**	**100000**	ND	LM
trichloroethane	ND	ND	ND	ND	**42000**	ND	ND	ND
acetone	**210**	**14000**	ND	**4400**	ND	ND	ND	ND
2-butanone	ND	ND	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone	ND	ND	ND	ND	ND	ND	LT	ND
styrene	ND	ND	ND	ND	ND	ND	ND	ND
o-xylene	ND	ND	**30000**	ND	**650000**	**70000**	ND	LM
PCB-1242	**600**	ND	NA	ND	ND	ND	ND	ND
PCB-1254	ND	ND	NA	ND	ND	ND	ND	ND
PCB-1248	ND	ND	NA	ND	**38000**	**70000**	ND	ND
PCB-1260	**1500**	**1300**	NA	**120**	**45000**	**681000**	**7000**	**5000**
PCB-1016	ND	ND	NA	**78**	ND	ND	**2200**	**3900**
Total PCB	NR	NR	NR	NR	NR	NR	NR	NR

μg/kg - Micrograms per kilogram
ND - Not Detected
NA - Not Analyzed
LT - Present, but lower than the detection limit for low hazard analyses
NR - Total PCBs not reported

SAUGET Analytical Data
Site Q

SOIL SAMPLES
Organics (µg/kg)
Collected by Ecology & Environment, Inc. (7/83)

Sample Number	B13A	B13B	B14A	B14B	B15A	B15B	B16A	B17A
Sample Depth(ft)	17.0-19.0	19.0-21.0	17.0-19.0	19.0-21.0	22.0-24.0	24.0-26.0	22.0-24.0	22.0-24.0
Organics								
2, 3, 7, 8-TCDD	ND	ND	P	P	ND	ND	ND	ND
2, 4, 6-trichlorophenol	20000	4600	ND	ND	800	1900	7700	6400
2-chlorophenol	2500	3800	ND	ND	600	1600	4600	100000
2, 4-dichlorophenol	9400	11000	460000	ND	ND	11000	27000	120000
2, 4-dimethylphenol	ND	LT	ND	ND	ND	ND	680	ND
4, 6-dinitro-2-methylphenol	LT	ND	ND	ND	ND	ND	ND	ND
pentachlorophenol	12000	44000	ND	16000	4200	12000	39000	26000
phenol	8900	15000	ND	ND	6000	13000	16000	50000
2-methylphenol	ND	ND	ND	ND	ND	ND	ND	ND
4-methylphenol	920	1400	ND	16000	ND	1000	1900	9200
2, 4, 5-trichlorophenol	ND	ND	ND	ND	ND	ND	LT	ND
acenaphthene	ND	ND	ND	ND	ND	ND	ND	ND
1, 2, 4-trichlorobenzene	2400	3000	13000000	2000000	ND	ND	ND	ND
1, 2-dichlorobenzene	ND	ND	620000	55000	ND	ND	LT	ND
1, 4-dichlorobenzene	1300	2000	1200000	100000	ND	1600	4100	ND
fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND
isophorone	ND	ND	ND	14000	ND	ND	ND	ND
naphthalene	ND	LT	210000	20000	ND	720	2000	ND
nitrobenzene	ND	ND	ND	ND	ND	ND	ND	ND
N-nitrosodiphenylamine	ND	400	ND	ND	ND	ND	ND	ND
bis(2-ethylhexyl)phthalate	ND	ND	1100000	220000	ND	ND	ND	4600
butyl benzyl phthalate	ND	ND	ND	LT	ND	LT	ND	ND
di-n-butyl phthalate	ND	LT	900000	49000	LT	3800	ND	ND
di-n-octyl phthalate	ND	LT	ND	ND	ND	ND	ND	ND
diethyl phthalate	ND	ND	ND	ND	ND	LT	ND	ND
benzo(a)anthracene	ND	ND	ND	ND	ND	ND	ND	ND
benzo(a)pyrene	ND	ND	ND	ND	ND	ND	ND	ND
benzo(b)fluoranthene	LT	ND	ND	ND	ND	ND	ND	ND
benzo(k)fluoranthene	1300*	ND	ND	ND	ND	ND	ND	ND
chrysene	1300*	ND	ND	ND	ND	ND	ND	ND
anthracene	ND	ND	ND	ND	ND	ND	ND	ND
benzo(ghi)perylene	ND	ND	ND	ND	ND	ND	ND	ND
fluorene	880	ND	ND	ND	ND	ND	ND	ND
phenanthrene	ND	ND	ND	ND	ND	ND	ND	ND
dibenzo(a,h)anthracene	ND	ND	ND	ND	ND	ND	ND	ND
indeno(1,2,3-cd)pyrene	LT	ND	ND	ND	ND	ND	ND	ND
pyrene	LT	ND	ND	ND	ND	ND	ND	ND
aniline	ND	ND	ND	ND	ND	ND	ND	ND
4-chloroaniline	ND	ND	ND	ND	ND	ND	680	ND
dibenzofuran	LT	2200	ND	ND	ND	ND	9600	ND
2-methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND
3-nitroaniline	ND	ND	ND	LT	ND	ND	ND	ND
benzene	ND	ND	ND	ND	ND	ND	ND	ND
	ND	ND	44000	ND	ND	ND	ND	ND

µg/kg - Micrograms per kilogram
ND - Not Detected
LT - Present, but lower than the detection limit for low hazard analyses
P - The sample could not be cleaned up sufficiently to yeild TCDD results

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Site Q

SOIL SAMPLES
Organics (μg/kg)
Collected by Ecology & Environment, Inc. (7/83)

Sample Number	B13A	B13B	B14A	B14B	B15A	B15B	B16A	B17A
Sample Depth(ft)	17.0-19.0	19.0-21.0	17.0-19.0	19.0-21.0	22.0-24.0	24.0-26.0	22.0-24.0	22.0-24.0
Organics								
chlorobenzene	ND	ND	63000	LM	ND	ND	ND	ND
1,2-dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethane	ND	ND	19000	ND	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	ND	ND	5700	ND	ND	ND	ND	ND
1,2-trans-dichloroethene	ND	ND	11000	ND	ND	ND	ND	ND
ethylbenzene	ND	ND	790000	330000	ND	LT	ND	ND
methylene chloride	50	13	5800	ND	2.5	23	ND	LM
tetrachloroethane	ND	ND	12000	ND	ND	ND	ND	ND
toluene	ND	ND	2400000	540000	ND	ND	ND	ND
trichloroethane	ND	ND	55000	ND	ND	ND	ND	ND
acetone	90	430	ND	ND	540	1400	ND	ND
2-butanone	ND	ND	LM	ND	ND	ND	ND	ND
4-methyl-2-pentanone	ND	LT	250000	ND	LT	ND	ND	ND
styrene	ND	ND	ND	64000	4.2	5.3	ND	ND
o-xylene	ND	ND	2300000	1400000	ND	LT	ND	ND
PCB-1242	ND	ND	ND	ND	ND	5000	ND	ND
PCB-1254	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1248	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1260	770	1300	2900000	16000000	190	1000	370	68
PCB-1016	ND	ND	ND	ND	210	ND	ND	ND
Total PCB	NR	NR	NR	NR	NR	NR	NR	NR

μg/kg - Micrograms per kilogram
ND - Not Detected
NA - Not Analyzed
LT - Present, but lower than the detection limit for low hazard analyses
LM - Present, but lower than the detection limit for medium hazard analyses
NR - Total PCBs not reported

SAUGET Analytical Data
Site Q

SOIL SAMPLES
Organics (µg/kg)
Collected by Ecology & Environment, Inc. (7/83)

Sample Number	B17B	B18A	B18B	BLANK 1	BLANK 2	Maximum
Sample Depth(ft)	24 0-26 0	22 0-24 0	24 0-26 0	NA	NA	Concentration
Organics						
2, 3, 7, 8-TCDD	ND	ND	ND	ND	ND	3.31
2, 4, 6-trichlorophenol	ND	ND	ND	ND	ND	ND
2-chlorophenol	ND	ND	ND	ND	ND	ND
2, 4-dichlorophenol	ND	ND	ND	ND	ND	ND
2, 4-dimethylphenol	3800	ND	ND	ND	ND	72000
4, 6-dinitro-2-methylphenol	ND	ND	ND	ND	ND	ND
pentachlorophenol	ND	ND	ND	ND	ND	ND
phenol	ND	ND	ND	ND	ND	ND
2-methylphenol	ND	ND	ND	ND	ND	1400
4-methylphenol	ND	ND	ND	ND	ND	ND
2, 4, 5-trichlorophenol	ND	ND	ND	ND	ND	ND
acenaphthene	ND	ND	ND	ND	ND	2800
1, 2, 4-trichlorobenzene	ND	ND	ND	ND	ND	ND
1, 2-dichlorobenzene	ND	ND	ND	ND	ND	ND
1, 4-dichlorobenzene	550	ND	LT	ND	ND	1200000
fluoranthene	ND	ND	ND	ND	1000	1200
isophorone	ND	ND	ND	ND	ND	17000
naphthalene	ND	ND	ND	ND	ND	ND
nitrobenzene	ND	ND	ND	ND	ND	56000
N-nitrosodiphenylamine	ND	ND	ND	ND	ND	400
bis(2-ethylhexyl)phthalate	580	910	1400	LT	ND	1100000
butyl benzyl phthalate	ND	ND	ND	ND	ND	ND
di-n-butyl phthalate	ND	ND	LT	ND	ND	900000
di-n-octyl phthalate	ND	LT	ND	ND	ND	ND
diethyl phthalate	ND	ND	ND	ND	ND	840
benzo(a)anthracene	ND	520	ND	ND	600	600
benzo(a)pyrene	ND	ND	ND	ND	LT	ND
benzo(b)fluoranthene	ND	LT	ND	ND	LT	1000
benzo(k)fluoranthene	ND	LT	ND	ND	LT	1000
chrysene	ND	640	ND	ND	560	6400
anthracene	ND	ND	ND	ND	ND	400
benzo(ghi)perylene	ND	ND	ND	ND	ND	880
fluorene	ND	ND	ND	ND	ND	2000
phenanthrene	ND	ND	ND	ND	720	5200
dibenzo(a,h)anthracene	ND	ND	ND	ND	ND	ND
indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	ND	ND
pyrene	ND	LT	ND	ND	800	5600
aniline	51000	1700	ND	ND	ND	51000
4-chloroaniline	ND	960	ND	ND	ND	9600
dibenzofuran	ND	ND	ND	ND	ND	3000
2-methylnaphthalene	ND	ND	ND	ND	ND	10000
3-nitroaniline	ND	ND	ND	ND	ND	4600
benzene	ND	ND	ND	ND	ND	44000

µg/kg - Micrograms per kilogram
ND - Not Detected
LT - Present, but lower than the detection limit for low hazard analyses

SAUGET Analytical Data
Site Q

SOIL SAMPLES
Organics (µg/kg)
Collected by Ecology & Environment, Inc. (7/83)

Sample Number	B17B	B18A	B18B	BLANK 1	BLANK 2	Maximum
Sample Depth(ft)	24.0-26.0	22.0-24.0	24.0-26.0	NA	NA	Concentration
Organics						
chlorobenzene	4.1	ND	ND	ND	ND	100000
1,2-dichloroethane	ND	ND	ND	ND	ND	12000
1,1-dichloroethane	ND	ND	ND	ND	ND	19000
1,1,2,2-tetrachloroethane	ND	ND	ND	ND	ND	5700
1,2-trans-dichloroethene	ND	ND	ND	ND	ND	11000
ethylbenzene	7.7	ND	ND	ND	ND	790000
methylene chloride	6.1	19	47	LM	6.9	8700
tetrachloroethane	ND	ND	ND	ND	ND	12000
toluene	ND	ND	ND	ND	ND	2400000
trichloroethane	ND	ND	ND	ND	ND	55000
acetone	2000	ND	260	ND	ND	14000
2-butanone	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone	ND	ND	ND	ND	ND	250000
styrene	ND	ND	ND	ND	ND	64000
o-xylene	23	ND	ND	ND	ND	2300000
PCB-1242	ND	--	ND	ND	ND	ND
PCB-1254	ND	--	ND	ND	ND	360000
PCB-1248	ND	--	ND	ND	ND	70000
PCB-1260	160	--	2400	ND	260	16000000
PCB-1016	ND	--	ND	ND	ND	ND
Total PCB	NR	670	NR	NR	NR	1000000

µg/kg - Micrograms per kilogram
ND - Not Detected
LM - Present, but lower than the detection limit for medium hazard analyses
NR - Total PCBs not reported
-- Only PCB Total was reported

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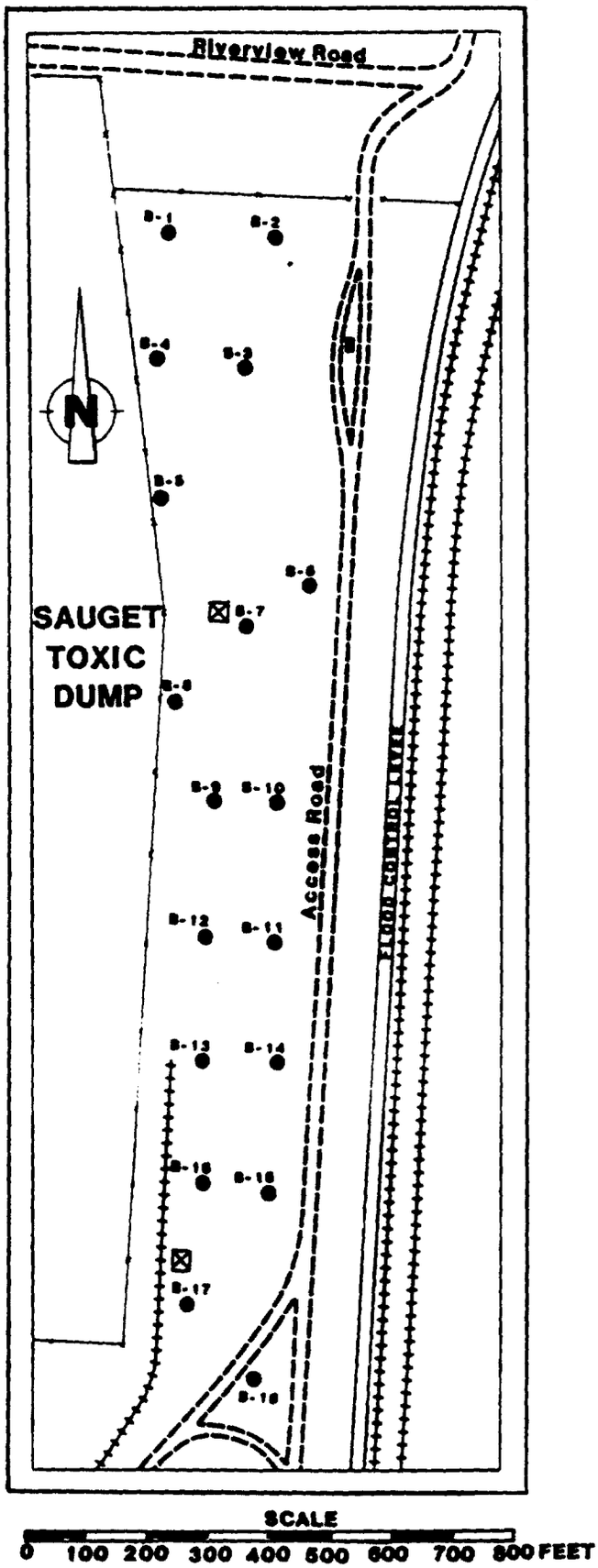

FIGURE Q-2
USEPA - FIT SUBSURFACE SOIL SAMPLING LOCATIONS AT SITE Q

LOCATION MAP - Borings B-1 through B-18

Source: "Description of Current Situation at the Dead Creek Project Sites", E&E, 1986

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Site Q

SURFACE WATER, LEACHATE, GROUNDWATER SAMPLES
Total Metals and Misc.(mg/L unless otherwise noted)
Collected by IEPA

Sample Number	P-1	L-1	GW-1	GW-2	P-2	P-3	Maximum
Sample Type	Pond water	Leachate	Groundwater	Groundwater	Pond water	Pond water	Concentration
Date Collected	10/17/72	10/17/72	1/17/73	1/17/73	4/10/73	4/26/73	Detected
Metals							
Calcium	80	56	310	137	250	280	310
Magnesium	8	26	57	205	42	44	205
Sodium	23	169	275	13	230	205	275
Potassium	6	30	10	4	85	70	85
Ammonia	0.19	21	NA	NA	32	36	36
Boron	7	6.5	NA	NA	2.6	2.8	7
Cadmium	ND	ND	0.02	ND	NA	0.02	0.02
Chromium (total)	ND	ND	ND	ND	NA	0.03	0.03
Copper	ND	0.01	ND	ND	0.02	ND	0.02
Iron	ND	46	ND	ND	60	67	67
Lead	ND	0.02	ND	ND	0.07	0.07	0.07
Manganese	ND	ND	ND	ND	6	6.5	6.5
Mercury (µg/L A28)	0.5	0.5	ND	ND	0.4	0.6	0.6
Nickel	ND	ND	ND	ND	0.3	0.2	0.3
Silver	ND	ND	0.01	ND	ND	ND	0.01
Zinc	ND	0.2	ND	0.1	4.2	5	5
Alkalinity	46	810	645	375	420	ND	810
Chloride	19	4	310	24	210	205	310
Nitrate	NA	NA	NA	NA	NA	ND	ND
Phosphate	NA	NA	NA	NA	3.7	5	5
Sulfate	230	18	325	25	350	270	350
Hardness	240	560	NA	NA	970	930	970
Phenols	NA	NA	0.02	ND	NA	NA	0.02

mg/L - Milligrams per liter
NA - Parameter not analyzed
ND - Not detected.
µg/L - Micrograms per liter.

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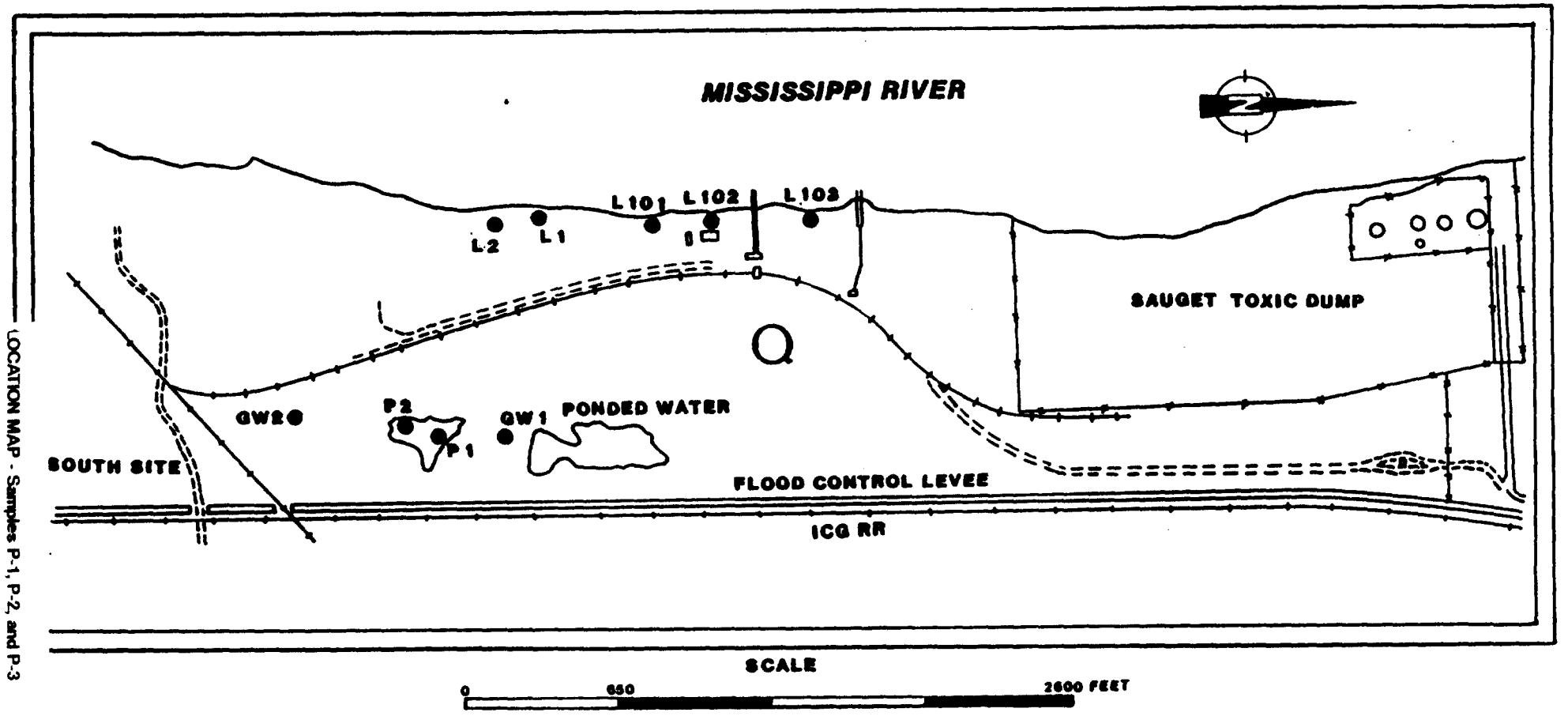

LEGEND

GW1	IEPA GROUNDWATER SAMPLING LOCATION
P1	IEPA SURFACE WATER SAMPLING LOCATION
L1	IEPA LEACHATE SAMPLING LOCATION

FIGURE Q-1
DEAD CREEK SITE AREA Q WITH SAMPLING LOCATIONS

LOCATION MAP - Samples P-1, P-2, and P-3

Source: "Description of Current Situation at the Dead Creek Project Sites", E&E, 1986

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Site Q

LEACHATE SAMPLES
Total Metals, PCB and Misc.(mg/L unless otherwise noted)
Collected by IEPA

	Sample Number	L-1	L-2	L101	L012	L103	Maximum
	Date Collected	10/28/81	10/28/81	9/29/83	9/29/83	9/29/83	Concentration
Metals, PCB and Misc.							Detected
Alkalinity		255	293	191	158	242	293
Ammonia		3.8	2.8	6.5	4	3.7	6.5
Arsenic		0.057	0.022	0.11	0.034	0.012	0.11
Barium		0.8	0.2	0.5	0.4	0.3	0.8
Boron		5.8	5.6	37.5	42	23	42
Cadmium		ND	ND	ND	ND	ND	ND
COD		445	35	87	94	71	445
Chloride		15	17	23	22	31	31
Chromium (total)		0.08	ND	0.03	0.01	ND	0.08
Copper		0.2	0.04	1.2	0.06	ND	1.2
Cyanide		ND	ND	ND	0.01	0.01	0.01
Hardness		1330	1220	1225	1360	1045	1360
Iron		207	17.5	86	36	6.4	207
Lead		0.26	ND	0.13	0.08	0.02	0.26
Magnesium		145	67	81	73	44.5	145
Manganese		7.7	34	6.7	6.8	2.7	34
Mercury		ND	ND	ND	ND	ND	ND
Nickel		0.3	ND	0.1	0.1	ND	0.3
Nitrate		0.24	0.4	0.21	6.1	1.8	6.1
Phosphorus		6.1	0.74	3.1	1.3	0.86	6.1
Potassium		16.5	9.5	13.4	13.5	17	17
R.O.E.		1980	1829	1880	2118	1563	2118
Silver		0.02	0.01	0.01	ND	ND	0.02
Sodium		55.7	53.3	56	70	51	70
Sulfate		1196	1059	1200	1350	900	1350
Zinc		1.2	0.2	0.3	0.2	ND	1.2
Phenol		0.005	0.005	ND	ND	ND	0.005
PCBs (µg/L)		0.7	1	0.5	ND	0.1	1
2,3-D (µg/L)		ND	ND	ND	ND	ND	ND

mg/L - Milligrams per liter
ND - Not detected.
µg/L - Micrograms per liter.

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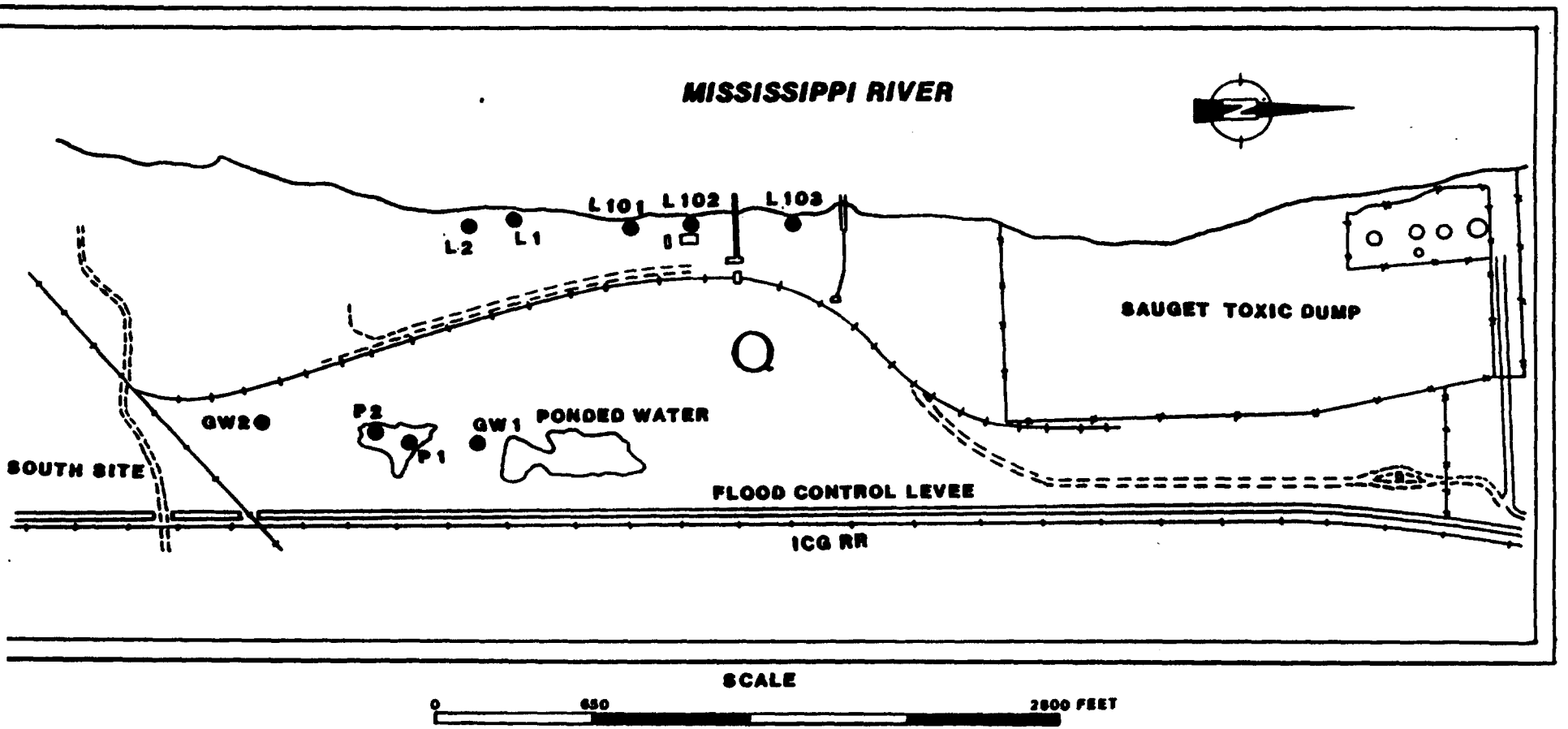

LEGEND

GW1	IEPA GROUNDWATER SAMPLING LOCATION
P1	IEPA SURFACE WATER SAMPLING LOCATION
L1	IEPA LEACHATE SAMPLING LOCATION

FIGURE Q-1
DEAD CREEK SITE AREA Q WITH SAMPLING LOCATIONS

LOCATION MAP - Samples L-1, L-2, and L101 - L103

Source: "Description of Current Situation at the Dead Creek Project Sites", E&E, 1986

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Site Q

SOIL/SEDIMENT SAMPLES
Metals (mg/kg)
Collected by START (1997)

Metal	Sample Number	Q201	Q202	Q203	Q204	Q205	Q206	Q207	Q208	Maximum Concentration
Arsenic		6.9	9.4	4.7	32.0	4.8	3.4	7.3	0.19	32
Barium		191	232	135	969	128	70.6	169	416	969
Cadmium		0.15	4.4	1.2	20.8	5.0	3.1	0.67	130	130
Chromium (total)		10.3	15.9	11.0	125	304	13.3	17.4	3900	3900
Lead		28.7	92.4	128	2450	102	139	47.8	2300	2450
Mercury		0.18	1.6	0.08	0.42	0.15	0.28	0.16	12.2	12.2
Selenium		1.0	1.9	1.1	0.62	1.3	0.76	1.4	8.1	8.1
Silver		0.36	0.71	1.4	18.7	0.40	0.37	0.32	0.80	18.7

mg/kg - Milligrams per kilogram.

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0051

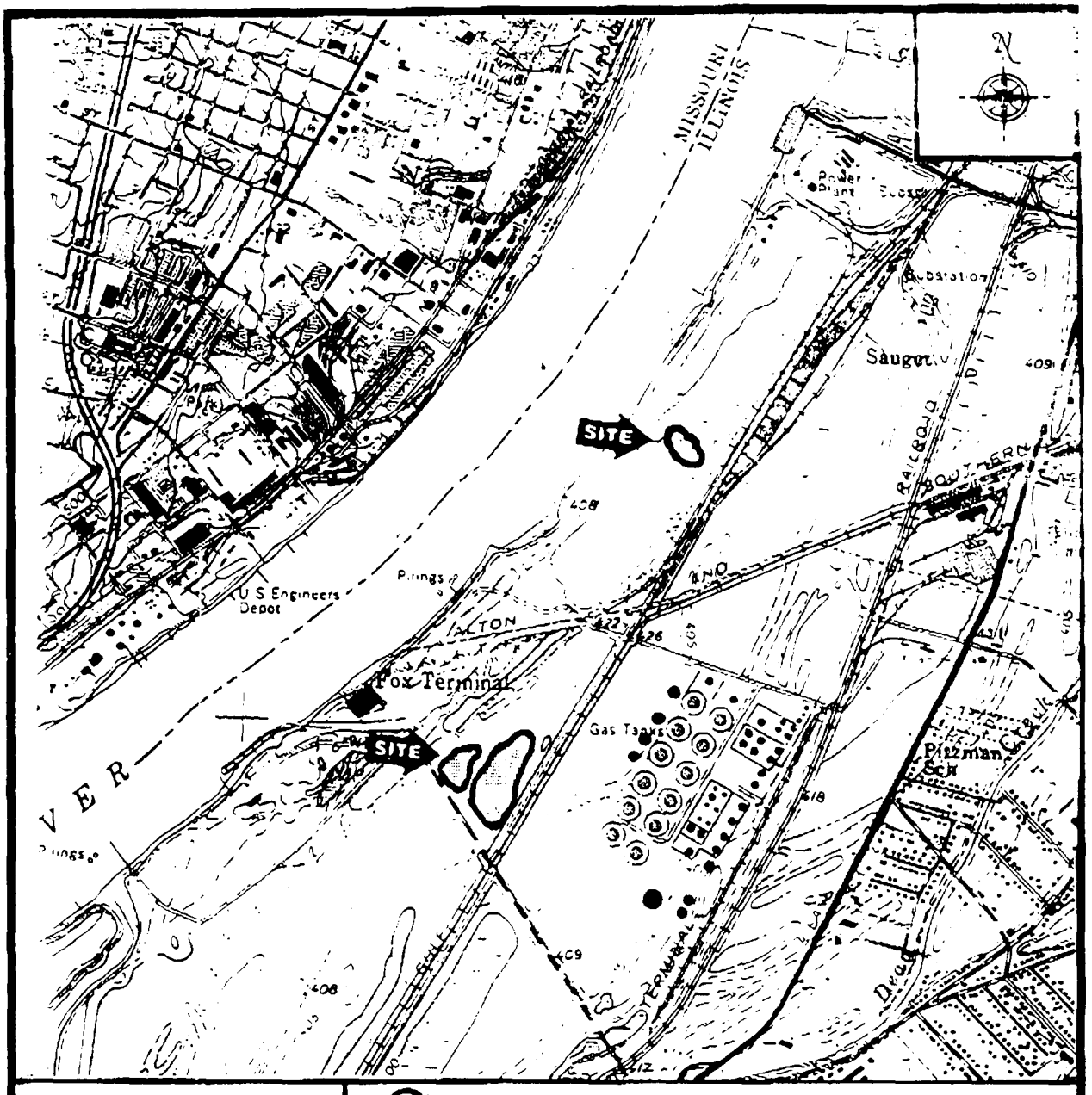
SAUGET Analytical Data
Site Q

SOIL/SEDIMENT SAMPLES
PCB (mg/kg)
Collected by START (1997)

	Sample Number	Q201	Q202	Q203	Q204	Q205	Q206	Q207	Q208	Maximum Concentration
PCB										
1254		0.72	1.7	0.88	1.8	0.034	4.2	1.6	ND	4.2
1248		0.48	1.6	ND	0.92	ND	2.6	ND	120	120
1260		0.61	0.76	0.11	1.1	0.028	1.9	1.8	ND	1.9

mg/kg - Milligrams per kilogram.
ND - Not detected.

0038



Quadrangle Location

ecology and environment, inc.
Superfund Technical Assessment and Response Team
Region 5
33 North Dearborn Street, Chicago, Illinois 60602

TITLE Site Location Map	FIGURE # 2-1
SITE Sauget Area 2	SCALE 1:24000
CITY Sauget STATE Illinois	TDD S05-9703-013
SOURCE USGS Topographical Map, 7.5' Series Quadrangle: Cahokia, Illinois	DATE 1980

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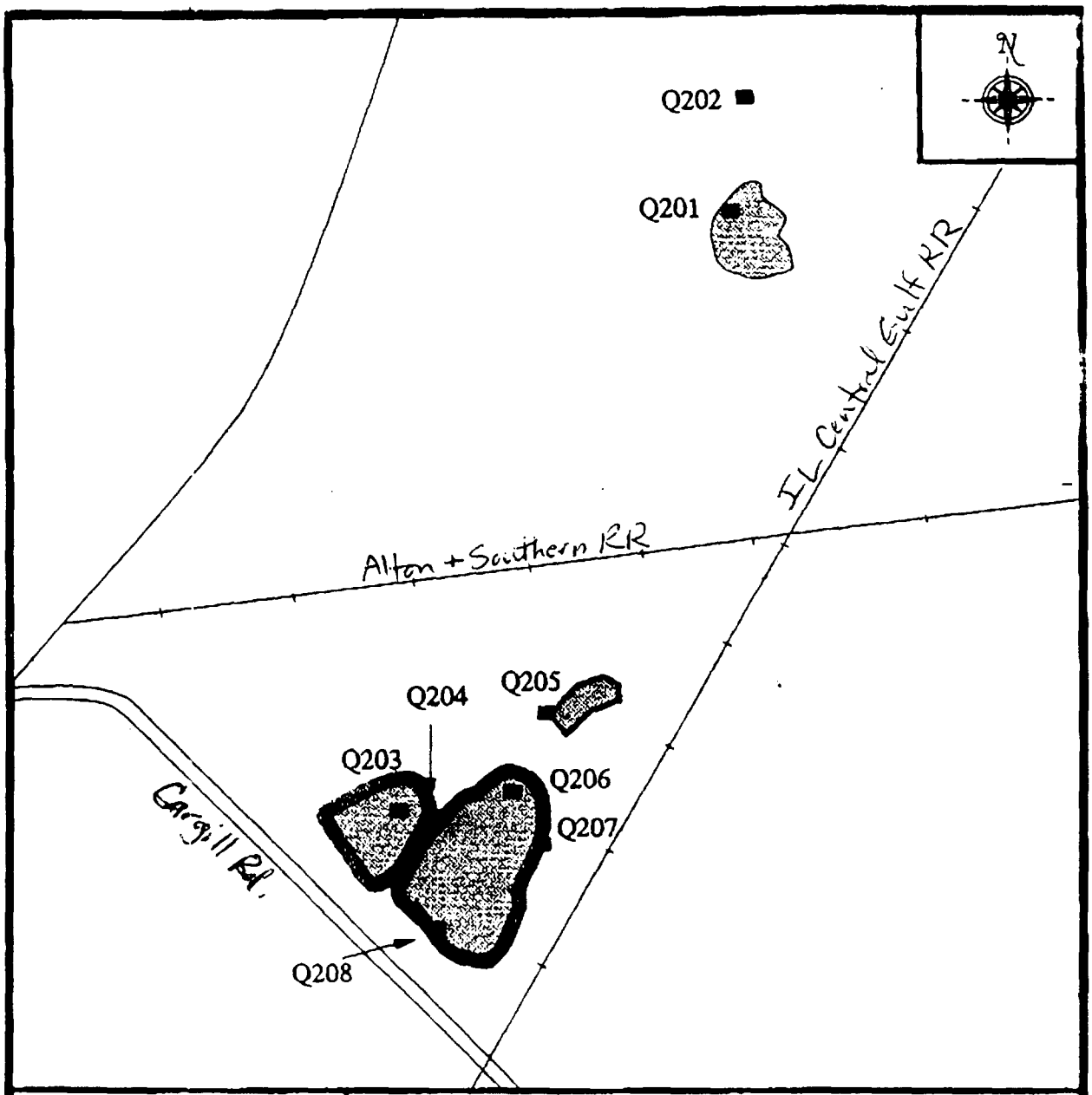
PAGE 27



Legend

■ Sample Location

ecology and environment, inc.
Superfund Technical Assessment and Response Team
Region 5
33 North Dearborn Street, Chicago, Illinois 60602

TITLE: Sample Location Map	FIGURE #: 2-3
SITE: Sauget Area 2	SCALE: Not to scale
CITY: Sauget STATE: Illinois	TDD: S05-9703-013
SOURCE: Ecology and Environment, Inc.	DATE: 1997

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PAGE.02

Site R Data
(Pre-1992)

0101

SAUGET Analytical Data
Site R

MISSISSIPPI RIVER WATER SAMPLES
Dioxins (ng/l)
Collected by IEPA

	Sample Number	Up River #1	Up River #2	Up River #3	Up River #4	Down River #1	Down River #2	Down River #3	Down River #4	Maximum
	Date Collected	1981	1981	1981	1981	1981	1981	1981	1981	Detected
Dioxin										
CL_1		ND	ND	ND	ND	ND	ND	ND	ND	ND
CL_2		ND	ND	ND	ND	ND	ND	ND	ND	ND
CL_3		ND	ND	ND	ND	ND	ND	ND	ND	ND
CL_4		ND	ND	ND	ND	ND	ND	ND	ND	ND
CL_5		ND	ND	ND	ND	ND	ND	ND	ND	ND
CL_6		ND	ND	ND	ND	ND	ND	ND	ND	ND
CL_7		ND	ND	ND	ND	ND	ND	ND	ND	ND
CL_8		ND	ND	ND	ND	ND	ND	ND	ND	ND

ng/L - Nanograms per liter.
ND - Not detected

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0102

SAUGET Analytical Data
Site R

LEACHATE SAMPLES
Dioxins (ng/l)
Collected by U.S. EPA

Sample Number	CWS-1	CWS-2	CWS-3	CWS-4	CWS-5	Maximum
Date Collected	11/12/81	11/12/81	11/12/81	11/12/81	11/12/81	Detected
Dioxin						
TCDDs	0(1)	0(1)	0(1)	0(1)	0(1)	ND
TCDFs	0(1)	0(1)	0(1)	0(1)	0(1)	ND
PCDDs	0(2)	0(1)	0(2)	0(2)	0(2)	ND
PCDFs	0(2)	0(1)	0(2)	0(2)	0(2)	ND
HxCDDs	**4.5**	**6.3**	**5.8**	0(3)	0(3)	**6.3**
HxCDFs	**6.3**	**10**	**6.3**	0(3)	0(3)	**10**
HpCDDs	**85**	**181**	**162**	0(4)	0(3)	**181**
HpCDFs	**74**	**182**	**112**	0(4)	0(3)	**182**
OCDD	**323**	**575**	**2693**	0(6)	0(6)	**2693**

ng/L - Nanograms per liter
ND - Not detected
( ) - Field Blank

0103

SAUGET Analytical Data
Site R

LEACHATE SAMPLES
PCDD/PCDF Analysis (ppt)
Collected by IEPA

Sample Number	X101D	X103D	X104D	X104DUP	S101D	S103D	S104D	S103D	X103D	Maximum
Date Collected	2/89	2/89	2/89	2/89	3/89	3/89	3/89	3/89	3/89	Detected
PCDD/PCDF								Blank	Blank	
2378-TCDD	ND	ND	ND	ND	ND	ND	ND	0.058	ND	0.058
12378-PeCDD	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
123478-HxCDD	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
123678-HxCDD	ND	6.395	ND	ND	ND	ND	ND	ND	4.992	6.395
123789-HxCDD	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1234678-HpCDD	72.233	285.252	ND	27.53	ND	ND	ND	0.208	443.859	443.859
OCDD	1654.809	6697.077	1248.585	1113.124	1.84	4.104	ND	9.43	5356.575	6697.077
2378-TCDF	ND	6.263	1.279	1.57	ND	ND	ND	0.079	1.405	6.263
12378-PeCDF	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
23478-PeCDF	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
123478-HxCDF	ND	ND	ND	ND	ND	ND	ND	ND	1.692	1.692
123678-HxCDF	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
234678-HxCDF	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
123789-HxCDF	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1234678-HpCDF	10.672	60.557	ND	ND	0.029	0.024	ND	ND	ND	60.557
1234789-HpCDF	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
OCDF	71.346	485.469	45.672	17.48	0.169	ND	ND	0.321	1059.558	1059.558
TOTAL TCDD	4.835	443.101	ND	2.184	ND	0.062	0.06	0.086	31.017	443.101
TOTAL PeCDD	4.687	ND	ND	ND	ND	ND	ND	ND	3.47	4.687
TOTAL HxCDD	4.779	19.808	8.648	4.016	ND	0.006	ND	0.014	39.805	39.805
TOTAL HpCDD	151.344	586.262	41.824	64.855	ND	ND	ND	0.424	1182.05	1182.05
TOTAL TCDF	ND	12.942	2.355	1.57	0.587	0.114	0.023	0.79	5.69	12.942
TOTAL PeCDF	0.997	5.858	ND	ND	ND	ND	ND	ND	ND	5.858
TOTAL HxCDF	9.693	18.805	ND	ND	ND	ND	ND	0.033	74.038	74.038
TOTAL HpCDF	50.168	278.338	20.412	ND	0.095	0.074	ND	0.114	587.395	587.395

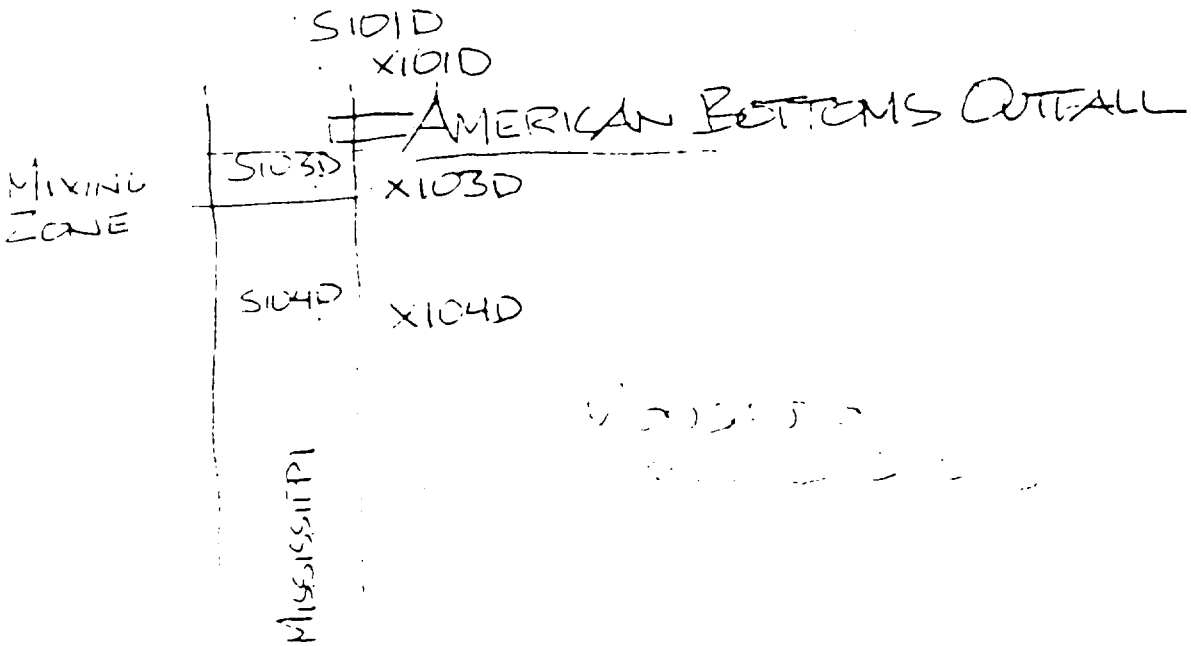
ppt - Parts per trillion
ND - Not detected

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY

ALLIED SITES (AREA 2, SITE R)

ALL LAKES — 19 jan 90

SAMPLING LOCATION MAP



S SERIES - WATER SAMPLES

X103D, X104D - LEACHATE SAMPLES

X101D - BACKGROUND SEDIMENTS

SAUGET Analytical Data
Site R

SEDIMENT SAMPLES
MISC. (μg/kg)
Collected by IEPA

	Sample ID	SOIL SAMPLE A	SOIL SAMPLE B	SOIL SAMPLE C	Maximum
	Sample Number	DO22690	DO22692	DO22692	Concentration
	Date Collected	10/2/81	10/2/81	10/2/81	Detected
Misc.					
PCB		48	ND	230	230
Toluene		ND	ND	ND	ND
Chlorobenzene		ND	ND	ND	ND
Chloroaniline		1700	190	6900	6900
Chloronitrobenzene		ND	130	ND	130
2, 4 - D		53	< 5	< 5	53
2, 4, 5 - T		< 5	< 5	< 5	ND
Dichloronitrobenzene		ND	ND	ND	ND
Dichloroaniline		ND	ND	190	190
Chloronitroaniline		ND	ND	ND	ND
Nitroaniline		ND	ND	ND	ND
Chlorophenol		ND	ND	290	290
Phenol		ND	ND	ND	ND
Methylphenol		ND	ND	ND	ND
Dichlorophenol		40	ND	ND	40
Nitrophenol		ND	ND	ND	ND
Biphenyldiol		ND	ND	ND	ND
Aniline		ND	ND	ND	ND
Methylbenzene		ND	ND	ND	ND
Sucponamide		ND	ND	ND	ND
4-Methyl -2-pentanol		ND	ND	ND	ND
2-Methyl cyclopentanol		ND	ND	ND	ND
Biphenyl 2-01		ND	ND	310	310
Benzenesulfonamide		ND	ND	ND	ND
Dichlorobenzene		ND	ND	ND	ND
Benzoic acid / derivatives		ND	ND	ND	ND
Hydroxybenzoic acid / derivatives		ND	ND	ND	ND
2, 4 - D Isomer		ND	ND	ND	ND
2, 4, 5 - T Isomer		ND	ND	ND	ND

μg/kg - Micrograms per kilogram
ND - Not detected

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SAUGET Analytical Data
Site R

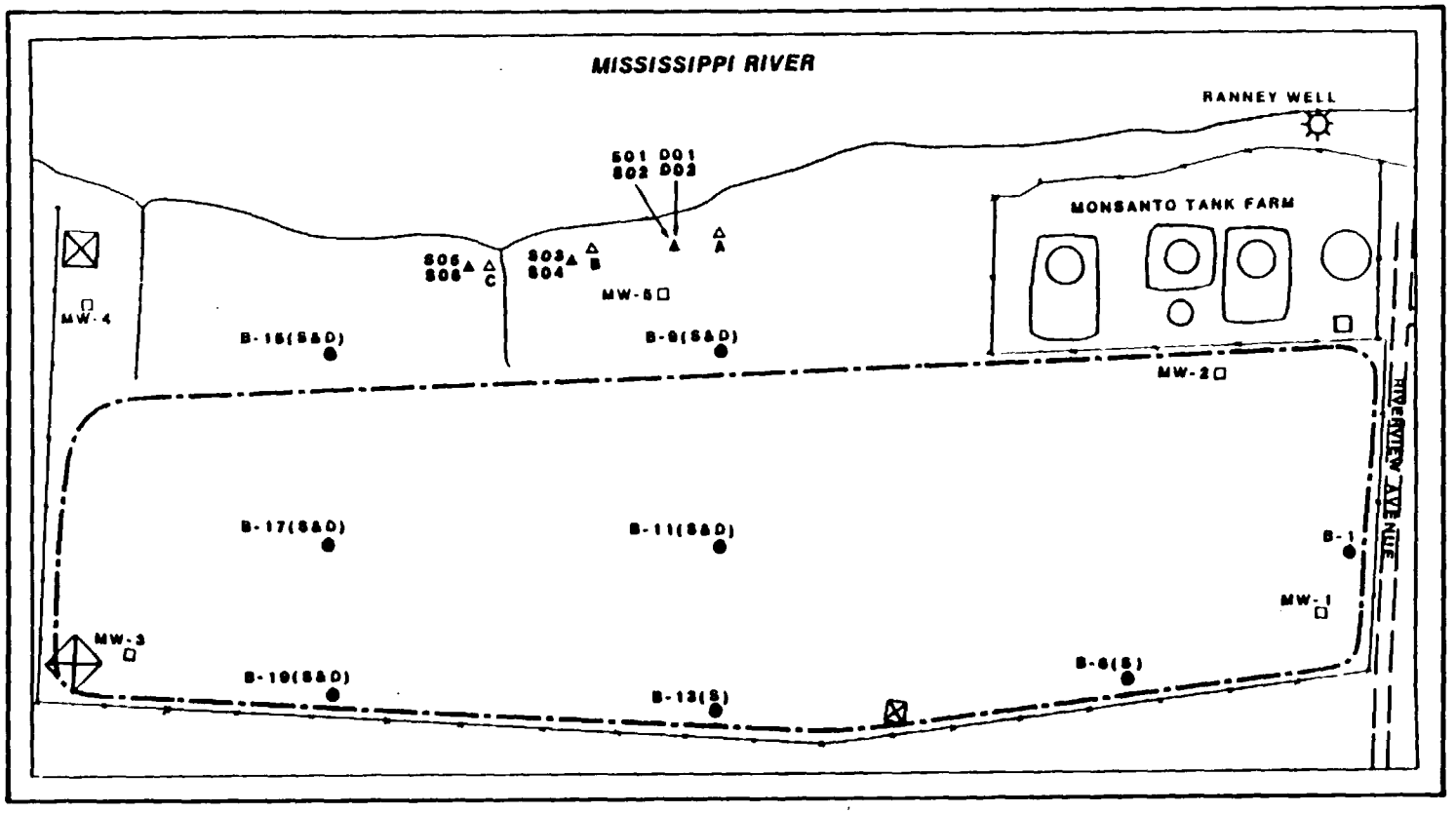
LEACHATE SAMPLES
Misc. (μg/L)
Collected by IEPA 10/2/81

	Sample Number	SAMPLE A	SAMPLE B	SAMPLE C	Maximum
	Well Number	DO22687	DO22688	DO22689	Concentration
	Date Collected	10/2/81	10/2/81	10/2/81	Detected
Misc.					
PCB		ND	ND	2.6	2.6
Toluene		11	40	150	150
Chlorobenzene		160	390	1600	1600
Chloroaniline		24000	22000	38000	38000
Chloronitrobenzene		21000	9600	820	21000
2, 4 - D		16000	17000	7800	17000
2, 4, 5 - T		ND	ND	ND	ND
Dichloronitrobenzene		740	590	790	790
Dichloroaniline		870	820	2800	2800
Chloronitroaniline		84	33	ND	84
Nitroaniline		100	23	ND	100
Chlorophenol		15000	30000	27000	30000
Phenol		22000	17000	12000	22000
Methylphenol		570	220	110	570
Dichlorophenol		32000	7200	2100	32000
Nitrophenol		600	ND	ND	600
Biphenyldiol		1700	ND	ND	1700
Aniline		550	120	35	550
Methylbenzene		180	2000	140	2000
Sucponamide		ND	ND	ND	ND
4-Methyl -2-pentanol		26	ND	ND	26
2-Methyl cyclopentanol		93	ND	ND	93
Biphenyl 2-01		300	300	280	300
Benzenesulfonamide		76	630	ND	630
Dichlorobenzene		ND	110	250	250
Benzoic acid / derivatives		12000	6600	2000	12000
Hydroxybenzoic acid / derivatives		12000	ND	ND	12000
2, 4 - D Isomer		38000	48000	29000	48000
2, 4, 5 - T Isomer		10000	12000	6500	12000

μg/L - Micrograms per liter

ND - Not detected

010



LEGEND

A	IEPA LEACHATE & SEDIMENT SAMPLING LOCATION
S01	USEPA - FIT LEACHATE & SEDIMENT SAMPLING LOCATION
D01	DUPLICATE SAMPLE
MW-1	IEPA MONITORING WELL SAMPLING LOCATION (PRIOR TO 1979)
B-1	IEPA MONITORING WELL SAMPLING LOCATION (1979-1981)

SCALE

0 100 400 800 FEET

FIGURE R-1
STATE AND USEPA SAMPLING LOCATIONS AT SITE R.

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SAUGET Analytical Data
Site R

SEDIMENT SAMPLES
BNA's/Pesticides/PCBs (ug/kg)
Collected by E&E

Sample Number	S02	M02	S04	M04	S06	M06	Maximum
Date Collected	11/12/81	11/12/81	11/12/81	11/12/81	11/12/81	11/12/81	Concentration
BNA's/Pest./PCBs							Detected
2-Chlorophenol	0.26	ND	0.2	200	0.4	ND	200
2, 4-Dichlorophenol	ND	ND	0.42	ND	0.56	ND	0.56
Phenol	ND	ND	0.5	300	0.42	300	300
2, 4, 6-Trichlorophenol	ND	ND	ND	ND	0.32	ND	0.32
1, 4-Dichlorobenzene	ND	200	ND	400	ND	600	600
1, 2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND
Bis(2 ethylhexyl) Phthalate	ND	400	ND	300	ND	400	400
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND
Aniline	ND	ND	ND	ND	ND	ND	ND
Chloroanilines	ND	ND	ND	ND	ND	ND	ND
Dichloroanilines	ND	ND	ND	ND	ND	200	200
Chloronitrobenzenes	ND	ND	ND	ND	ND	ND	ND
2, 4-D	ND	ND	ND	ND	ND	ND	ND
PCBs	ND	0.014	ND	0.034	ND	0.192	0.192

µg/kg - Micrograms per kilogram

ND - Not detected

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ecology and environment

0103

SAUGET Analytical Data
Site R

LEACHATE SAMPLES
Dioxins and Furans (ng/L)
Collected by E&E

	Sample Number	S01	S03	S05	S07	R01	Maximum
	Date Collected	11/2/81	11/2/81	11/2/81	11/2/81	11/2/81	Concentration
Dioxins and Furans					BLANK	BLANK	Detected
TCDDs		ND	ND	ND	ND	ND	ND
TCDFs		ND	ND	ND	ND	ND	ND
PCDDs		ND	ND	ND	ND	ND	ND
PCDFs		ND	ND	ND	ND	ND	ND
HXCDDs		4.5	6.3	5.8	ND	ND	6.3
HXCDFs		6.3	10	6.3	ND	ND	10
HPCDDs		86	181	152	ND	ND	181
HPCDFs		74	182	112	ND	ND	182
OCDDs		323	675	2693	ND	ND	2693
OCDFs		30	103	53	ND	ND	103

ng/L - Nanograms per liter

ND - Not detected

0110

SAUGET Analytical Data
Site R

LEACHATE SAMPLES
Total Metals(mg/L)
Collected by E&E

Sample Number	S01	M01	D01	S03	M03	S05	M05	R01	Maximum
Date Collected	11/12/81	11/12/81	11/12/81	11/12/81	11/12/81	11/12/81	11/12/81	11/12/81	Concentration
Metals								BLANK	Detected
Arsenic	0.034	0.02	0.031	0.016	0.025	0.029	0.065	ND	0.065
Mercury	0.0002	ND	0.0002	0.0002	0.0014	0.0008	0.001	ND	0.0014
Selenium	0.038	ND	0.032	0.026	ND	0.031	ND	ND	0.038
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony	ND	ND	ND	ND	ND	ND	ND	ND	ND
Beryllium	ND	0.008	ND	ND	0.005	ND	0.008	ND	0.008
Cadmium	ND	0.006	ND	ND	0.007	ND	0.008	ND	0.008
Chromium	0.04	0.086	0.02	0.015	0.075	0.02	0.07	0.01	0.086
Copper	ND	0.073	ND	ND	0.092	ND	0.08	ND	0.092
Lead	0.005	ND	0.008	ND	ND	ND	ND	ND	0.008
Nickel	0.04	0.155	ND	ND	0.124	ND	0.144	ND	0.155
Silver	ND	ND	ND	ND	ND	0.01	ND	ND	0.01
Zinc	0.048	0.216	0.024	0.01	0.216	0.049	0.062	0.031	0.216
Aluminum	ND	26.8	ND	ND	30.5	ND	3.22	ND	30.5
Barium	ND	0.5	ND	ND	0.5	ND	0.36	ND	0.5
Boron	19.7	18	17.1	15.35	13.6	21.6	19.1	ND	21.6
Calcium	NA	368	NA	NA	257	NA	257	NA	368
Cobalt	ND	0.03	ND	ND	0.019	ND	0.031	ND	0.031
Iron	0.06	25.5	0.06	ND	30.8	0.63	27.4	ND	30.8
Magnesium	NA	43.2	NA	NA	48.2	NA	39.8	NA	48.2
Manganese	0.02	6.27	0.32	1.99	2.1	5.4	8.82	0.03	8.82
Molybdenum	NA	0.53	NA	NA	0.403	NA	0.439	NA	0.53
Phosphorus	NA	0.9	NA	NA	0.907	NA	2.06	NA	2.06
Sodium	NA	40.4	NA	NA	41.8	NA	44.2	NA	44.2
Tin	ND	ND	ND	ND	ND	0.02	1.4	ND	1.4
Vanadium	ND	0.18	ND	ND	0.138	ND	0.17	ND	0.18
Cyanide	0.071	NA	0.057	NA	NA	NA	NA	0.13	0.13

mg/L - Milligrams per liter
NA - Parameter not analyzed
ND - Not detected

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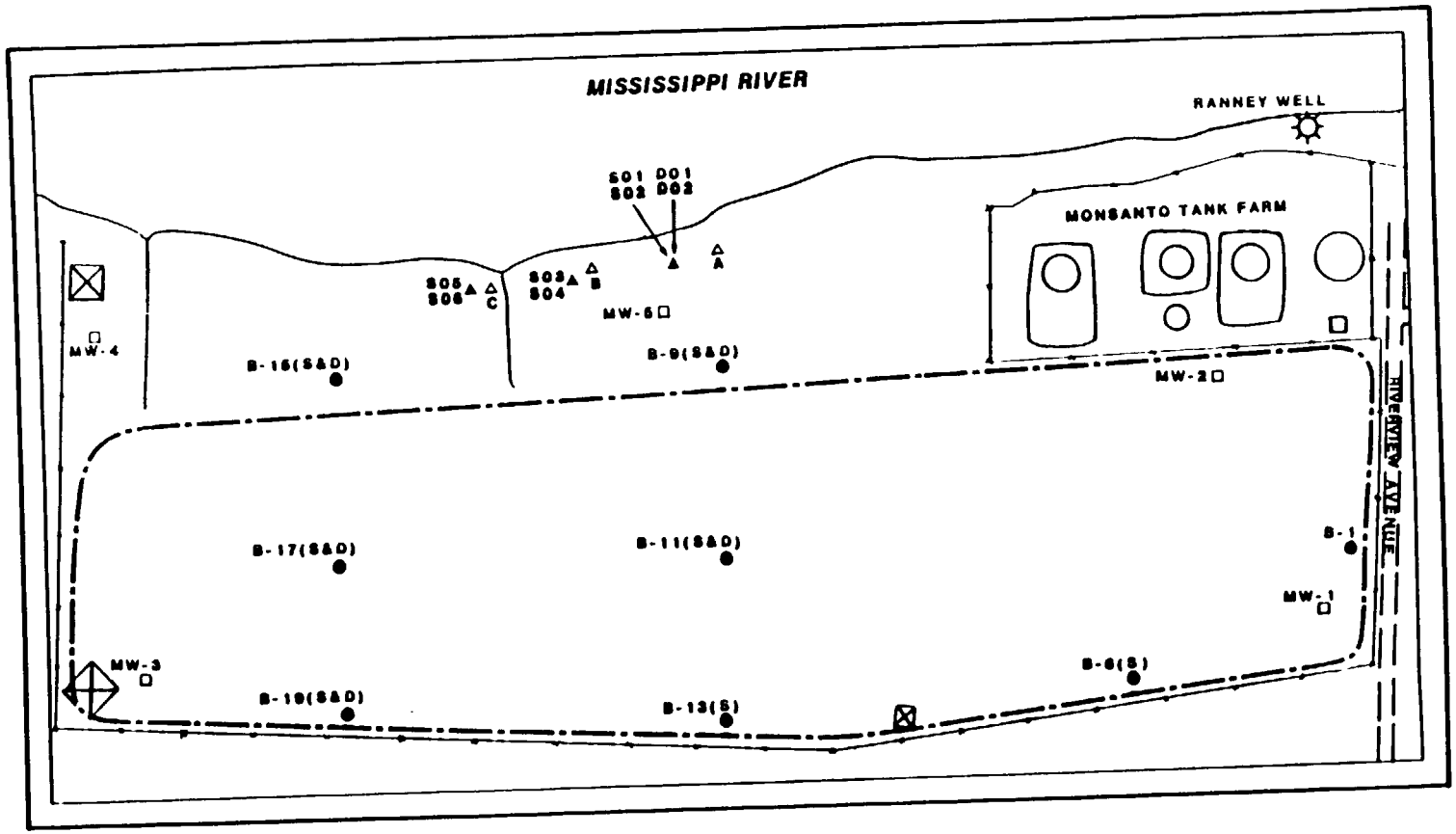
SAUGET Analytical Data
Site R

SEDIMENT SAMPLES
Total Metals (mg/kg)
Collected by E&E

	Sample Number	S02	S03	M02	S04	M04	S06	M06	Maximum
	Date Collected	11/12/81	11/12/81	11/12/81	11/12/81	11/12/81	11/12/81	11/12/81	Concentration
Total Metals									Detected
Arsenic		1.1	2.9	5.3	1.25	9.6	1.8	8.2	9.6
Mercury		ND	ND	ND	ND	ND	ND	ND	ND
Selenium		1.1	1.8	ND	1.5	ND	1.6	ND	1.8
Thallium		ND	ND	ND	ND	ND	ND	ND	ND
Antimony		ND	ND	ND	4	ND	ND	ND	4
Beryllium		ND	ND	0.412	ND	0.489	ND	1.08	1.08
Cadmium		ND	ND	0.747	0.61	1.04	ND	2.49	2.49
Chromium		ND	ND	10.7	ND	10.4	ND	[illegible]	28.7
Copper		ND	ND	7.17	ND	7.89	ND	25.5	25.5
Lead		2.4	2.9	ND	2.45	ND	1.7	ND	2.9
Nickel		ND	ND	17.4	ND	18.6	ND	33.8	33.8
Zinc		9.5	10	29.5	6.8	36.3	9.2	69.4	69.4
Aluminum		150	190	3870	155	4380	170	13900	13900
Barium		ND	ND	75.4	ND	130	20	7.79	130
Boron		ND	25	53	17	28.7	26	30.3	53
Calcium		NA	NA	3660	NA	4010	NA	6590	6590
Cobalt		ND	ND	4.7	ND	4.8	ND	9.45	9.45
Iron		580	660	5870	425	8660	580	12600	12600
Magnesium		NA	NA	1780	NA	2090	NA	4080	4080
Manganese		76	46	79.7	42	119	47	273	273
Molybdenum		NA	NA	10.6	NA	12.5	NA	22.4	22.4
Phosphorus		NA	NA	154	NA	270	NA	366	366
Sodium		NA	NA	1840	NA	1270	NA	4720	4720
Tin		ND	ND	ND	ND	ND	ND	ND	ND
Vanadium		ND	ND	14.4	ND	17	ND	43.9	43.9
Cyanide		28	13	NA	6.8	NA	90	NA	90

mg/kg - Milligrams per kilogram
NA - Parameter not analyzed
ND - Not detected



LEGEND

A	IEPA LEACHATE & SEDIMENT SAMPLING LOCATION
S01	USEPA - FIT LEACHATE & SEDIMENT SAMPLING LOCATION
D01	DUPLICATE SAMPLE
MW-1	IEPA MONITORING WELL SAMPLING LOCATION (PRIOR TO 1979)
B-1	IEPA MONITORING WELL SAMPLING LOCATION (1979-1981)

SCALE
0 100 400 800 FEET

FIGURE R-1
STATE AND USEPA SAMPLING LOCATIONS AT SITE R.

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0113

SAUGET Analytical Data
Site R

SOIL SAMPLES
Volatile Organic Compounds (µg/kg)
Collected by IEPA

Sample Number	x112	x113	Maximum
Date Collected	11/11/94	11/11/94	Detected
VOC			
Chloromethane	DM	ND	ND
Bromomethane	DM	ND	ND
Vinyl chloride	DM	ND	ND
Chloroethane	DM	ND	ND
Methylene chloride	DM	28	28
Acetone	DM	33	33
Carbon Disulfide	DM	ND	ND
1,1-Dichloroethene	DM	ND	ND
1,1-Dichloroethane	DM	ND	ND
trans-1,2-Dichloroethene	DM	ND	ND
Chloroform	DM	ND	ND
1,2-Dichloroethane	DM	ND	ND
2-Butanone (MEK)	DM	ND	ND
1,1,1-Trichloroethane	DM	ND	ND
Carbon Tetrachloride	DM	ND	ND
Vinyl Acetate	DM	ND	ND
Bromodichloromethane	DM	ND	ND
1,2-Dichloropropane	DM	ND	ND
trans-1,3-Dichloropropene	DM	ND	ND
Trichloroethene	DM	ND	ND
Dibromochloromethane	DM	ND	ND
1,1,2-Trichloroethane	DM	ND	ND
Benzene	DM	ND	ND
cis-1,3-Dichloropropene	DM	ND	ND
2-Chloroethyl Vinyl Ether	DM	ND	ND
Bromoform	DM	ND	ND
4-Methyl-2-pentanone	DM	ND	ND
2-Hexanone	DM	ND	ND
Tetrachloroethene	DM	ND	ND
1,1,2,2-Tetrachloroethane	DM	ND	ND
Toluene	DM	ND	ND
Chlorobenzene	DM	ND	ND
Ethylbenzene	DM	ND	ND
Styrene	DM	ND	ND
Total Xylenes	DM	ND	ND

µg/kg - Micrograms per kilogram.
DM - Data missing.
ND - Not detected.

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SAUGET Analytical Data
Site R

SOIL SAMPLES
Base Neutrals/Acids (μg/kg)
Collected by IEPA

	Sample Number	x112	x113	Maximum
	Date Collected	11/11/94	11/11/94	Detected
BNAs				
Phenol		ND	ND	ND
bis(2-Chloroethyl)ether		ND	ND	ND
2-Chlorophenol		ND	ND	ND
1,3-Dichlorobenzene		ND	ND	ND
1,4-Dichlorobenzene		ND	ND	ND
Benzyl Alcohol		ND	ND	ND
1,2-Dichlorobenzene		ND	ND	ND
2-Methylphenol		ND	ND	ND
bis(2-Chloroisopropyl)ether		ND	ND	ND
4-Methylphenol		ND	ND	ND
N-Nitroso-n-Dipropylamine		ND	ND	ND
Hexachloroethane		ND	ND	ND
Nitrobenzene		ND	ND	ND
Isophorone		ND	ND	ND
2-Nitrophenol		ND	ND	ND
2,4-Dimethylphenol		ND	ND	ND
Benzoic Acid		ND	ND	ND
bis-(2-Chloroethoxy)methane		ND	ND	ND
2,4-Dichlorophenol		ND	ND	ND
1,2,4-Trichlorophenol		ND	ND	ND
Naphthalene		810	240 J	810
4-Chloroaniline		ND	ND	ND
Hexachlorobutadiene		ND	ND	ND
4-Chloro-3-methylphenol		ND	ND	ND
2-Methylnaphathalene		300 J	70 J	300 J
Hexachlorocyclopentadiene		ND	ND	ND
2,4,6-Trichlorophenol		ND	ND	ND
2,4,5-Trichlorophenol		ND	ND	ND
2-Chloronaphthalene		ND	ND	ND
2-Nitroaniline		ND	ND	ND
Dimethyl Phthalate		ND	ND	ND
Acenaphthylene		42 J	ND	42 J
3-Nitroaniline		ND	ND	ND
Acenaphthene		2200	340 J	2200

μg/kg - Micrograms per kilogram.
J - Estimated value.
ND - Not detected.

SAUGET Analytical Data
Site R

SOIL SAMPLES
Base Neutrals/Acids (μg/kg)
Collected by IEPA

	Sample Number	x112	x113	Maximum
	Date Collected	11/11/94	11/11/94	Detected
BNAs				
2,4-Dinitrophenol		ND	ND	ND
4-Nitrophenol		ND	ND	ND
Dibenzofuran		1600	220 J	1600
2,4-Dinitrotoluene		ND	ND	ND
2,6-Dinitrotoluene		ND	ND	ND
Diethylphthalate		ND	ND	ND
4-Chlorophenyl-Phenylether		ND	ND	ND
Fluorene		2500	230 J	2500
4-Nitroaniline		ND	ND	ND
4,6-Dinitro-2-methylphenol		ND	ND	ND
N-Nitrosodiphenylamine		ND	ND	ND
4-Bromophenyl-phenylether		ND	ND	ND
Hexachlorobenzene		ND	ND	ND
Pentachlorophenol		ND	ND	ND
Phenanthrene		15000 D	1100	15000 D
Anthracene		3900 JD	250 J	3900 JD
Carbazole		1600	150 J	1600
Di-n-butly phthalate		ND	72 J	72 J
Fluoranthene		14000 D	740	14000 D
Pyrene		12000 D	700	12000 D
Butyl Benzyl phthalate		ND	ND	ND
3,3'-Dichlorobenzidine		ND	ND	ND
Benzo (a)anthracene		4300 D	230 J	4300 D
bis(2-ethylhexyl)phthalate		ND	240 J	240 J
Di-n-octyl phthalate		ND	28 JB	28 JB
Chrysene		4300 D	ND	4300 D
Benzo(b)fluoranthene		2900 JD	160 J	2900 JD
Benzo(k)fluoranthene		1700	160 J	1700
Benzo (a)pyrene		3100 JD	200 J	3100 JD
Indeno(1,2,3-cd)pyrene		2100	150 J	2100
Benzo(g,h,I)perylene		790	51 J	790
Dibenzo(a,h)anthracene		1500	150 J	1500

μg/kg - Micrograms per kilogram.
B - Compound detected in blank sample
D - Diluted Compound
J - Estimated value.
ND - Not Deteceld

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SAUGET Analytical Data
Site R

SOIL SAMPLES
Pesticides/PCBs (μg/kg)
Collected by IEPA

	Sample Number	x112	x113	Maximum
	Date Collected	11/11/94	11/11/94	Detected
Pesticides/PCBs				
Alpha-BHC		ND	ND	ND
Beta-BHC		ND	ND	ND
Delta-BHC		ND	ND	ND
Gamma-BHC (Lindane)		ND	ND	ND
Heptachlor		ND	ND	ND
Aldrin		ND	ND	ND
Heptachlor Epoxide		ND	ND	ND
Endosulfan I		ND	ND	ND
Dieldrin		ND	ND	ND
4,4'-DDE		ND	ND	ND
Endrin		ND	ND	ND
Endosulfan II		ND	ND	ND
4,4'-DDD		ND	ND	ND
Endosulfan sulfate		ND	ND	ND
4,4'-DDT		ND	ND	ND
Methoxychlor		ND	ND	ND
Endrin Ketone		ND	ND	ND
Chlordane		ND	ND	ND
Toxaphene		ND	ND	ND
Aroclor-1016		ND	ND	ND
Aroclor-1221		ND	ND	ND
Aroclor-1232		ND	ND	ND
Aroclor-1242		ND	ND	ND
Aroclor-1248		ND	ND	ND
Aroclor-1254		ND	ND	ND
Aroclor-1260		ND	**39 J**	**39 J**

μg/kg - Micrograms per kilogram.
J - Estimated value.
ND - Not detected.

State of Illinois
ENVIRONMENTAL PROTECTION AGENCY

Mary A. Gade, Director

2200 Churchill Road, Springfield, IL 62794-9276

MEMORANDUM

Date: December 30, 1994

From: Paul E. Takács, IEPA/BOL/NPL

To: Monica Rebbe, IDPH

Subject: L1630200005 -- St. Clair County
Sauget Sites (Area 1, Area 2) -- Sauget
Superfund/Technical Reports

The primary purpose of this memorandum is to present and interpret the results from a sampling event that IEPA was tasked to perform on November 9 and 10, 1994 at the Sauget Area 1 and Area 2 Sites. This sampling entailed the collection of sixteen surface soil samples within Site Q and near Site G (see Attachment A).

As outlined in the September 6 proposal to the Illinois Department of Public Health (IDPH) (see Attachment B), the objective of the sampling event was to gather data on areas in the Sauget and Cahokia area that were impacted by last year's flooding. This project represents a cooperative effort between IEPA and IDPH. All analytical costs were paid for by IDPH.

Actual field sampling was performed by Tom Miller and Doug Hayward of IEPA's Collinsville office with Monica Rebbe (IDPH) and Paul Takacs (IEPA) providing general oversight and assistance. The sixteen soil samples were sent to Applied Research and Development Laboratory (ARDL) in Mt. Vernon for analysis. ARDL was picked because of its proximity to the site.

Each sample was collected with a stainless steel spoon, sealed in a glass jar and packed with blue ice before shipping as per normal IEPA guidelines. One trip blank was sent to ARDL along wich each group of samples that were taken on both days. All samples arrived at ARDL on the same day they were taken. Analyses were then run for volatile and semivolatile organic compounds, pesticides, PCBs and inorganics. As per the Health and Safety Plan (Attachment C), the sampling was performed in Level C protection.

Inorganics

In general, the samples ranged from very low to high levels of contamination. The first group of samples were taken in the east borrow pit of Site Q. Previous site visits have noted two large mounded areas near the west-central portion of this pit. Two soil samples each were taken around the edges of both mounds where drums and waste piles were exposed. Sample X101 was a grayish waste

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material that had fairly high levels of antimony (157ppm), cadmium (2,260ppm), chromium (3,650ppm), lead (7,690ppm), mercury (4.9ppm), nickel (153ppm), selenium (59.9ppm) and cyanide (3.3ppm). Sample X102 was a white crumbly waste. It had only low levels of inorganic contamination with magnesium (4,259ppm) being most significant. The next sample, X103 was a bluish-grey waste that had high levels of antimony (17,900ppm), arsenic (216ppm), copper (1,630ppm), lead (195,000ppm) and silver (30.2ppm). Sample X104, similar to X102, contained the white crumbly substance that had similar contaminants (magnesium @ 4,600ppm). Samples X105 and X106 were both located in waste piles near the northern portion of the borrow pit along the west boundary. X105 was a grayish crystalline substance, which did not appear to have inorganic contamination (although the sample did have a pH of 2.6). X106 was a light blue flaky material that also did not appear to have significant inorganic contamination. Samples X107 and X108 were also taken at the northern portion of the pit. X107 was taken on a ridge of what appeared to be waste material, although the reddish material resembling clay in this sample did not appear to have significant inorganic contamination. X108 was the northernmost sample taken in the east borrow pit. It was dark grey in color and had rather significant concentrations of lead (571ppm).

Samples X109, X110 and X111 were collected along the east bank of the west borrow pit with X109 and X110 taken from one waste pile that resembled the one X105 and X106 came from in the other borrow pit. X109 was a reddish grey waste that did not contain high levels of organics, while X110 contained antimony (47.6ppm), arsenic (19.3ppm), copper (226ppm), lead (5,320ppm), nickel (371ppm), and silver (28.9ppm). Both samples also had pH's (3.6 and 3.7, respectively). Sample X111 was a grayish-white material collected south of the above-mentioned samples and contained nickel (25.9ppm) and vanadium (23.1ppm).

Samples X112 and X113 were taken along the river bank, just south of Site R. Both samples contained a hard blackish substance that appeared to have been disposed of in drums. X112 contained notable levels of cadmium (56.2ppm) and zinc (10,300ppm), while X113 was found to contain magnesium (4,710ppm).

The remaining samples (X114, X115 and X116) were collected around Site G. Both X114 and X115 were soil samples collected in lower elevation areas to the south of the southern Site G fence that could have received runoff from Site G. These samples showed rather high levels of copper (675ppm in X114 and 1,150ppm in X115), lead (172ppm in X114), nickel (32.7ppm in X114 and 38.5ppm in X115) and vanadium (23.3ppm in X114 and 22.7ppm in X115). The last sample (X116) was located in a ridge off of the southwest corner of Site G. X116 which was a brownish waste material containing significant levels of copper (515ppm), mercury (4.7ppm) and high levels of zinc (38,200ppm).

Volatile Organic Contaminants

Only X101, X106, X115 and X116 showed any significant measurable

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SUMMARY OF SAMPLES COLLECTED AT THE RIVER'S EDGE LANDFILL, MARCH 13-16, 1989

DYNAMAC SAMPLE NUMBER	RMA SAMPLE NUMBER	LOCATION	ANALYTES	SAMPLE DEPTH (FEET)*	CHAIN OF CUSTODY NUMBER	TRIP BLANK
D-1-3	003918-0001-SA	BORING 1	VOA	2-4	9348	1
D-1-7	003918-0002-SA	BORING 1	VOA	6-8	9348	1
D-1-13	003918-0003-SA	BORING 1	TCL	0-16, 12-14	9348	1
D-2-7	003918-0004-SA	BORING 2	VOA	6-8	9348	1
D-2-11	003918-0005-SA	BORING 2	VOA	10-12	9348	1
D-2-15	003918-0006-SA	BORING 2	VOA	14-16	9348	1
D-2-17	003918-0007-SA	BORING 2	TCL	0-18, 16-18	9348	1
D-8-5	003918-0008-SA	BORING 8	VOA	4-6	9348	1
D-8-9	003918-0009-SA	BORING 8	VOA	8-10	9348	1
D-8-25	003918-0010-SA	BORING 8	TCL	0-28, 24-26	9348	1
D-7-5	003919-0001-SA	BORING 7	VOA	6-8	9349	1
D-7-15	003919-0002-SA	BORING 7	VOA	14-16	9349	1
R-7-15	003919-0003-SA	BORING 7	VOA	14-16	9349	1
D-7-23	003919-0004-SA	BORING 7	TCL	0-24, 22-24	9349	1
D-6-5	003919-0005-SA	BORING 6	VOA	4-6	9349	1
D-6-15	003919-0006-SA	BORING 6	VOA	14-16	9349	1
D-6-27	003919-0007-SA	BORING 6	TCL	0-30, 26-28	9349	1
P-1	003919-0008-SA	PERIMETER	VOA	0.5-1	9349	1
P-2	003919-0009-SA	PERIMETER	TCL	0.5-1	9349	1
P-3	003919-0010-SA	PERIMETER	TCL	0.5-1	9349	1
P-4	003919-0011-SA	PERIMETER	VOA	0.5-1	9351	1
P-5	003919-0012-SA	PERIMETER	TCL	0.5-1	9351	1
P-6	003919-0013-SA	PERIMETER	VOA	0.5-1	9351	1

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TRIP BLANK	003919-0014-SA	-	VOA	-	9351	-
D-5-7	003950-0001-SA	BORING 5	VOA	6-8	9330	2
D-5-13	003950-0002-SA	BORING 5	VOA	12-14	9330	2
D-5-23	003950-0003-SA	BORING 5	TCL	0-30, 22-24	9330	2
D-4-5	003950-0004-SA	BORING 4	VOA	4-6	9330	2
D-4-17	003950-0005-SA	BORING 4	VOA	16-18	9330	2
D-4-23	003950-0006-SA	BORING 4	TCL	0-26, 22-24	9330	2
D-3-5	003950-0007-SA	BORING 3	VOA	4-6	9330	2
R-3-5	003950-0008-SA	BORING 3	VOA	4-6	9330	2
D-3-13	003950-0009-SA	BORING 3	VOA	12-14	9330	2
D-3-29	003950-0010-SA	BORING 3	TCL	0-30, 28-30	9330	2
R-3-29	003951-0001-SA	BORING 3	TCL	0-30, 28-30	9331	2
D-3-21	003951-0002-SA	BORING 3	VOA	20-22	9331	2
C-7	003951-0003-SA	CENTER	VOA	0.5-1	9331	2
C-8	003951-0004-SA	CENTER	VOA	0.5-1	9331	2
C-5	003951-0005-SA	CENTER	VOA	0.5-1	9331	2
C-6	003951-0006-SA	CENTER	VOA	0.5-1	9331	2
C-3	003951-0007-SA	CENTER	TCL	0.5-1	9331	2
RC-3	003951-0008-SA	CENTER	TCL	0.5-1	9331	2
C-4	003951-0009-SA	CENTER	VOA	0.5-1	9331	2
C-1	003951-0010-SA	CENTER	VOA	0.5-1	9331	2
C-2	003951-0011-SA	CENTER	VOA	0.5-1	9331	2
P-7	003951-0012-SA	PERIMETER	VOA	0.5-1	9331	2
PR-7	003951-0013-SA	PERIMETER	VOA	0.5-1	9331	2
P-8	003951-0014-SA	PERIMETER	VOA	0.5-1	9331	2
P-9	003951-0015-SA	PERIMETER	TCL	0.5-1	9331	2
P-10	003951-0016-SA	PERIMETER	VOA	0.5-1	9331	2
RC-6	003951-0017-SA	PERIMETER	VOA	0.5-1	9331	2
TRIP BLANK	NONE	-	VOA	-	9331	-

*1ST NUMBER IS COMPOSITE FOR NON-VOLATILE FRACTIONS OF THE TCL ANALYSIS

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NOTE: THE DATA PRESENTED IN THIS SECTION IS PRESENTED IN THE ORIGINAL REPORT FORMAT.

SOURCE: "REMEDIAL INVESTIGATION AT SAUGET SITE R"
Geraghty & Miller, 1994

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APPENDIX K

DYNAMAC SOIL BORING REPORT - 1989

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GERAGHTY & MILLER, INC.

ATTACHMENT B

Analytical Data for Surface and Subsurface Soil Samples

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TABLE 1: Summary of TCL Volatile Organics in Surface Soil Samples
River's Edge Landfill (Sauget Site R), Monsanto Company, Sauget IL
(concentrations in ug/kg; sample depth in ft)

CAP/PERIM	CAP	CAP	CAP	CAP	CAP	CAP	CAP	CAP	CAP	CAP
SAMPLE NUMBER	C-1	C-2	C-3	RC-3	C-4	C-5	C-6	RC-6	C-7	C-8
SAMPLE DEPTH	0.5-1	0.5-1	0.5-1	0.5-1	0.5-1	0.5-1	0.5-1	0.5-1	0.5-1	0.5-1
Acrolein	< 10000	< 10000	< 100000	< 100000	< 10000	< 10000	< 10000	< 10000	< 10000	< 10000
Acrylonitrile	< 10000	< 10000	< 10000	< 10000	< 10000	< 10000	< 10000	< 10000	< 10000	< 10000
Trichlorofluoromethane	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
Dichlorodifluoromethane	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000
Methyl Isoamyl Ketone	--	--	--	--	--	--	--	--	--	--
Chloromethane	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000
Bromomethane	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000
Vinyl chloride	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000
Chloroethane	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000
Methylene chloride	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500
Acetone	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500
Carbon disulfide	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
1,1-Dichloroethene	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
1,1-Dichloroethane	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
1,2-Dichloroethene (cis/trans)	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
Chloroform	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
1,2-Dichloroethane	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
2-Butanone	< 2500	< 2500	< 2500	< 2500	3300	< 2500	< 2500	< 2500	< 2500	< 2500
1,1,1-Trichloroethane	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
Carbon tetrachloride	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
Vinyl acetate	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000
Bromodichloromethane	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
1,2-Dichloropropane	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
cis-1,3-Dichloropropene	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
Trichloroethene	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
Chlorodibromomethane	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
1,1,2-Trichloroethane	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
Benzene	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
trans-1,3-Dichloropropene	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
2-Chloroethyl vinyl ether	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000
Bromoform	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
4-Methyl-2-pentanone	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000
2-Hexanone	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000
1,1,2,2-Tetrachloroethane	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
Tetrachloroethene	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
Toluene	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
Chlorobenzene	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
Ethyl benzene	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
Styrene	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
Total xylenes	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500

REPLICATE SAMPLE NUMBERS ARE UNDERLINED

TABLE 1 (continued)

CAP/PERIM	PERIM	PERIM	PERIM	PERIM	PERIM	PERIM	PERIM	PERIM	PERIM	PERIM	PERIM
SAMPLE NUMBER	P-1	P-2	P-3	P-4	P-5	P-6	P-7	PR-7	P-8	P-9	P-10
SAMPLE DEPTH	0.5-1	0.5-1	0.5-1	0.5-1	0.5-1	0.5-1	0.5-1	0.5-1	0.5-1	0.5-1	0.5-1
Acrolein	< 10000	< 10000	< 10000	< 10000	< 10000	< 2500	< 10000	< 10000	< 10000	100000	< 10000
Acrylonitrile	< 10000	< 10000	< 10000	< 10000	< 10000	< 2500	< 10000	< 10000	< 10000	< 10000	< 10000
Trichlorofluoromethane	< 500	< 500	< 500	< 500	< 500	< 2500	< 500	< 500	< 500	< 500	< 500
Dichlorodifluoromethane	< 1000	< 1000	< 1000	< 1000	< 1000	< 2500	< 1000	< 1000	< 1000	< 1000	< 1000
Methyl Isoamyl Ketone	--	--	--	--	--	2500	--	--	--	--	--
Chloromethane	< 1000	< 1000	< 1000	< 1000	< 1000	< 2500	< 1000	< 1000	< 1000	< 1000	< 1000
Bromomethane	< 1000	< 1000	< 1000	< 1000	< 1000	< 2500	< 1000	< 1000	< 1000	< 1000	< 1000
Vinyl chloride	< 1000	< 1000	< 1000	< 1000	< 1000	< 2500	< 1000	< 1000	< 1000	< 1000	< 1000
Chloroethane	< 1000	< 1000	< 1000	< 1000	< 1000	< 2500	< 1000	< 1000	< 1000	< 1000	< 1000
Methylene chloride	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500
Acetone	< 2500	< 2500	< 2500	< 2500	< 2500	4900	< 2500	< 2500	4600	3400	3100
Carbon disulfide	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
1,1-Dichloroethene	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
1,1-Dichloroethane	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
1,2-Dichloroethene (cis/trans)	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
Chloroform	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
1,2-Dichloroethane	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
2-Butanone	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500
1,1,1-Trichloroethane	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
Carbon tetrachloride	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
Vinyl acetate	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000
Bromodichloromethane	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
1,2-Dichloropropane	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
cis-1,3-Dichloropropene	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
Trichloroethene	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
Chlorodibromomethane	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
1,1,2-Trichloroethane	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
Benzene	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
trans-1,3-Dichloropropene	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
2-Chloroethyl vinyl ether	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000
Bromoform	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
4-Methyl-2-pentanone	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000
2-Hexanone	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000
1,1,2,2-Tetrachloroethane	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
Tetrachloroethene	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
Toluene	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
Chlorobenzene	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
Ethyl benzene	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
Styrene	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500
Total xylenes	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500

REPLICATE SAMPLES NUMBERS ARE UNDERLINED

TABLE 2: Summary of TCL Semivolatile Organics in Surface Soil Samples
River's Edge Landfill (Sauget Site R), Monsanto Company, Sauget, IL
(concentrations in ug/kg; sample depth in ft)

CAP/PERIM	CAP	CAP	PERIM	PERIM	PERIM	PERIM
SAMPLE NUMBER	C-3	RC-3	P-2	P-3	P-5	P-9
SAMPLE DEPTH	0.5-1	0.5-1	0.5-1	0.5-1	0.5-1	0.5-1
1,2-Diphenylhydrazine	--	--	< 330	< 330	< 330	--
Benzidine	--	--	< 330	< 330	< 330	--
N-Nitrosodimethylamine	< 330	< 330	< 330	< 330	< 330	< 330
Aniline	< 330	< 330	< 330	< 330	< 330	< 330
4-Chlorophenol	--	--	--	--	--	--
Triphenyl Phosphate	--	--	--	--	--	--
4-Nitrodiphenylamine	--	--	--	360	--	--
2-Nitrobiphenyl	--	--	--	--	--	--
3-Nitrobiphenyl	--	--	--	--	--	--
2-Nitrochlorobenzene	--	--	--	--	--	--
4-Nitrochlorobenzene	--	--	--	360	--	--
Total Dinitrochlorobenzene	--	--	--	--	--	--
Phenol	< 330	< 330	< 330	< 330	< 330	< 330
bis(2-Chloroethyl)ether	< 330	< 330	< 330	< 330	< 330	< 330
2-Chlorophenol	< 330	< 330	< 330	< 330	< 330	< 330
1,3-Dichlorobenzene	< 330	< 330	< 330	< 330	< 330	< 330
1,4-Dichlorobenzene	< 330	< 330	< 330	< 330	< 330	< 330
Benzyl alcohol	< 330	< 330	< 330	< 330	< 330	< 330
1,2-Dichlorobenzene	< 330	< 330	< 330	< 330	< 330	< 330
2-Methylphenol	< 330	< 330	< 330	< 330	< 330	< 330
bis(2-Chloroisopropyl)ether	< 330	< 330	< 330	< 330	< 330	< 330
4-Methylphenol	< 330	< 330	< 330	< 330	< 330	< 330
N-Nitroso-di-n-propylamine	< 330	< 330	< 330	< 330	< 330	< 330
Hexachloroethane	< 330	< 330	< 330	< 330	< 330	< 330
Nitrobenzene	< 330	< 330	< 330	< 330	< 330	< 330
Isophorone	< 330	< 330	< 330	< 330	< 330	< 330
2-Nitrophenol	< 330	< 330	< 330	< 330	< 330	< 330
2,4-Dimethylphenol	< 330	< 330	< 330	< 330	< 330	< 330
Benzoic acid	< 1600	< 1600	< 1600	< 1600	< 1600	< 1600
bis(2-Chloroethoxy) methane	< 330	< 330	< 330	< 330	< 330	< 330
2,4-Dichlorophenol	< 330	< 330	< 330	< 330	< 330	< 330
1,2,4-Trichlorobenzene	< 330	< 330	< 330	< 330	< 330	< 330
Naphthalene	< 330	< 330	< 330	< 330	< 330	< 330
4-Chloroaniline	< 330	< 330	< 330	< 330	< 330	< 330
Hexachlorobutadiene	< 330	< 330	< 330	< 330	< 330	< 330
4-Chloro-3-methylphenol	< 330	< 330	< 330	< 330	< 330	< 330
2-Methylnaphthalene	< 330	< 330	< 330	< 330	< 330	< 330
Hexachlorocyclopentadiene	< 330	< 330	< 330	< 330	< 330	< 330

REPLICATE SAMPLE NUMBERS ARE UNDERLINED

TABLE 2 (tinued)

CAP/PERIM	CAP	CAP	PERIM	PERIM	PERIM	PERIM
SAMPLE NUMBER	C-3	RC-3	P-2	P-3	P-5	P-9
SAMPLE DEPTH	0.5-1	0.5-1	0.5-1	0.5-1	0.5-1	0.5-1
2,4-Dinitrophenol	< 1600	< 1600	< 1600	< 1600	< 1600	< 1600
4-Nitrophenol	< 1600	< 1600	< 1600	< 1600	< 1600	< 1600
Dibenzofuran	< 330	< 330	< 330	< 330	< 330	< 330
2-4-Dinitrotoluene	< 330	< 330	< 330	< 330	< 330	< 330
2,6-Dinitrotoluene	< 330	< 330	< 330	< 330	< 330	< 330
Diethyl phthalate	< 330	< 330	< 330	< 330	< 330	< 330
4-Chlorophenyl phenyl ether	< 330	< 330	< 330	< 330	< 330	< 330
Fluorene	< 330	< 330	< 330	< 330	< 330	< 330
4-Nitroaniline	< 1600	< 1600	< 1600	< 1600	< 1600	< 1600
4,6-Dinitro-2-methylphenol	< 1600	< 1600	< 1600	< 1600	< 1600	< 1600
N-Nitrosodiphenylamine	< 330	< 330	< 330	< 330	< 330	< 330
4-Bromophenyl phenyl ether	< 330	< 330	< 330	< 330	< 330	< 330
Hexachlorobenzene	< 330	< 330	< 330	< 330	< 330	< 330
Pentachlorophenol	< 1600	< 1600	< 1600	< 1600	< 1600	< 1600
Phenanthrene	< 330	< 330	< 330	< 330	< 330	< 330
Anthracene	< 330	< 330	< 330	< 330	< 330	< 330
Di-n-butyl phthalate	< 330	< 330	< 330	< 330	< 330	< 330
Fluoranthene	< 330	< 330	< 330	< 330	< 330	< 330
Pyrene	< 330	< 330	< 330	< 330	< 330	< 330
Butyl benzyl phthalate	< 330	< 330	< 330	< 330	< 330	< 330
3,3'-Dichlorobenzidine	< 660	< 660	< 660	< 660	< 660	< 660
Benzo(a)anthracene	< 330	< 330	< 330	< 330	< 330	< 330
bis(2-Ethylhexyl) phthalate	< 330	< 330	< 330	< 330	< 330	< 330
Chrysene	< 330	< 330	< 330	< 330	< 330	< 330
Di-n-octyl phthalate	< 330	< 330	< 330	< 330	< 330	< 330
Benzo(b)fluoroanthene	< 330	< 330	< 330	< 330	< 330	< 330
Benzo(k)fluoroanthene	< 330	< 330	< 330	< 330	< 330	< 330
Benzo(a)pyrene	< 330	< 330	< 330	< 330	< 330	< 330
Indeno(1,2,3-c,d)pyrene	< 330	< 330	< 330	< 330	< 330	< 330
Dibenz(a,h)anthracene	< 330	< 330	< 330	< 330	< 330	< 330
Benzo(g,h,i)perylene	< 330	< 330	< 330	< 330	< 330	< 330

REPLICATE SAMPLE NUMBERS ARE UNDERLINED

TABLE 3: Summary of PP Organochlorine Pesticides/PCBs in Surface Soil Samples
River's Edge Landfill (Sauget Site R), Monsanto Company, Sauget, IL
(concentrations in ug/kg; sample depth in ft)

CAP/PERIM	CAP	CAP	CAP	PERIM	PERIM	PERIM	PERIM
SAMPLE NUMBER	C-1	C-3	RC-3	P-2	P-3	P-5	P-9
SAMPLE DEPTH	0.5-1	0.5-1	0.5-1	0.5-1	0.5-1	0.5-1	0.5-1
alpha-BHC	< 8	< 8	< 8	< 8	< 8	< 8	< 8
beta-BHC	< 8	< 8	< 8	< 8	< 8	< 8	< 8
delta-BHC	< 8	< 8	< 8	< 8	< 8	< 8	< 8
gamma-BHC (Lindane)	< 8	< 8	< 8	< 8	< 8	< 8	< 8
Heptachlor	< 8	< 8	< 8	< 8	< 8	< 8	< 8
Aldrin	< 8	< 8	< 8	< 8	< 8	< 8	< 8
Heptachlor epoxide	< 8	< 8	< 8	< 8	< 8	< 8	< 8
Endosulfan I	< 8	< 8	< 8	< 8	< 8	< 8	< 8
Dieldrin	< 16	< 16	< 16	< 16	< 16	< 16	< 16
4,4'-DDE	< 16	< 16	< 16	< 16	< 16	< 16	< 16
Endrin	< 16	< 16	< 16	< 16	< 16	< 16	< 16
Endosulfan II	< 16	< 16	< 16	< 16	< 16	< 16	< 16
4,4'-DDT	< 16	< 16	< 16	< 16	< 16	< 16	< 16
Endosulfan sulfate	< 16	< 16	< 16	< 16	< 16	< 16	< 16
4,4'-DDT	< 16	< 16	< 16	< 16	< 16	< 16	< 16
Endrin aldehyde	< 16	< 16	< 16	< 16	< 16	< 16	< 16
Methoxychlor	< 80	< 80	< 80	< 80	< 80	< 80	< 80
Chlordane	< 80	< 80	< 80	< 80	< 80	< 80	< 80
Toxaphene	< 160	< 160	< 160	< 160	< 160	< 160	< 160
Arochlor-1016	< 80	< 80	< 80	< 80	< 80	< 80	< 80
Arochlor-1221	< 80	< 80	< 80	< 80	< 80	< 80	< 80
Arochlor-1232	< 80	< 80	< 80	< 80	< 80	< 80	< 80
Arochlor-1242	< 80	< 80	< 80	< 80	< 80	< 80	< 80
Arochlor-1248	< 80	< 80	< 80	< 80	680	< 80	< 80
Arochlor-1254	< 160	< 160	< 160	< 160	630	< 160	< 160
Arochlor-1260	< 160	< 160	< 160	< 160	< 160	< 160	< 160

REPLICATE SAMPLE NUMBERS ARE UNDERLINED

TABLE 4: Summary of Metals and Miscellaneous Compounds in Surface Soil Samples
River's Edge Landfill (Sauget Site R), Monsanto Company, Sauget, IL
(concentrations in mg/kg; sample depth in ft)

CAP/PERIM	CAP	CAP	PERIM	PERIM	PERIM	PERIM
SAMPLE NUMBER	C-3	RC-3	P-2	P-3	P-5	P-9
SAMPLE DEPTH	0.5-1	0.5-1	0.5-1	0.5-1	0.5-1	0.5-1
Antimony	< 5.00	< 5.00	< 5.00	< 5.00	< 5.00	< 0.50
Beryllium	0.40	0.40	0.40	0.40	0.40	0.50
Cadmium	< 0.50	< 0.50	< 0.50	< 0.50	1.00	< 1.00
Chromium	9.00	8.00	8.00	9.00	9.00	8.00
Copper	12.00	11.00	9.40	9.70	14.00	13.00
Nickel	13.00	14.00	11.00	11.00	11.00	13.00
Silver	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Zinc	30.00	27.00	27.00	27.00	75.00	43.00
Aluminum	7600.00	6700.00	6800.00	7500.00	7400.00	8100.00
Barium	93.00	87.00	74.00	78.00	86.00	100.00
Boron	< 2.00	< 2.00	11.00	2.00	11.00	4.00
Cobalt	6.00	7.00	5.00	6.00	5.00	7.00
Iron	13500.00	12100.00	11400.00	12400.00	12300.00	13900.00
Lead	10.00	8.00	8.00	9.00	16.00	15.00
Manganese	470.00	560.00	400.00	430.00	400.00	550.00
Tin	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00
Vanadium	22.00	21.00	23.00	25.00	24.00	23.00
Arsenic	3.90	4.10	3.10	3.60	3.70	5.70
Mercury	< 0.05	< 0.05	< 0.05	0.24	< 0.05	< 0.05
Selenium	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Thallium	< 0.80	< 0.80	< 0.40	< 0.40	< 0.40	0.40
2,3,7,8-TCDD (ng/g)	< 0.045	< 0.064	< 0.036	< 0.059	< 0.037	< 0.04

REPLICATE SAMPLE NUMBERS ARE UNDERLINED

TABLE 5: Summary of TCL Volatile Organics in Subsurface Soil Samples
River's Edge Landfill (Sauget Site R), Monsanto Company, Sauget, IL
(concentrations in ug/kg)

BORING	D-1	D-1	D-1	D-2	D-2	D-2	D-2	D-3	D-3
SAMPLE NUMBER	D-1-3	D-1-7	D-1-13	D-2-7	D-2-11	D-2-15	D-2-17	D-3-5	R-3-5
SAMPLE DEPTH *	2-4	6-8	12-14	6-8	10-12	14-16	16-18	4-6	4-6
Acrolein	< 200000	< 100000	< 200000	< 2000000	< 50000	< 20000	< 50000	< 10000	< 10000
Acrylonitrile	< 200000	< 100000	< 200000	< 2000000	< 50000	< 20000	< 50000	< 10000	< 10000
Trichlorofluoromethane	< 10000	< 5000	< 10000	< 100000	< 2500	< 1000	< 2500	< 500	< 500
Dichlorodifluoromethane	< 20000	< 10000	< 20000	< 200000	< 5000	< 2000	< 5000	< 1000	< 1000
Methyl Isoamyl Ketone	--	--	--	--	--	--	--	--	--
Chloromethane	< 20000	< 10000	< 20000	< 200000	< 5000	< 2000	< 5000	< 1000	< 1000
Bromomethane	< 20000	< 10000	< 20000	< 200000	< 5000	< 2000	< 5000	< 1000	< 1000
Vinyl chloride	< 20000	< 10000	< 20000	< 200000	< 5000	< 2000	< 5000	< 1000	< 1000
Chloroethane	< 20000	< 10000	< 20000	< 200000	< 5000	< 2000	< 5000	< 1000	< 1000
Methylene chloride	< 50000	< 25000	< 50000	< 500000	< 12500	< 5000	< 12500	< 2500	< 2500
Acetone	< 50000	< 25000	< 50000	1200000	< 12500	12000	< 12500	< 2500	< 2500
Carbon disulfide	< 10000	< 5000	< 10000	< 100000	< 2500	< 1000	< 2500	< 500	< 500
1,1-Dichloroethene	< 10000	< 5000	< 10000	< 100000	< 2500	< 1000	< 2500	< 500	< 500
1,1-Dichloroethane	< 10000	< 5000	< 10000	< 100000	< 2500	< 1000	< 2500	< 500	< 500
1,2-Dichloroethene (cis/trans)	< 10000	< 5000	< 10000	< 100000	< 2500	< 1000	< 2500	< 500	< 500
Chloroform	< 10000	< 5000	< 10000	< 100000	< 2500	< 1000	< 2500	< 500	< 500
1,2-Dichloroethane	< 10000	< 5000	< 10000	< 100000	< 2500	< 1000	< 2500	< 500	< 500
2-Butanone	< 50000	< 25000	< 50000	770000	< 12500	< 5000	< 12500	< 2500	< 2500
1,1,1-Trichloroethane	< 10000	< 5000	< 10000	< 100000	< 2500	< 1000	< 2500	< 500	< 500
Carbon tetrachloride	< 10000	< 5000	< 10000	< 100000	< 2500	< 1000	< 2500	< 500	< 500
Vinyl acetate	< 20000	< 10000	< 20000	< 200000	< 5000	< 2000	< 5000	< 1000	< 1000
Bromodichloromethane	< 10000	< 5000	< 10000	< 100000	< 2500	< 1000	< 2500	< 500	< 500
1,2-Dichloropropane	< 10000	< 5000	< 10000	< 100000	< 2500	< 1000	< 2500	< 500	< 500
cis-1,3-Dichloropropene	< 10000	< 5000	< 10000	< 100000	< 2500	< 1000	< 2500	< 500	< 500
Trichloroethene	< 10000	< 5000	< 10000	< 100000	< 2500	< 1000	< 2500	< 500	< 500
Chlorodibromomethane	< 10000	< 5000	< 10000	< 100000	< 2500	< 1000	< 2500	< 500	< 500
1,1,2-Trichloroethane	< 10000	< 5000	< 10000	< 100000	< 2500	< 1000	< 2500	< 500	< 500
Benzene	< 10000	< 5000	< 10000	1200000	5800000	2900	6800	< 500	< 500
trans-1,3-Dichloropropene	< 10000	< 5000	< 10000	< 100000	< 2500	< 1000	< 2500	< 500	< 500
2-Chloroethyl vinyl ether	< 20000	< 10000	< 20000	< 200000	< 5000	< 2000	< 5000	< 1000	< 1000
Bromoform	< 10000	< 5000	< 10000	< 100000	< 2500	< 1000	< 2500	< 500	< 500
4-Methyl-2-pentanone	< 20000	< 10000	< 20000	< 200000	< 5000	< 2000	< 5000	< 1000	< 1000
2-Hexanone	< 20000	< 10000	< 20000	< 200000	< 5000	< 2000	< 5000	< 1000	< 1000
1,1,2,2-Tetrachloroethane	< 10000	< 5000	< 10000	< 100000	< 2500	< 1000	< 2500	< 500	< 500
Tetrachloroethene	< 10000	< 5000	< 10000	< 100000	< 2500	< 1000	< 2500	< 500	< 500
Toluene	< 10000	< 5000	< 10000	< 100000	13000	< 1000	< 2500	510	< 500
Chlorobenzene	< 10000	< 5000	48000	1900000	540000	24000	39000	< 500	< 500
Ethyl benzene	< 10000	< 5000	< 10000	< 100000	< 2500	< 1000	< 2500	< 500	< 500
Styrene	< 10000	< 5000	< 10000	< 100000	< 2500	< 1000	< 2500	< 500	< 500
Total xylenes	< 10000	< 5000	< 10000	< 100000	< 2500	< 1000	< 2500	< 500	< 500

TABLE 5 (continued)

BORING	D-3	D-3	D-3	D-3	D-4	D-4	D-4	D-5	D-5
SAMPLE NUMBER	D-3-13	D-3-21	D-3-29	R-3-29	D-4-5	D-4-17	D-4-23	D-5-7	D-5-13
SAMPLE DEPTH *	12-14	20-22	28-30	28-30	4-6	16-18	22-24	6-8	12-14
Acrolein	< 1000000	< 200000	< 1000000	< 10000000	< 67000	< 10000	< 100000	< 13000	< 200000
Acrylonitrile	< 1000000	< 200000	< 1000000	< 1000000	< 67000	< 10000	< 10000	< 13000	< 200000
Trichlorofluoromethane	< 50000	< 10000	< 50000	< 50000	< 3350	< 500	< 500	< 650	< 10000
Dichlorodifluoromethane	< 100000	< 20000	< 100000	< 100000	< 6700	< 1000	< 1000	< 1300	< 20000
Methyl Isoamyl Ketone	--	--	--	--	--	--	--	--	--
Chloromethane	< 100000	< 20000	< 100000	< 100000	< 6700	< 1000	< 1000	< 1300	< 20000
Bromomethane	< 100000	< 20000	< 100000	< 100000	< 6700	< 1000	< 1000	< 1300	< 20000
Vinyl chloride	< 100000	< 20000	< 100000	< 100000	< 6700	< 1000	< 1000	< 1300	< 20000
Chloroethane	< 100000	< 20000	< 100000	< 100000	< 6700	< 1000	< 1000	< 1300	< 20000
Methylene chloride	< 250000	< 50000	< 250000	< 250000	< 16750	< 2500	< 2500	< 3250	< 50000
Acetone	< 250000	< 50000	< 250000	< 250000	33000	< 2500	< 2500	14000	130000
Carbon disulfide	< 50000	< 10000	< 50000	< 50000	< 3350	< 500	< 500	< 650	< 10000
1,1-Dichloroethene	< 50000	< 10000	< 50000	< 50000	< 3350	< 500	< 500	< 650	< 10000
1,1-Dichloroethane	< 50000	< 10000	< 50000	< 50000	< 3350	< 500	< 500	< 650	< 10000
1,2-Dichloroethene (cis/trans)	< 50000	< 10000	< 50000	< 50000	< 3350	< 500	< 500	< 650	< 10000
Chloroform	< 50000	< 10000	< 50000	< 50000	< 3350	< 500	< 500	< 650	< 10000
1,2-Dichloroethane	< 50000	170000	< 50000	270000	< 3350	< 500	< 500	< 650	< 10000
2-Butanone	670000	< 50000	280000	< 250000	18000	< 2500	< 2500	< 3250	< 50000
1,1,1-Trichloroethane	< 50000	< 10000	< 50000	< 50000	< 3350	< 500	< 500	< 650	< 10000
Carbon tetrachloride	< 50000	< 10000	< 50000	< 50000	< 3350	< 500	< 500	< 650	< 10000
Vinyl acetate	< 100000	< 20000	< 100000	< 100000	< 6700	< 1000	< 1000	< 1300	< 20000
Bromodichloromethane	< 50000	< 10000	< 50000	< 50000	< 3350	< 500	< 500	< 650	< 10000
1,2-Dichloropropane	< 50000	< 10000	< 50000	< 50000	< 3350	< 500	< 500	< 650	< 10000
cis-1,3-Dichloropropene	< 50000	< 10000	< 50000	< 50000	< 3350	< 500	< 500	< 650	< 10000
Trichloroethene	< 50000	< 10000	< 50000	< 50000	< 3350	< 500	< 500	< 650	< 10000
Chlorodibromomethane	< 50000	< 10000	< 50000	< 50000	< 3350	< 500	< 500	< 650	< 10000
1,1,2-Trichloroethane	< 50000	< 10000	< 50000	< 50000	< 3350	< 500	< 500	< 650	< 10000
Benzene	< 50000	< 10000	< 50000	< 50000	< 3350	< 500	< 500	870	< 10000
trans-1,3-Dichloropropene	< 50000	< 10000	< 50000	< 50000	< 3350	< 500	< 500	< 650	< 10000
2-Chloroethyl vinyl ether	< 100000	< 20000	< 100000	< 100000	< 6700	< 1000	< 1000	< 1300	< 20000
Bromoform	< 50000	< 10000	< 50000	< 50000	< 3350	< 500	< 500	< 650	< 10000
4-Methyl-2-pentanone	< 100000	< 20000	< 100000	< 100000	< 6700	< 1000	< 1000	< 1300	< 20000
2-Hexanone	< 100000	< 20000	< 100000	< 100000	< 6700	< 1000	< 1000	< 1300	< 20000
1,1,2,2-Tetrachloroethane	< 50000	< 10000	< 50000	< 50000	< 3350	< 500	< 500	< 650	< 10000
Tetrachloroethene	380000	46000	< 50000	< 50000	< 3350	< 500	< 500	< 650	< 10000
Toluene	190000	25000	80000	86000	< 3350	< 500	< 500	730	< 10000
Chlorobenzene	260000	230000	1200000	1500000	< 3350	< 500	< 500	< 650	< 10000
Ethyl benzene	< 50000	< 10000	< 50000	< 50000	< 3350	< 500	< 500	< 650	< 10000
Styrene	< 50000	< 10000	< 50000	< 50000	< 3350	< 500	< 500	< 650	< 10000
Total xylenes	180000	18000	< 50000	52000	< 3350	< 500	< 500	< 650	< 10000

TABLE 5 (continued)

BORING	D-5	D-6	D-6	D-6	D-7	D-7	D-7	D-7	D-8	D-8
SAMPLE NUMBER	D-5-23	D-6-5	D-6-15	D-6-27	D-7-5	D-7-15	R-7-15	D-7-23	D-8-5	D-8-9
SAMPLE DEPTH *	22-24	4-6	14-16	26-28	6-8	14-16	14-16	22-24	4-6	8-10
Acrolein	< 200000	< 10000	< 10000	< 10000	< 10000	< 10000	< 10000	< 10000	< 200000	< 50000
Acrylonitrile	< 20000	< 10000	< 10000	< 10000	< 10000	< 10000	< 10000	< 10000	< 200000	< 50000
Trichlorofluoromethane	< 1000	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 10000	< 2500
Dichlorodifluoromethane	< 2000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 20000	< 5000
Methyl Isoamyl Ketone	--	--	--	--	--	--	--	--	--	--
Chloromethane	< 2000	< 1000	< 1000	< 1000	< 1000	5500	< 1000	< 1000	< 20000	< 5000
Bromomethane	< 2000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 20000	< 5000
Vinyl chloride	< 2000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 20000	< 5000
Chloroethane	< 2000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 20000	< 5000
Methylene chloride	< 5000	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 50000	< 12500
Acetone	16000	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 50000	26000
Carbon disulfide	< 1000	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 10000	< 2500
1,1-Dichloroethene	< 1000	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 10000	< 2500
1,1-Dichloroethane	< 1000	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 10000	< 2500
1,2-Dichloroethene (cis/trans)	< 1000	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 10000	< 2500
Chloroform	< 1000	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 10000	< 2500
1,2-Dichloroethane	< 1000	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 10000	< 2500
2-Butanone	< 5000	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 50000	< 12500
1,1,1-Trichloroethane	< 1000	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 10000	< 2500
Carbon tetrachloride	< 1000	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 10000	< 2500
Vinyl acetate	< 2000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 20000	< 5000
Bromodichloromethane	< 1000	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 10000	< 2500
1,2-Dichloropropane	< 1000	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 10000	< 2500
cis-1,3-Dichloropropene	< 1000	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 10000	< 2500
Trichloroethene	< 1000	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 10000	< 2500
Chlorodibromomethane	< 1000	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 10000	< 2500
1,1,2-Trichloroethane	< 1000	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 10000	< 2500
Benzene	3100	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 10000	< 2500
trans-1,3-Dichloropropene	< 1000	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 10000	< 2500
2-Chloroethyl vinyl ether	< 2000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 20000	< 5000
Bromoform	< 1000	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 10000	< 2500
4-Methyl-2-pentanone	14000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 20000	< 5000
2-Hexanone	< 2000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 1000	< 20000	< 5000
1,1,2,2-Tetrachloroethane	< 1000	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 10000	< 2500
Tetrachloroethene	< 1000	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 10000	< 2500
Toluene	3400	< 500	< 500	< 500	< 500	< 500	< 500	< 500	210000	48000
Chlorobenzene	1200	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 10000	< 2500
Ethyl benzene	< 1000	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 10000	< 2500
Styrene	< 1000	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 10000	< 2500
Total xylenes	< 1000	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 10000	< 2500

* ALL SAMPLE DEPTHS ARE GIVEN IN FEET BELOW LAND SURFACE

REPLICATE SAMPLE NUMBERS UNDERLINED

VOC FRACTION SAMPLES ARE COMPOSITES OF ONE SPLIT SPOON SAMPLE FROM THE STATED DEPTH INTERVAL

NON-VOC SAMPLES ARE COMPOSITES OF ALIQUOTS FROM CONTINUOUS SPLIT SPOON SAMPLES COLLECTED FROM OVER THE STATED DEPTH INTERVAL

TABLE 6: Summary of TCL Semivolatile Organics in Subsurface Soil Samples
River's Edge Landfill (Sauget Site R), Monsanto Company, Sauget, IL
(concentrations in ug/kg)

BORING	D-1	D-2	D-3	D-3	D-4	D-5	D-6	D-7	D-8
SAMPLE NUMBER	D-1-13	D-2-17	D-3-29	R-3-29	D-4-23	D-5-23	D-6-27	D-7-23	D-8-25
SAMPLE DEPTH *	0-16	0-18	0-30	0-30	0-26	0-30	0-30	0-24	0-28
1,2-Diphenylhydrazine	< 16000000	< 159984	--	--	--	--	< 330	< 330	< 33000
Benzidine	< 16000000	< 159984	--	--	--	--	< 330	< 330	< 33000
N-Nitrosodimethylamine	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
Aniline	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
4-Chlorophenol	--	--	--	--	14000	120000	--	--	--
Triphenyl Phosphate	--	--	--	--	360000	800000	--	--	--
4-Nitrodiphenylamine	--	--	--	--	17000	440000	--	--	--
2-Nitrobiphenyl	--	--	--	--	--	--	--	--	--
3-Nitrobiphenyl	--	--	--	--	--	--	--	--	--
2-Nitrochlorobenzene	8000000	5400000	8000000	19000000	57000	840000	--	--	--
4-Nitrochlorobenzene	--	2100000	6800000	8400000	14000	320000	--	--	--
Total Dinitrochlorobenzene	--	--	--	--	--	--	--	--	--
Phenol	< 1600005	330000	< 660000	< 660000	21000	140000	< 330	< 330	< 33000
bis(2-Chloroethyl)ether	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
2-Chlorophenol	< 1600005	< 159984	< 660000	< 660000	26000	220000	< 330	< 330	< 33000
1,3-Dichlorobenzene	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
1,4-Dichlorobenzene	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
Benzyl alcohol	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
1,2-Dichlorobenzene	< 1600005	< 159984	< 660000	< 660000	7300	680000	< 330	< 330	< 33000
2-Methylphenol	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
bis(2-Cloroisopropyl) ether	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
4-Methylphenol	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
N-Nitroso-di-n-propylamine	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
Hexachloroethane	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
Nitrobenzene	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
Isophorone	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
2-Nitrophenol	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
2,4-Dimethylphenol	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
Benzoic acid	< 7757600	< 775680	< 3200000	< 3200000	< 32000	< 160000	< 1600	< 1600	< 160000
bis(2-Chloroethoxy) methane	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
2,4-Dichlorophenol	2100000	980000	3900000	4200000	16000	1100000	< 330	< 330	< 33000
1,2,4-Trichlorobenzene	< 1600005	< 159984	< 660000	< 660000	< 6600	210000	< 330	< 330	< 33000
Naphthalene	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	410	< 330	< 33000
4-Chloroaniline	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
Hexachlorobutadiene	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
4-Chloro-3-methylphenol	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
2-Methylnaphthalene	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
Hexachlorocyclopentadiene	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
2,4,6-Trichlorophenol	< 1600005	< 159984	< 660000	980000	< 6600	240000	< 330	< 330	< 33000
2,4,5-Trichlorophenol	< 7757600	< 775680	< 3200000	< 3200000	< 32000	< 160000	< 1600	< 1600	< 160000
2-Chloronaphthalene	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
2-Nitroaniline	< 7757600	< 775680	< 3200000	< 3200000	< 32000	< 160000	< 1600	< 1600	< 160000
Dimethyl phthalate	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< [illegible]00

TABLE 6 (continued)

BORING	D-1	D-2	D-3	D-3	D-4	D-5	D-6	D-7	D-8
SAMPLE NUMBER	D-1-13	D-2-17	D-3-29	R-3-29	D-4-23	D-5-23	D-6-27	D-7-23	D-8-25
SAMPLE DEPTH *	0-16	0-18	0-30	0-30	0-26	0-30	0-30	0-24	0-28
Acenaphthylene	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
3-Nitroaniline	< 7757600	< 775680	< 3200000	< 3200000	< 32000	< 160000	< 1600	< 1600	< 160000
Acenaphthene	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
2,4-Dinitrophenol	< 7757600	< 775680	< 3200000	< 3200000	< 32000	< 160000	< 1600	< 1600	< 160000
4-Nitrophenol	< 7757600	< 775680	< 3200000	< 3200000	< 32000	< 160000	< 1600	< 1600	< 160000
Dibenzofuran	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
2-4-Dinitrotoluene	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
2,6-Dinitrotoluene	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
Diethyl phthalate	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
4-Chlorophenyl phenyl ether	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
Fluorene	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
4-Nitroaniline	< 7757600	< 775680	< 3200000	< 3200000	< 32000	< 160000	< 1600	< 1600	< 160000
4,6-Dinitro-2-methylphenol	< 7757600	< 775680	< 3200000	< 3200000	< 32000	< 160000	< 1600	< 1600	< 160000
N-Nitrosodiphenylamine	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
4-Bromophenyl phenyl ether	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
Hexachlorobenzene	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
Pentachlorophenol	< 7757600	< 775680	< 3200000	< 3200000	< 32000	< 160000	< 1600	< 1600	< 160000
Phenanthrene	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
Anthracene	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
Di-n-butyl phthalate	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
Fluoranthene	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	600	< 330	< 33000
Pyrene	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	370	< 330	< 33000
Butyl benzyl phthalate	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
3,3'-Dichlorobenzidine	< 3200010	< 319968	< 1320000	< 1320000	< 13200	< 66000	< 660	< 660	< 66000
Benzo(a)anthracene	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
bis(2-Ethylhexyl) phthalate	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
Chrysene	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	410	< 330	< 33000
Di-n-octyl phthalate	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
Benzo(b)fluoroanthene	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
Benzo(k)fluoroanthene	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	580	< 330	< 33000
Benzo(a)pyrene	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
Indeno(1,2,3-c,d)pyrene	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
Dibenz(a,h)anthracene	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000
Benzo(g,h,i)perylene	< 1600005	< 159984	< 660000	< 660000	< 6600	< 33000	< 330	< 330	< 33000

* ALL SAMPLE DEPTHS ARE GIVEN IN FEET BELOW LAND SURFACE

REPLICATE SAMPLE NUMBERS ARE UNDERLINED

VOC FRACTION SAMPLES ARE COMPOSITES OF ONE SPLIT SPOON SAMPLE FROM THE STATED DEPTH INTERVAL

NON-VOC SAMPLES ARE COMPOSITES OF ALIQUOTS FROM CONTINUOUS SPLIT SPOON SAMPLES COLLECTED OVER THE STATED DEPTH INTERVAL

TABLE 7: Summary of PP Organochlorine Pesticides/PCBs in Subsurface Soil Samples
River's Edge Landfill (Sauget Site R), Monsanto Company, Sauget, IL
(concentrations in ug/kg)

BORING	D-1	D-2	D-3	D-3	D-4	D-5	D-6	D-7	D-8
SAMPLE NUMBER	D-1-13	D-2-17	D-3-29	R-3-29	D-4-23	D-5-23	D-6-27	D-7-23	D-8-25
SAMPLE DEPTH *	0-16	0-18	0-30	0-30	0-26	0-30	0-30	0-24	0-28
alpha-BHC	< 800	< 800	< 4000	< 1600	< 80	< 800	< 8	< 8	< 80
beta-BHC	< 800	< 800	< 4000	< 1600	< 80	< 800	< 8	< 8	< 80
delta-BHC	< 800	< 800	< 4000	< 1600	< 80	< 800	< 8	< 8	< 80
gamma-BHC (Lindane)	< 800	< 800	< 4000	< 1600	< 80	< 800	< 8	< 8	< 80
Heptachlor	< 800	< 800	< 4000	< 1600	< 80	< 800	< 8	< 8	< 80
Aldrin	< 800	< 800	< 4000	< 1600	< 80	< 800	< 8	< 8	< 80
Heptachlor epoxide	< 800	< 800	< 4000	< 1600	< 80	< 800	< 8	< 8	< 80
Endosulfan I	< 800	< 800	< 4000	< 1600	< 80	< 800	< 8	< 8	< 80
Dieldrin	< 1600	< 1600	< 8000	< 3200	< 160	< 1600	< 16	< 16	< 160
4,4'-DDE	< 1600	< 1600	< 8000	< 3200	< 160	< 1600	< 16	< 16	< 160
Endrin	< 1600	< 1600	< 8000	< 3200	< 160	< 1600	< 16	< 16	< 160
Endosulfan II	< 1600	< 1600	< 8000	< 3200	< 160	< 1600	< 16	< 16	< 160
4,4'-DDT	< 1600	< 1600	< 8000	< 3200	< 160	< 1600	< 16	< 16	< 160
Endosulfan sulfate	< 1600	< 1600	< 8000	< 3200	< 160	< 1600	< 16	< 16	< 160
4,4'-DDT	< 1600	< 1600	< 8000	< 3200	< 160	< 1600	< 16	< 16	< 160
Endrin aldehyde	< 1600	< 1600	< 8000	< 3200	< 160	< 1600	< 16	< 16	< 160
Methoxychlor	< 8000	< 8000	< 40000	< 16000	< 800	< 8000	< 80	< 80	< 800
Chlordane	< 8000	< 8000	< 40000	< 16000	< 800	< 8000	< 80	< 80	< 800
Toxaphene	< 16000	< 16000	< 80000	< 32000	< 1600	< 16000	< 160	< 160	< 1600
Arochlor-1016	< 8000	< 8000	< 40000	49000	< 800	< 8000	< 80	< 80	< 800
Arochlor-1221	< 8000	< 8000	< 40000	< 16000	< 800	< 8000	< 80	< 80	< 800
Arochlor-1232	< 8000	< 8000	< 40000	< 16000	< 800	< 8000	< 80	< 80	< 800
Arochlor-1242	< 8000	< 8000	< 40000	< 16000	< 800	< 8000	< 80	< 80	< 800
Arochlor-1248	< 8000	< 8000	< 40000	< 16000	< 800	< 8000	< 80	< 80	< 800
Arochlor-1254	< 16000	< 16000	< 80000	< 32000	< 1600	< 16000	160	< 160	< 1600
Arochlor-1260	< 16000	20000	< 80000	< 32000	< 1600	< 16000	< 160	< 160	< 1600

* ALL SAMPLE DEPTHS ARE GIVEN IN FEET BELOW LAND SURFACE

REPLICATED SAMPLE NUMBERS ARE UNDERLINED

VOC FRACTION SAMPLES ARE COMPOSITES OF ONE SPLIT SPOON SAMPLE FROM THE STATED DEPTH INTERVAL

NON-VOC SAMPLES ARE COMPOSITES OF ALIQUOTS FROM CONTINUOUS SPLIT SPOON SAMPLES COLLECTED OVER THE STATED DEPTH INTERVAL

TABLE 8: Summary of Metals and Miscellaneous Compounds in Subsurface Soil Samples
River's Edge Landfill (Sauget Site R), Monsanto Company, Sauget, IL
(concentrations in mg/kg)

BORING	D-1	D-2	D-3	D-3	D-4	D-5	D-6	D-7	D-8
SAMPLE NUMBER	D-1-13	D-2-17	D-3-29	R-3-29	D-4-23	D-5-23	D-6-27	D-7-23	D-8-25
SAMPLE DEPTH *	0-16	0-18	0-30	0-30	0-26	0-30	0-30	0-24	0-28
Antimony	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Beryllium	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.6	0.6
Cadmium	< 0.5	< 0.5	0.6	0.7	< 0.5	< 0.5	< 0.5	0.7	< 0.5
Chromium	5	8	13	13	5	7	4	8	8
Copper	11	23	18	36	11	14	7.4	9.3	12
Nickel	9	19	9	10	11	9	9	12	13
Silver	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	43	79	110	46	70	35	40	79	68
Aluminum	10	24	3100	3500	4700	4800	4500	5100	16
Barium	4000	3700	150	160	110	90	110	100	5800
Boron	83	170	9	9	9	15	10	60	110
Cobalt	5	12	6	8	5	3	3	4	28
Iron	7	12	7900	11000	9100	10500	8400	10400	5
Lead	5300	8100	13	16	14	15	10	19	11400
Manganese	200	180	180	170	250	190	180	210	250
Tin	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Vanadium	14	13	13	14	16	16	13	22	20
Arsenic	3.5	3.1	2.1	3.1	2.3	3	2.9	13	16
Mercury	< 0.05	< 0.05	0.15	0.29	0.26	0.53	< 0.05	< 0.05	0.06
Selenium	< 0.2	< 0.3	< 0.2	< 0.2	0.2	< 0.2	0.3	0.5	0.6
Thallium	< 0.8	< 2	< 0.8	2	< 0.8	2	0.8	0.4	0.4
2,3,7,8-TCDD (ng/g)	< 0.24	< 0.27	0.66	2.6	0.04	< 0.04	< 0.2	< 0.17	< 0.17

* ALL SAMPLE DEPTHS ARE GIVEN IN FEET BELOW LAND SURFACE

REPLICATE SAMPLE NUMBERS ARE UNDERLINED

VOC FRACTION SAMPLES ARE COMPOSITES OF ONE SPLIT SPOON SAMPLE FROM THE STATED DEPTH INTERVAL

NON-VOC SAMPLES ARE COMPOSITES OF ALIQUOTS FROM CONTINUOUS SPLIT SPOON SAMPLES COLLECTED OVER THE STATED DEPTH INTERVAL

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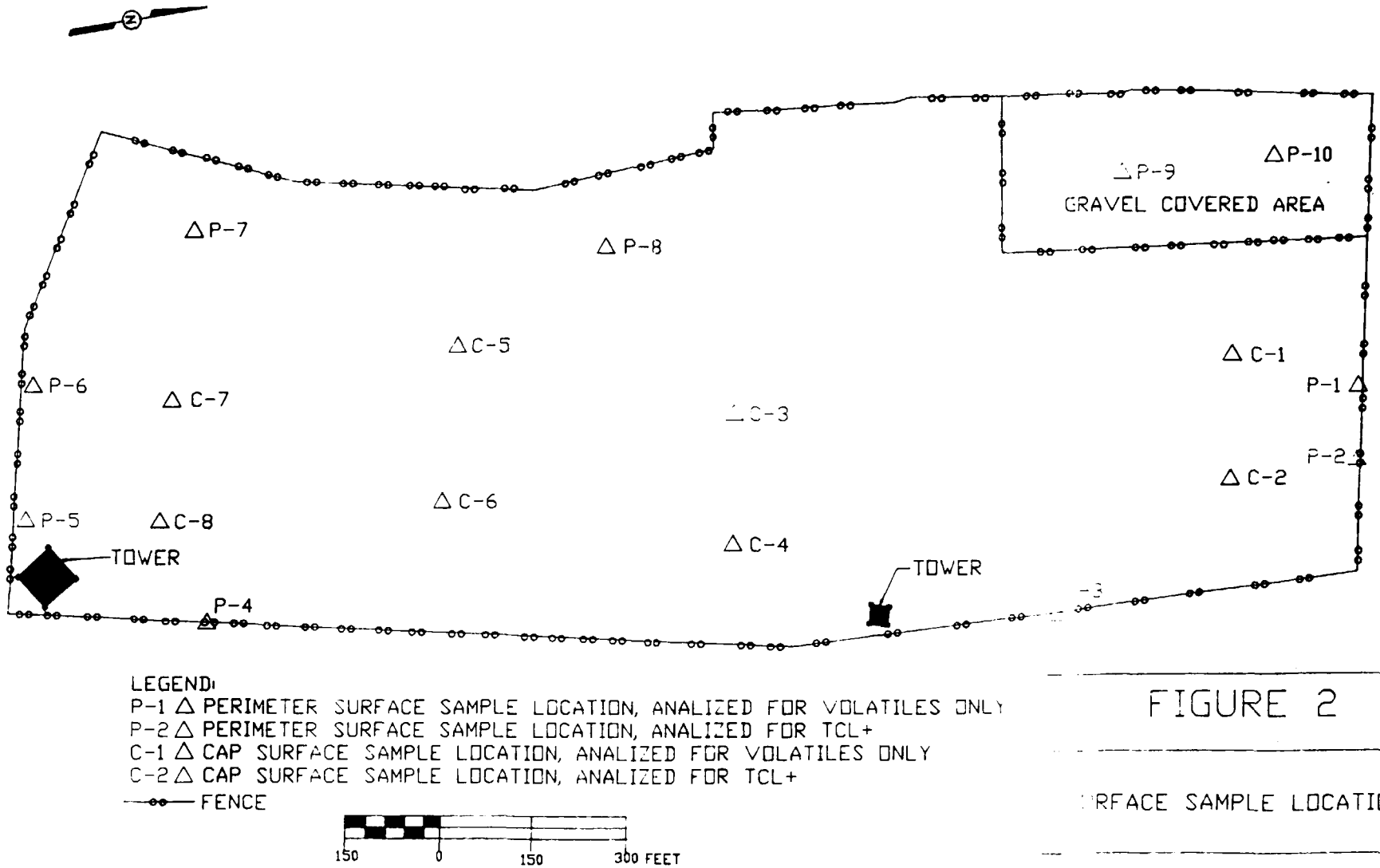

FIGURE 2

RFACE SAMPLE LOCATIONS

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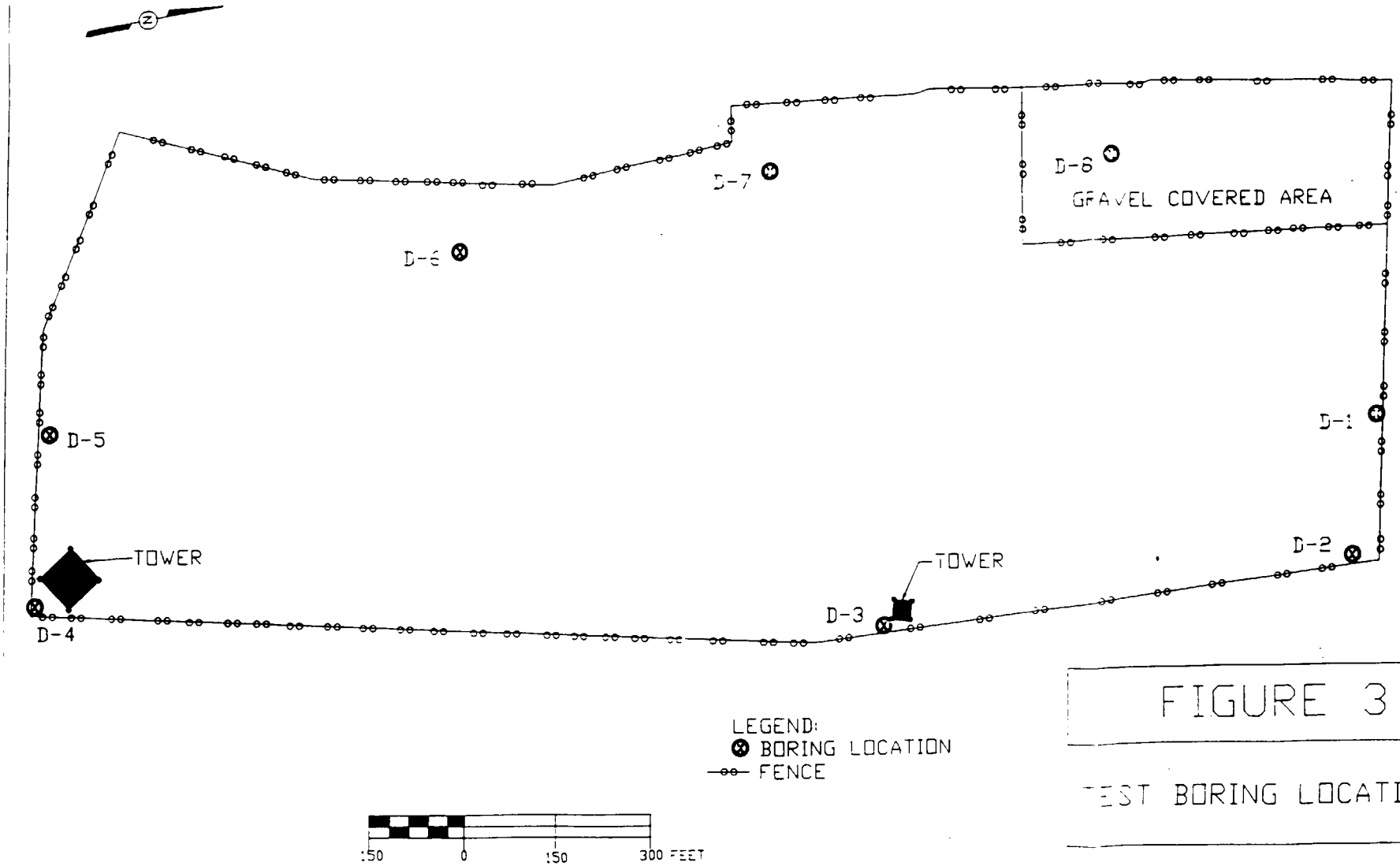

FIGURE 3

TEST BORING LOCATIONS

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Site R Data
(Post-1992)

0140

NOTE: THE DATA PRESENTED IN THIS SECTION IS PRESENTED IN THE ORIGINAL REPORT FORMAT.

SOURCE: "REMEDIAL INVESTIGATION AT SAUGET SITE R"
Geraghty & Miller, 1994

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VOLUME I
REMEDIAL INVESTIGATION
AT SAUGET SITE R
MONSANTO COMPANY, SAUGET, ILLINOIS

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Prepared for

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Prepared by

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ORIGINAL

Table 5-4. Summary of Target Compound List Volatile Organic Compounds Detected in Sediment Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Parameter / Sample Location:	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	Trip Blank	Equipment Blank
Sample Date:	6/30/92	6/30/92	6/30/92	6/30/92	6/30/92	6/30/92	6/30/92	6/30/92	6/30/92	6/30/92
Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/L	ug/L
Methylene chloride	--	4 J	4 BJ	3 BJ	14 J	16 J	--	5 J	--	--
1,1,1-Trichloroethane	--	--	--	--	4 J	2 J	--	6 J	--	--
Trichloroethene	--	--	5 J	--	--	--	--	--	--	--
Tetrachloroethene	--	10 J	11 J	6 J	23 J	19 J	7 J	9 J	--	--
Toluene	--	3 J	7 J	7 J	10 J	11 J	5 J	9 J	--	--
Ethylbenzene	--	2 J	--	--	7 J	5 J	--	4 J	--	--
Xylenes	--	17 J	--	--	35 J	22 J	--	--	--	--
Total VOCs	--	36	27	16	93	75	12	33	--	--

ug/L Micrograms per liter.
ug/kg Micrograms per kilogram.
-- Not detected.
J Estimated value.
B Compound detected in blank.
VOCs Volatile organic compounds.

Only those compounds detected are listed.

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Table 5-5. Summary of Target Compound List Semivolatile Organic Compounds Detected in Sediment Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	Equipment Blank
Sample Date:	6/30/92	6/30/92	6/30/92	6/30/92	6/30/92	6/30/92	6/30/92	6/30/92	6/30/92
Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/L
Parameter									
2-Methylphenol (o-cresol)	--	--	--	--	--	--	45 J	--	--
2,4-Dimethylphenol	--	--	--	--	--	--	29 J	--	--
Naphthalene	--	--	--	--	--	--	230 J	200 J	--
2-Methylnaphthalene	--	--	--	--	--	--	410	360	--
Acenaphthene	--	--	--	--	--	--	20 J	--	--
Dibenzofuran	--	--	--	--	--	--	51 J	66 J	--
Diethylphthalate	22 J	28 J	19 J	17 J	--	--	14 J	--	--
Fluorene	--	--	--	--	--	--	31 J	15 J	--
Phenanthrene	--	--	--	--	--	--	370	270 J	--
Anthracene	--	--	--	--	--	--	91 J	44 J	--
Carbazole	--	--	--	--	--	--	31 J	32 J	--
Di-n-butylphthalate	--	--	9 J	--	--	--	13 J	--	--
Fluoranthene	--	--	54 J	--	160 J	--	170 J	130 J	--
Pyrene	9 J	23 J	48 J	19 J	150 J	25 J	380	180 J	--
Butylbenzylphthalate	11 J	11 J	--	9 J	--	--	25 J	25 J	--
Benzo(a)anthracene	--	--	--	--	130 J	--	450	180 J	--
Chrysene	--	--	44 J	--	140 J	34 J	470	190 J	--
bis(2-Ethylhexyl)phthalate	--	--	53 J	--	--	--	--	54 J	--
Di-n-octylphthalate	37 J	--	22 J	--	--	--	--	32 J	--
Benzo(b)fluoranthene	--	--	--	--	120 J	--	280 J	97 J	--
Benzo(k)fluoranthene	--	--	--	--	110 J	--	130 J	--	--
Benzo(a)pyrene	--	--	--	--	120 J	--	490	210 J	--
Indeno(1,2,3-cd)pyrene	--	--	--	--	38 J	--	100 J	--	--
Benzo(g,h,i)perylene	--	--	--	--	38 J	--	160 J	--	--
Total SVOCs	79	62	249	45	1006	59	3990	2085	--

ug/kg Micrograms per kilogram.
ug/L Micrograms per liter.
J Estimated value.
-- Not detected.
SVOCs Semivolatile organic compounds.

Only those compounds detected are listed.

Table 5-6. Summary of Target Compound List Pesticides and PCBs Detected in Sediment Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	Equipment Blank
Sample Date:	6/30/92	6/30/92	6/30/92	6/30/92	6/30/92	6/30/92	6/30/92	6/30/92	6/30/92
Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/L
Parameter									
Pesticides/PCBs									
4,4'-DDE	8.8	--	--	--	--	--	--	--	--
4,4'-DDT	87	--	--	--	--	--	--	--	--
Aroclor-1248	--	--	570 J	--	--	--	79 J	220 J	--
Aroclor-1254	--	--	520 J	64 J	52 J	--	110 J	220 J	--
Aroclor-1260	80	320 J	410 J	92 J	89 J	--	120 J	230 J	--

ug/kg Micrograms per kilogram.
ug/L Micrograms per liter.
J Estimated value.
-- Not detected.
PCB Polychlorinated biphenyls.

Only those compounds detected are listed.

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Table 5-7. Summary of Target Analyte List Parameters Detected in Sediment Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	Equipment Blank
Sample Date:	6/30/92	6/30/92	6/30/92	6/30/92	6/30/92	6/30/92	6/30/92	6/30/92	6/30/92
Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/L
Parameter									
Aluminum	10100	10000	11200	10500	11900	11100	11400	7870	–
Antimony	R	R	R	R	R	R	R	R	–
Arsenic	4.3	9.6	3.8	6.3	7.7	4.5	7.3	5.3	–
Barium	92.8	123	107	118	124	111	111	111	–
Calcium	7160	7020	3440	6470	5850	4470	4490	8110	271 B
Chromium	16.2	17.8	18.4	15.8	18.4	18.2	20.1	13.7	–
Cobalt	8.2 B	9.6 B	9.9 B	9.7 B	10.0 B	9.4 B	9.0 B	9.1 B	–
Copper	19.1	22.2	20.6	17.7	20.1	15.5	20.0	19.1	–
Iron	15700	19100	17700	17400	19200	17700	18700	14800	–
Lead	15.1	20.5	12.3	22.6	21.9	13.2	20.2	16.8	–
Magnesium	4950	4610	3090	4150	4120	3790	3810	5450	–
Manganese	473	594	592	549	566	616	461	513	–
Mercury	0.05	0.11	–	0.13	0.06	–	0.05	0.06	–
Nickel	19.0	23.6	21.0	20.6	22.2	20.7	27.9	22.7	–
Potassium	1270	1250	1290	976 B	1290	1110	1300	919 B	–
Sodium	–	–	–	–	–	–	–	–	561 B
Vanadium	31.9	31.7	36.8	29.5	33.4	33.4	55.2	29.2	–
Zinc	99.4	117	116	85.9	128	82.2	171	105	–
Cyanide	–	–	–	–	–	–	–	–	–

– Not detected.
ug/L Micrograms per liter.
mg/kg Milligrams per kilogram.
B Compound is between the contract required detection limit and the instrument detection limit.
R Data were unusable.

Only those compounds detected are listed.

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Table 5-8. Summary of Target Compound List Volatile Organic Compounds Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	SB-1	SB-1	SB-1	SB-2	SB-2	SB-2
Sample Depth:	12-14 ft	26-28 ft	32-34 ft	12-14 ft	14-16 ft	28-30 ft
Sample Date:	4/9/92	4/9/92	4/9/92	4/10/92	4/10/92	4/13/92
Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Parameter						
Methylene chloride	–	–	–	–	250 J	–
Acetone	–	9800	11000	81000	5300 J	9000 J
1,1-Dichloroethene	–	–	–	–	–	–
1,2-Dichloroethene (total)	–	–	–	–	–	–
Chloroform	–	–	–	–	670 J	–
1,2-Dichloroethane	220000	–	–	–	–	–
2-Butanone (MEK)	–	–	–	–	–	–
1,1,1-Trichloroethane	–	–	–	–	–	–
Bromodichloroethane	–	–	–	–	–	–
Trichloroethene	–	–	–	–	–	–
Dibromochloroethane	–	–	–	–	–	–
Benzene	210000	1400 J	1700	26000 J	200000 D	3900 J
4-Methyl-2-pentanone	–	–	–	–	–	–
Tetrachloroethene	3700 J	–	–	–	1800 J	–
Toluene	16000 J	880 J	1100 J	38000 J	74000 J	830 J
Chlorobenzene	890000	18000	9200	650000	2400000 D	33000
Ethylbenzene	43000 J	760 J	750 J	–	680 J	–
Xylenes	110000	2200 J	1500 J	–	2600 J	350 J
Total VOCs	1492700	33040	25250	795000	2685300	47080

ug/L	Micrograms per liter.
ug/kg	Micrograms per kilogram.
–	Not detected.
E	Concentration is above the calibration range of the instrument.
J	Estimated value.
B	Compound detected in blank.
D	Concentration determined at a secondary dilution factor.
VOCs	Volatile organic compounds.

Only those compounds detected are listed.

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Table 5-8. Summary of Target Compound List Volatile Organic Compounds Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	SB-3	SB-3	SB-3	SB-4	SB-4	SB-4
Sample Depth:	12 - 14 ft	14 - 16 ft	32 - 24 ft	10-12 ft	12-14 ft	30-32 ft
Sample Date:	4/16/92	4/16/92	4/16/92	4/14/92	4/14/92	4/14/92
Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Parameter						
Methylene chloride	–	–	–	–	–	–
Acetone	500000	320000	–	17000	2500	34000 J
1,1-Dichloroethene	–	–	–	–	–	–
1,2-Dichloroethene (total)	–	–	–	–	–	–
Chloroform	–	–	–	–	150 J	–
1,2-Dichloroethane	–	–	–	–	–	–
2-Butanone (MEK)	–	–	–	–	2400	–
1,1,1-Trichloroethane	–	–	–	–	190 J	–
Bromodichloroethane	–	–	–	–	–	–
Trichloroethene	–	–	–	–	–	–
Dibromochloroethane	–	–	–	–	–	–
Benzene	–	–	6300 J	–	7700	31000 J
4-Methyl-2-pentanone	–	–	–	–	–	–
Tetrachloroethene	90000	6600 J	2600 J	660 J	–	–
Toluene	450000	160000	14000 J	43000	24000	110000
Chlorobenzene	420000	160000	120000	29000	14000	350000
Ethylbenzene	970000	63000	–	3800 J	6800	38000 J
Xylenes	1500000	100000	9200 J	25000	43000 J	160000
Total VOCs	3930000	809600	152100	118460	100740	723000

ug/L	Micrograms per liter.
ug/kg	Micrograms per kilogram.
–	Not detected.
E	Concentration is above the calibration range of the instrument.
J	Estimated value.
B	Compound detected in blank.
D	Concentration determined at a secondary dilution factor.
VOCs	Volatile organic compounds.

Only those compounds detected are listed.

Table 5-8. Summary of Target Compound List Volatile Organic Compounds Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	SB-5	SB-5	SB-5	SB-6	SB-6	SB-6
Sample Depth:	12-14 ft	20-22 ft	28-30 ft	18-20 ft	20-22 ft	28-30 ft
Sample Date:	5/4/92	5/4/92	5/4/92	5/5/92	5/5/92	5/6/92
Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Parameter						
Methylene chloride	–	–	–	–	–	–
Acetone	–	–	14000 B	–	–	–
1,1-Dichloroethene	–	–	–	–	–	–
1,2-Dichloroethene (total)	–	–	–	–	–	–
Chloroform	–	–	–	–	–	–
1,2-Dichloroethane	–	–	–	–	–	–
2-Butanone (MEK)	–	–	–	–	–	–
1,1,1-Trichloroethane	–	–	–	–	–	–
Bromodichloroethane	–	–	–	–	–	–
Trichloroethene	–	–	–	–	–	–
Dibromochloroethane	–	–	–	–	–	–
Benzene	13000 J	2000 J	4900 J	–	–	1200 J
4-Methyl-2-pentanone	–	–	–	–	–	–
Tetrachloroethene	–	–	8600	–	–	–
Toluene	32000 J	22000 J	8700	55000	89000	5100 J
Chlorobenzene	460000	270000	130000	140000	200000	33000
Ethylbenzene	–	–	–	18000	27000	1900 J
Xylenes	9700 J	–	–	96000	150000	11000
Total VOCs	514700	294000	166200	309000	466000	52200

ug/L	Micrograms per liter.
ug/kg	Micrograms per kilogram.
–	Not detected.
E	Concentration is above the calibration range of the instrument.
J	Estimated value.
B	Compound detected in blank.
D	Concentration determined at a secondary dilution factor.
VOCs	Volatile organic compounds.

Only those compounds detected are listed.

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Table 5-8. Summary of Target Compound List Volatile Organic Compounds Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	SB-7	SB-7	SB-7	SB-8	SB-9	SB-9
Sample Depth:	16-18 ft	20-22 ft	24-26 ft	6-8 ft	18-20 ft	20-22 ft
Sample Date:	5/7/92	5/7/92	5/7/92	5/8/92	5/13/92	5/13/92
Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Parameter						
Methylene chloride	–	–	–	–	–	–
Acetone	–	–	–	–	–	150000 EJ
1,1-Dichloroethene	–	–	–	–	–	–
1,2-Dichloroethene (total)	–	–	–	–	–	–
Chloroform	5400 J	–	–	–	–	–
1,2-Dichloroethane	–	–	–	3000 J	–	–
2-Butanone (MEK)	–	–	–	–	8600 J	8600
1,1,1-Trichloroethane	–	–	–	–	–	–
Bromodichloroethane	–	–	–	–	–	–
Trichloroethene	–	–	–	2000 J	–	–
Dibromochloroethane	–	–	–	–	–	–
Benzene	3900 J	–	2900 J	20000	1600 J	–
4-Methyl-2-pentanone	77000 J	22000 J	67000 J	–	–	–
Tetrachloroethene	–	–	–	–	8300	–
Toluene	3200 J	14000 J	22000	5900 J	–	–
Chlorobenzene	190000 J	100000	110000	5500 J	6000 J	12000
Ethylbenzene	–	–	–	–	7600 J	1700 J
Xylenes	–	–	–	3900 J	26000 J	9200
Total VOCs	279500	136000	201900	40300	58100	181500

ug/L	Micrograms per liter.
ug/kg	Micrograms per kilogram.
–	Not detected.
E	Concentration is above the calibration range of the instrument.
J	Estimated value.
B	Compound detected in blank.
D	Concentration determined at a secondary dilution factor.
VOCs	Volatile organic compounds.

Only those compounds detected are listed.

0150

Table 5-8. Summary of Target Compound List Volatile Organic Compounds Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	SB-9	SB-9	SB-10	SB-10	SB-10	SB-11
Sample Depth:	28-30 ft	30-32 ft	6-8 ft	18-20 ft	24-26 ft	14-16 ft
Sample Date:	5/13/92	5/13/92	5/14/92	5/14/92	5/14/92	5/19/92
Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Parameter						
Methylene chloride	1400 J	13000 J	27000 J	--	1100 J	--
Acetone	--	--	--	--	19000 J	8000
1,1-Dichloroethene	--	--	--	--	--	--
1,2-Dichloroethene (total)	--	--	59000 J	--	--	--
Chloroform	--	--	38000 J	--	--	--
1,2-Dichloroethane	--	--	130000 J	--	3200 J	--
2-Butanone (MEK)	10000 J	--	--	--	10000 J	--
1,1,1-Trichloroethane	--	--	--	--	--	--
Bromodichloroethane	--	--	--	--	--	--
Trichloroethene	--	--	750000	480000	33000 J	--
Dibromochloroethane	--	--	--	--	--	--
Benzene	6400 J	47000 J	97000 J	30000 J	1500 J	--
4-Methyl-2-pentanone	29000 J	110000 J	--	--	--	--
Tetrachloroethene	7500 J	37000 J	--	--	--	--
Toluene	--	240000	3800000	1200000	60000 J	1800
Chlorobenzene	110000	620000	370000	180000	17000 J	220 J
Ethylbenzene	6000 J	28000 J	--	--	--	--
Xylenes	39000	180000	100000 J	50000 J	3500 J	--
Total VOCs	209300	1275000	5371000	1940000	148300	10020

ug/L Micrograms per liter.
ug/kg Micrograms per kilogram.
-- Not detected.
E Concentration is above the calibration range of the instrument.
J Estimated value.
B Compound detected in blank.
D Concentration determined at a secondary dilution factor.
VOCs Volatile organic compounds.

Only those compounds detected are listed.

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Table 5-8. Summary of Target Compound List Volatile Organic Compounds Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	SB-11	SB-11	SB-12	SB-12	SB-12	SB-13
Sample Depth:	16-18 ft	30-32 ft	8-10 ft	22-24 ft	32-34 ft	16-18 ft
Sample Date:	5/19/92	5/20/92	5/15/92	5/18/92	5/18/92	5/21/92
Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Parameter						
Methylene chloride	–	–	–	–	–	–
Acetone	18000 J	–	–	21000 J	3000	–
1,1-Dichloroethene	–	–	290 J	–	–	–
1,2-Dichloroethene (total)	–	–	–	–	–	–
Chloroform	–	–	–	–	–	360 J
1,2-Dichloroethane	–	–	–	–	–	–
2-Butanone (MEK)	–	–	2300 J	9000 J	–	2800
1,1,1-Trichloroethane	–	–	–	–	–	–
Bromodichloroethane	–	–	–	–	–	350 J
Trichloroethene	–	–	360 J	–	–	–
Dibromochloroethane	–	–	–	–	–	300 J
Benzene	–	–	320 J	1300 J	–	2200
4-Methyl-2-pentanone	–	–	–	–	–	–
Tetrachloroethene	–	37000	340 J	1800 J	–	–
Toluene	8700 J	26000	3600 J	9400 J	–	–
Chlorobenzene	–	190000	210 J	41000 J	7900	–
Ethylbenzene	–	9000 J	–	46000 J	3800	–
Xylenes	–	61000	–	230000 EJ	23000	–
Total VOCs	26700	323000	7420	359500	37700	6010

ug/L	Micrograms per liter.
ug/kg	Micrograms per kilogram.
–	Not detected.
E	Concentration is above the calibration range of the instrument.
J	Estimated value.
B	Compound detected in blank.
D	Concentration determined at a secondary dilution factor.
VOCs	Volatile organic compounds.

Only those compounds detected are listed.

Table 5-8. Summary of Target Compound List Volatile Organic Compounds Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	SB-13	SB-13	SB-14	SB-14	SB-14	SB-15
Sample Depth:	18-20 ft	30-32 ft	10-12 ft	20-22 ft	30-32 ft	16-18 ft
Sample Date:	5/21/92	5/21/92	5/22/92	5/26/92	5/26/92	5/27/92
Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Parameter						
Methylene chloride	–	–	–	–	10000 J	–
Acetone	2900	6600	–	–	–	200000 J
1,1-Dichloroethene	–	–	–	–	–	–
1,2-Dichloroethene (total)	–	–	–	–	–	–
Chloroform	–	–	–	–	–	–
1,2-Dichloroethane	–	–	–	–	–	–
2-Butanone (MEK)	2700 J	2400	3200	–	–	–
1,1,1-Trichloroethane	–	–	–	–	–	–
Bromodichloroethane	–	–	–	–	–	–
Trichloroethene	–	–	370 J	–	–	–
Dibromochloroethane	–	–	–	–	–	–
Benzene	420 J	9700	7200	1100 J	–	–
4-Methyl-2-pentanone	–	–	–	–	–	2800000
Tetrachloroethene	–	–	–	–	–	–
Toluene	–	270 J	540 J	2700 J	–	–
Chlorobenzene	360 J	6900	26000	23000	360000	390000
Ethylbenzene	–	–	–	–	–	510000
Xylenes	–	–	–	2900 J	–	4100000
Total VOCs	6380	25870	37310	29700	370000	8000000

ug/L Micrograms per liter.
ug/kg Micrograms per kilogram.
– Not detected.
E Concentration is above the calibration range of the instrument.
J Estimated value.
B Compound detected in blank.
D Concentration determined at a secondary dilution factor.
VOCs Volatile organic compounds.

Only those compounds detected are listed.

0150

Table 5-8. Summary of Target Compound List Volatile Organic Compounds Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	SB-15	SB-15	SB-16	SB-16	SB-16	SB-16
Sample Depth:	18-20 ft	26-28 ft	6-8 ft	16-18 ft	28-30 ft	30-32 ft
Sample Date:	5/28/92	5/28/92	5/29/92	5/29/92	5/29/92	5/29/92
Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Parameter						
Methylene chloride	10000 J	–	–	–	–	–
Acetone	–	15000 B	20000 B	–	–	–
1,1-Dichloroethene	–	–	–	–	–	–
1,2-Dichloroethene (total)	–	–	–	–	–	–
Chloroform	–	–	–	–	–	–
1,2-Dichloroethane	–	–	–	–	–	–
2-Butanone (MEK)	–	–	1300 J	1600	–	1800
1,1,1-Trichloroethane	–	–	–	–	–	–
Bromodichloroethane	–	–	–	–	–	–
Trichloroethene	–	–	–	–	–	–
Dibromochloroethane	–	–	–	–	–	–
Benzene	–	–	–	–	320 J	390 J
4-Methyl-2-pentanone	470000	16000	–	–	–	–
Tetrachloroethene	–	–	–	–	–	–
Toluene	–	–	–	–	–	–
Chlorobenzene	120000	–	750 J	6900	5100	4200
Ethylbenzene	65000	–	–	–	–	–
Xylenes	460000	–	–	–	–	–
Total VOCs	1125000	31000	22050	8500	5420	6390

ug/L	Micrograms per liter.
ug/kg	Micrograms per kilogram.
–	Not detected.
E	Concentration is above the calibration range of the instrument.
J	Estimated value.
B	Compound detected in blank.
D	Concentration determined at a secondary dilution factor.
VOCs	Volatile organic compounds.

Only those compounds detected are listed.

0154

Table 5-8. Summary of Target Compound List Volatile Organic Compounds Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank
Sample Depth:						
Sample Date:	4/9/92	4/10/92	4/13/92	4/14/92	4/16/92	4/21/92
Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter						
Methylene chloride	–	–	–	–	–	–
Acetone	–	–	–	–	–	–
1,1-Dichloroethene	–	–	–	–	–	–
1,2-Dichloroethene (total)	–	–	–	–	–	–
Chloroform	–	–	–	–	–	–
1,2-Dichloroethane	–	–	–	–	–	–
2-Butanone (MEK)	–	–	–	–	–	–
1,1,1-Trichloroethane	–	–	–	–	–	–
Bromodichloroethane	–	–	–	–	–	–
Trichloroethene	–	–	–	–	–	–
Dibromochloroethane	–	–	–	–	–	–
Benzene	–	–	–	–	–	–
4-Methyl-2-pentanone	–	–	–	–	–	–
Tetrachloroethene	–	–	–	–	–	–
Toluene	–	–	–	–	–	–
Chlorobenzene	–	–	–	–	–	–
Ethylbenzene	–	–	–	–	–	–
Xylenes	–	–	–	–	–	–
Total VOCs	–	–	–	–	–	–

ug/L	Micrograms per liter.
ug/kg	Micrograms per kilogram.
–	Not detected.
E	Concentration is above the calibration range of the instrument.
J	Estimated value.
B	Compound detected in blank.
D	Concentration determined at a secondary dilution factor.
VOCs	Volatile organic compounds.

Only those compounds detected are listed.

0155

Table 5-8. Summary of Target Compound List Volatile Organic Compounds Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank
Sample Depth:						
Sample Date:	4/23/92	4/27/92	5/4/92	5/5/92	5/6/92	5/7/92
Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter						
Methylene chloride	–	–	–	–	–	–
Acetone	21 J	4 J	–	–	–	–
1,1-Dichloroethene	–	–	–	–	–	–
1,2-Dichloroethene (total)	–	–	–	–	–	–
Chloroform	–	–	–	–	–	–
1,2-Dichloroethane	–	–	–	–	–	–
2-Butanone (MEK)	–	–	–	–	–	–
1,1,1-Trichloroethane	–	–	–	–	–	–
Bromodichloroethane	4 J	–	–	–	–	–
Trichloroethene	–	–	–	–	–	–
Dibromochloroethane	–	–	–	–	–	–
Benzene	–	–	–	–	–	–
4-Methyl-2-pentanone	–	–	–	–	–	–
Tetrachloroethene	–	–	–	–	–	–
Toluene	–	–	–	–	–	–
Chlorobenzene	–	–	–	–	–	–
Ethylbenzene	–	–	–	–	–	–
Xylenes	–	–	–	–	–	–
Total VOCs	25	4	–	–	–	–

ug/L	Micrograms per liter.
ug/kg	Micrograms per kilogram.
–	Not detected.
E	Concentration is above the calibration range of the instrument.
J	Estimated value.
B	Compound detected in blank.
D	Concentration determined at a secondary dilution factor.
VOCs	Volatile organic compounds.

Only those compounds detected are listed.

Table 5-8. Summary of Target Compound List Volatile Organic Compounds Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank
Sample Depth:						
Sample Date:	5/8/92	5/13/92	5/14/92	5/15/92	5/18/92	5/19/92
Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter						
Methylene chloride	–	–	–	–	–	–
Acetone	–	–	–	–	–	–
1,1-Dichloroethene	–	–	–	–	–	–
1,2-Dichloroethene (total)	–	–	–	–	–	–
Chloroform	–	–	–	–	–	–
1,2-Dichloroethane	–	–	–	–	–	–
2-Butanone (MEK)	–	–	–	–	–	–
1,1,1-Trichloroethane	–	–	–	–	–	–
Bromodichloroethane	–	–	–	–	–	1 J
Trichloroethene	–	3 J	–	–	–	1 J
Dibromochloroethane	–	–	–	–	–	2 J
Benzene	–	–	–	–	–	–
4-Methyl-2-pentanone	–	–	–	–	–	–
Tetrachloroethene	–	–	–	–	–	–
Toluene	–	7 J	–	–	–	–
Chlorobenzene	–	1 J	–	–	–	–
Ethylbenzene	–	–	–	–	–	–
Xylenes	–	–	–	–	–	–
Total VOCs	–	11	–	–	–	4

ug/L	Micrograms per liter.
ug/kg	Micrograms per kilogram.
–	Not detected.
E	Concentration is above the calibration range of the instrument.
J	Estimated value.
B	Compound detected in blank.
D	Concentration determined at a secondary dilution factor.
VOCs	Volatile organic compounds.

Only those compounds detected are listed.

0157

Table 5-8. Summary of Target Compound List Volatile Organic Compounds Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank
Sample Depth:						
Sample Date:	5/20/92	5/21/92	5/22/92	5/26/92	5/27/92	5/28/92
Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter						
Methylene chloride	–	–	–	–	–	–
Acetone	–	-	–	–	–	–
1,1-Dichloroethene	–		–	–	–	–
1,2-Dichloroethene (total)	–	–	–	–	–	–
Chloroform	–	–	–	–	–	–
1,2-Dichloroethane	–	–	–	–	–	–
2-Butanone (MEK)	–	–	–	–	–	–
1,1,1-Trichloroethane	–	–	–	–	–	–
Bromodichloroethane	–	–	–	–	–	–
Trichloroethene	–	–	–	–	–	–
Dibromochloroethane	–	–	–	–	–	–
Benzene	–	–	–	–	–	–
4-Methyl-2-pentanone	–	–	–	–	–	–
Tetrachloroethene	–	–	–	–	–	–
Toluene	–	–	–	–	–	–
Chlorobenzene	–	–	–	–	–	–
Ethylbenzene	–	–	–	–	–	–
Xylenes	–	–	–	–	–	–
Total VOCs	–	–	–	–	–	–

ug/L Micrograms per liter.
ug/kg Micrograms per kilogram.
– Not detected.
E Concentration is above the calibration range of the instrument.
J Estimated value.
B Compound detected in blank.
D Concentration determined at a secondary dilution factor.
VOCs Volatile organic compounds.

Only those compounds detected are listed.

Table 5-8. Summary of Target Compound List Volatile Organic Compounds Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	Trip Blank
Sample Depth:	
Sample Date:	5/29/92
Units:	ug/L
Parameter	
Methylene chloride	–
Acetone	–
1,1-Dichloroethene	–
1,2-Dichloroethene (total)	–
Chloroform	–
1,2-Dichloroethane	–
2-Butanone (MEK)	–
1,1,1-Trichloroethane	–
Bromodichloroethane	–
Trichloroethene	–
Dibromochloroethane	–
Benzene	–
4-Methyl-2-pentanone	–
Tetrachloroethene	–
Toluene	–
Chlorobenzene	–
Ethylbenzene	–
Xylenes	–
Total VOCs	–

ug/L	Micrograms per liter.
ug/kg	Micrograms per kilogram.
–	Not detected.
E	Concentration is above the calibration range of the instrument.
J	Estimated value.
B	Compound detected in blank.
D	Concentration determined at a secondary dilution factor.
VOCs	Volatile organic compounds.

Only those compounds detected are listed.

Table 5-8. Summary of Target Compound List Volatile Organic Compounds Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank
Sample Depth:						
Sample Date:	4/9/92	4/10/92	4/13/92	4/14/92	4/16/92	4/21/92
Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter						
Methylene chloride	–	–	–	–	–	–
Acetone	–	–	–	–	–	6 J
1,1-Dichloroethene	–	–	–	–	–	–
1,2-Dichloroethene (total)	–	–	–	–	–	–
Chloroform	–	–	–	–	–	–
1,2-Dichloroethane	–	–	–	–	–	–
2-Butanone (MEK)	–	–	–	–	–	–
1,1,1-Trichloroethane	–	–	–	–	–	–
Bromodichloroethane	–	–	–	–	–	–
Trichloroethene	–	–	–	2 J	–	–
Dibromochloroethane	–	–	–	–	–	–
Benzene	–	–	–	0.9 J	–	–
4-Methyl-2-pentanone	–	–	–	–	–	–
Tetrachloroethene	–	–	–	–	–	–
Toluene	–	–	–	–	–	–
Chlorobenzene	–	–	–	1 J	–	–
Ethylbenzene	–	–	–	–	–	–
Xylenes	–	–	–	–	–	–
Total VOCs	–	–	–	3.9	–	6

ug/L Micrograms per liter.
ug/kg Micrograms per kilogram.
– Not detected.
E Concentration is above the calibration range of the instrument.
J Estimated value.
B Compound detected in blank.
D Concentration determined at a secondary dilution factor.
VOCs Volatile organic compounds.

Only those compounds detected are listed.

0100

Table 5-8. Summary of Target Compound List Volatile Organic Compounds Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank
Sample Depth:						
Sample Date:	4/23/92	4/27/92	5/4/92	5/5/92	5/6/92	5/7/92
Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter						
Methylene chloride	–	–	–	–	–	–
Acetone	–	–	–	–	9 J	–
1,1-Dichloroethene	–	–	–	–	–	–
1,2-Dichloroethene (total)	–	–	–	–	–	–
Chloroform	–	–	–	–	–	–
1,2-Dichloroethane	–	–	–	–	–	–
2-Butanone (MEK)	–	–	–	–	–	–
1,1,1-Trichloroethane	–	–	–	–	–	–
Bromodichloroethane	–	–	–	–	–	–
Trichloroethene	–	–	–	–	–	–
Dibromochloroethane	–	–	–	–	–	–
Benzene	–	–	–	–	–	–
4-Methyl-2-pentanone	–	–	–	–	–	–
Tetrachloroethene	–	–	–	–	–	–
Toluene	–	–	–	–	–	–
Chlorobenzene	–	–	–	–	–	–
Ethylbenzene	–	–	–	–	–	–
Xylenes	–	–	–	–	–	–
Total VOCs	–	–	–	–	9	–

ug/L	Micrograms per liter.
ug/kg	Micrograms per kilogram.
–	Not detected.
E	Concentration is above the calibration range of the instrument.
J	Estimated value.
B	Compound detected in blank.
D	Concentration determined at a secondary dilution factor.
VOCs	Volatile organic compounds.

Only those compounds detected are listed.

0161

Table 5-8. Summary of Target Compound List Volatile Organic Compounds Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank
Sample Depth:						
Sample Date:	5/8/92	5/13/92	5/14/92	5/15/92	5/18/92	5/19/92
Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter						
Methylene chloride	–	–	–	–	–	–
Acetone	–	16	–	–	–	–
1,1-Dichloroethene	–	–	–	–	–	–
1,2-Dichloroethene (total)	–	–	–	–	–	–
Chloroform	–	–	–	–	–	–
1,2-Dichloroethane	–	–	–	–	–	–
2-Butanone (MEK)	–	–	–	–	–	–
1,1,1-Trichloroethane	–	–	–	–	–	–
Bromodichloroethane	–	–	–	–	–	–
Trichloroethene	–	–	–	–	–	–
Dibromochloroethane	–	–	–	–	–	–
Benzene	–	–	–	–	–	–
4-Methyl-2-pentanone	–	–	–	–	–	–
Tetrachloroethene	–	–	–	–	–	–
Toluene	–	–	–	–	–	–
Chlorobenzene	–	–	–	–	–	–
Ethylbenzene	–	–	–	–	–	–
Xylenes	–	–	–	–	–	–
Total VOCs	–	16	–	–	–	–

ug/L Micrograms per liter.
ug/kg Micrograms per kilogram.
– Not detected.
E Concentration is above the calibration range of the instrument.
J Estimated value.
B Compound detected in blank.
D Concentration determined at a secondary dilution factor.
VOCs Volatile organic compounds.

Only those compounds detected are listed.

Table 5-8. Summary of Target Compound List Volatile Organic Compounds Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank
Sample Depth:						
Sample Date:	5/20/92	5/21/92	5/22/92	5/26/92	5/27/92	5/28/92
Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter						
Methylene chloride	–	–	–	–	–	–
Acetone	–	–	–	–	–	–
1,1-Dichloroethene	–	–	–	–	–	–
1,2-Dichloroethene (total)	–	–	–	–	–	–
Chloroform	–	–	–	–	–	–
1,2-Dichloroethane	–	–	–	–	–	–
2-Butanone (MEK)	–	–	–	–	–	–
1,1,1-Trichloroethane	–	–	–	–	–	–
Bromodichloroethane	–	–	–	–	–	–
Trichloroethene	–	–	–	–	–	–
Dibromochloroethane	–	–	–	–	–	–
Benzene	–	–	–	–	–	–
4-Methyl-2-pentanone	–	–	–	–	–	–
Tetrachloroethene	–	–	–	–	–	–
Toluene	–	–	–	–	–	–
Chlorobenzene	–	–	–	–	–	–
Ethylbenzene	–	–	–	–	–	–
Xylenes	–	–	–	–	–	–
Total VOCs	–	–	–	–	–	–

ug/L	Micrograms per liter.
ug/kg	Micrograms per kilogram.
–	Not detected.
E	Concentration is above the calibration range of the instrument.
J	Estimated value.
B	Compound detected in blank.
D	Concentration determined at a secondary dilution factor.
VOCs	Volatile organic compounds.

Only those compounds detected are listed.

0163

Table 5-8. Summary of Target Compound List Volatile Organic Compounds Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Parameter	Equipment Blank
Sample Location:	Equipment Blank
Sample Depth:	
Sample Date:	5/29/92
Units:	ug/L
Methylene chloride	–
Acetone	–
1,1-Dichloroethene	–
1,2-Dichloroethene (total)	–
Chloroform	–
1,2-Dichloroethane	–
2-Butanone (MEK)	–
1,1,1-Trichloroethane	–
Bromodichloroethane	–
Trichloroethene	–
Dibromochloroethane	–
Benzene	–
4-Methyl-2-pentanone	–
Tetrachloroethene	–
Toluene	–
Chlorobenzene	–
Ethylbenzene	–
Xylenes	–
Total VOCs	–

ug/L	Micrograms per liter.
ug/kg	Micrograms per kilogram.
–	Not detected.
E	Concentration is above the calibration range of the instrument.
J	Estimated value.
B	Compound detected in blank.
D	Concentration determined at a secondary dilution factor.
VOCs	Volatile organic compounds.

Only those compounds detected are listed.

Table 5-9. Summary of Target Compound List Semivolatile Organic Compounds Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	SB-1	SB-1	SB-1	SB-2	SB-2	SB-2
Sample Depth:	12-14 ft	26-28 ft	32-34 ft	12-14 ft	14-16 ft	28-30 ft
Sample Date:	4/9/92	4/9/92	4/9/92	4/10/92	4/10/92	4/13/92
Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Parameter						
Phenol	2100000	520000	490000	120000 J	390000	720000 D
bis(2-Chloroethyl)ether	–	–	–	–	–	–
2-Chlorophenol	–	200000	64000 J	94000 J	160000	51000 J
1,3-Dichlorobenzene	–	–	–	–	8000 J	–
1,4-Dichlorobenzene	410000	59000 J	12000 J	410000	800000	37000 J
1,2-Dichlorobenzene	260000 J	180000	34000 J	280000	540000	26000 J
2-Methylphenol (o-cresol)	–	–	–	–	–	–
4-Methylphenol (p-cresol)	–	–	–	–	–	–
Nitrobenzene	38000 J	120000 J	22000 J	540000 D	650000	90000
2,4-Dimethylphenol	–	–	–	–	–	–
2,4-Dichlorophenol	1700000	300000	80000	610000 D	630000	93000
1,2,4-Trichlorobenzene	6700 J	75000 J	10000 J	5000 J	8700 J	–
Naphthalene	–	–	720 J	–	–	–
4-Chloroaniline	–	–	–	–	–	–
2-Methylnaphthalene	–	–	–	–	–	–
2,4,6-Trichlorophenol	1200000	110000 J	19000 J	260000 J	400000	81000
2,4,5-Trichlorophenol	–	–	–	–	–	–
2-Nitroaniline	–	–	–	–	–	–
Dimethylphthalate	–	–	–	–	–	–
Acenaphthene	–	–	–	–	–	–
Dibenzofuran	–	–	–	–	–	–
Diethylphthalate	–	–	–	–	–	–
Fluorene	–	–	–	–	–	–
4-Nitroaniline	120000 J	15000 J	–	33000 J	–	–
N-Nitrosodiphenylamine	–	10000 J	–	9100 J	7100 J	–
Pentachlorophenol	–	–	–	–	–	–
Phenanthrene	–	–	–	–	–	–
Anthracene	–	–	–	–	–	–
Carbazole	–	–	–	–	–	–
Di-n-butylphthalate	–	–	–	–	–	–
Fluoranthene	–	–	–	–	–	–
Pyrene	–	–	–	–	–	–
Butylbenzylphthalate	–	–	–	–	–	–
3,3'-Dichlorobenzidine	–	–	–	–	–	–
Benzo(a)anthracene	–	–	–	–	–	–
Chrysene	–	–	–	–	–	–
bis(2-Ethylhexyl)phthalate	960000	32000 J	–	–	–	–
Di-n-octylphthalate	–	–	–	–	–	2100 J
Benzo(b)fluoranthene	–	–	–	–	–	–
Benzo(k)fluoranthene	–	–	–	–	–	–
Benzo(a)pyrene	–	–	–	–	–	–
Indeno(1,2,3-cd)pyrene	–	–	–	–	–	–
Benzo(g,h,i)perylene	–	–	–	–	–	–
Aniline	–	–	–	–	–	–
2-Chloroaniline	170000 J	530000	210000	240000	480000	230000
3-Chloroaniline	–	–	3200 J	–	–	9000 J
Total SVOCs	6964700	2151000	944920	2601100	4073800	1339100

ug/L	Micrograms per liter.
ug/kg	Micrograms per kilogram.
J	Estimated value.
D	Concentration determined at a secondary dilution factor.
R	Unusable value.
E	Exceeded the instrument calibration range.
–	Not detected.
SVOCs	Semivolatile organic compounds.

Only those compounds detected are listed.

0165

Table 5-9. Summary of Target Compound List Semivolatile Organic Compounds Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	SB-3	SB-3	SB-3	SB-4	SB-4	SB-4
Sample Depth:	12-14 ft	14-16 ft	32-34 ft	10-12 ft	12-14 ft	30-32 ft
Sample Date:	4/16/92	4/16/92	4/16/92	4/14/92	4/14/92	4/14/92
Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Parameter						
Phenol	1300000	1600000	1100000 D	830000	190000	320000 J
bis(2-Chloroethyl)ether	–	–	–	–	–	–
2-Chlorophenol	960000	1100000	490000	590000	270000	150000 J
1,3-Dichlorobenzene	–	–	–	–	–	–
1,4-Dichlorobenzene	–	96000 J	76000 J	55000 J	51000 J	22000 J
1,2-Dichlorobenzene	96000 J	170000 J	280000	470000	58000 J	75000 J
2-Methylphenol (o-cresol)	–	–	–	54000 J	–	–
4-Methylphenol (p-cresol)	–	–	–	–	–	7300 J
Nitrobenzene	450000 J	420000	110000 J	86000 J	69000	15000 J
2,4-Dimethylphenol	–	–	2700 J	–	–	3500 J
2,4-Dichlorophenol	3200000	3500000 D	950000	11000000 D	4200000 D	110000 J
1,2,4-Trichlorobenzene	–	–	200000	100000 J	72000	32000 J
Naphthalene	530000 J	800000	–	–	–	–
4-Chloroaniline	–	40000 J	34000 DJ	–	–	–
2-Methylnaphthalene	–	–	–	–	–	–
2,4,6-Trichlorophenol	3600000	3900000 D	290000	3700000 D	1700000 D	49000 J
2,4,5-Trichlorophenol	–	–	–	–	–	–
2-Nitroaniline	–	–	–	–	1900 J	–
Dimethylphthalate	–	–	–	–	–	3000 J
Acenaphthene	–	–	–	–	–	–
Dibenzofuran	–	–	–	–	–	–
Diethylphthalate	–	–	–	–	–	–
Fluorene	–	–	–	–	–	–
4-Nitroaniline	320000 J	400000 J	25000 J	52000 J	–	–
N-Nitrosodiphenylamine	–	–	–	–	7900 J	–
Pentachlorophenol	–	–	–	–	–	–
Phenanthrene	–	–	–	–	–	–
Anthracene	–	–	–	–	–	–
Carbazole	–	–	–	–	–	–
Di-n-butylphthalate	–	–	–	–	–	–
Fluoranthene	–	–	–	–	–	–
Pyrene	–	–	–	–	–	–
Butylbenzylphthalate	–	10000 J	7000 J	–	9200 J	–
3,3'-Dichlorobenzidine	–	–	–	–	–	–
Benzo(a)anthracene	–	–	–	–	–	–
Chrysene	–	–	–	–	–	–
bis(2-Ethylhexyl)phthalate	–	–	–	–	–	–
Di-n-octylphthalate	–	–	8800 J	–	–	–
Benzo(b)fluoranthene	–	–	–	–	–	–
Benzo(k)fluoranthene	–	–	–	–	–	–
Benzo(a)pyrene	–	–	–	–	–	–
Indeno(1,2,3-cd)pyrene	–	–	–	–	–	–
Benzo(g,h,i)perylene	–	–	–	–	–	–
Aniline	–	–	–	1100000	19000 J	–
2-Chloroaniline	1700000	3500000 D	1500000 D	220000 J	110000	73000 J
3-Chloroaniline	–	–	–	–	–	–
Total SVOCs	12156000	15536000	5073500	18257000	6758000	859800

ug/L	Micrograms per liter.
ug/kg	Micrograms per kilogram.
J	Estimated value.
D	Concentration determined at a secondary dilution factor.
R	Unusable value.
E	Exceeded the instrument calibration range.
–	Not detected.
SVOCs	Semivolatile organic compounds.

Only those compounds detected are listed.

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Table 5-9. Summary of Target Compound List Semivolatile Organic Compounds Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	SB-5	SB-5	SB-5	SB-6	SB-6	SB-6
Sample Depth:	12-14 ft	20-22 ft	28-30 ft	18-20 ft	20-22 ft	28-30 ft
Sample Date:	5/4/92	5/4/92	5/4/92	5/5/92	5/5/92	5/6/92
Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Parameter						
Phenol	260000 J	300000	590000	3300000	5800000 D	1500000
bis(2-Chloroethyl)ether	–	–	–	–	–	–
2-Chlorophenol	230000 J	61000 J	80000 J	4200000	6900000 D	3600000 D
1,3-Dichlorobenzene	–	1300 J	–	–	–	–
1,4-Dichlorobenzene	120000 J	43000 J	27000 J	–	20000 J	12000 J
1,2-Dichlorobenzene	2100000	200000	57000 J	570000 J	1100000	120000 J
2-Methylphenol (o-cresol)	–	–	–	–	–	–
4-Methylphenol (p-cresol)	–	–	–	500000 J	640000	290000
Nitrobenzene	–	100000	–	–	160000 J	110000 J
2,4-Dimethylphenol	–	–	–	120000 J	150000 J	100000 J
2,4-Dichlorophenol	11000000 D	950000 D	370000	4100000	9600000 D	1200000
1,2,4-Trichlorobenzene	1800000	140000	23000 J	260000 J	520000	69000 J
Naphthalene	–	–	–	670000	–	–
4-Chloroaniline	–	–	–	–	–	–
2-Methylnaphthalene	–	–	–	–	–	–
2,4,6-Trichlorophenol	1800000	190000	76000 J	1300000	300000	700000
2,4,5-Trichlorophenol	–	–	–	–	1600000	–
2-Nitroaniline	–	–	–	–	38000 J	–
Dimethylphthalate	–	–	–	–	–	–
Acenaphthene	–	–	–	–	–	–
Dibenzofuran	–	–	–	–	–	–
Diethylphthalate	–	–	–	–	–	–
Fluorene	–	–	–	–	–	–
4-Nitroaniline	–	–	–	–	–	–
N-Nitrosodiphenylamine	–	–	–	–	–	–
Pentachlorophenol	–	–	43000 J	150000 J	–	260000 J
Phenanthrene	–	–	–	–	–	–
Anthracene	–	–	–	–	–	–
Carbazole	–	–	–	–	–	–
Di-n-butylphthalate	–	–	–	–	–	–
Fluoranthene	–	–	–	–	–	–
Pyrene	–	–	–	–	–	–
Butylbenzylphthalate	–	–	–	–	–	–
3,3'-Dichlorobenzidine	–	–	–	R	R	–
Benzo(a)anthracene	–	–	–	–	–	–
Chrysene	–	–	–	–	–	–
bis(2-Ethylhexyl)phthalate	–	–	–	–	22000 J	–
Di-n-octylphthalate	–	–	–	–	–	–
Benzo(b)fluoranthene	–	–	–	–	–	–
Benzo(k)fluoranthene	–	–	–	–	–	–
Benzo(a)pyrene	–	–	–	–	–	–
Indeno(1,2,3-cd)pyrene	–	–	–	–	–	–
Benzo(g,h,i)perylene	–	–	–	–	–	–
Aniline	–	–	–	–	10000 J	–
2-Chloroaniline	33000 J	970000 D	500000 J	370000 J	790000	140000 J
3-Chloroaniline	–	–	–	–	–	–
Total SVOCs	17343000	2955300	1766000	15540000	27650000	8101000

ug/L	Micrograms per liter.
ug/kg	Micrograms per kilogram.
J	Estimated value.
D	Concentration determined at a secondary dilution factor.
R	Unusable value.
E	Exceeded the instrument calibration range.
–	Not detected.
SVOCs	Semivolatile organic compounds.

Only those compounds detected are listed.

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Table 5-9. Summary of Target Compound List Semivolatile Organic Compounds Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	SB-7	SB-7	SB-7	SB-8	SB-9	SB-9
Sample Depth:	16-18 ft	20-22 ft	24-26 ft	6-8 ft	18-20 ft	20-22 ft
Sample Date:	5/7/92	5/7/92	5/7/92	5/8/92	5/13/92	5/13/92
Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Parameter						
Phenol	33000 J	120000 J	140000 J	–	1200000 J	270000 J
bis(2-Chloroethyl)ether	–	–	–	–	–	–
2-Chlorophenol	180000 J	100000 J	33000 J	–	–	4500 J
1,3-Dichlorobenzene	–	–	–	–	–	–
1,4-Dichlorobenzene	41000 J	21000 J	33000 J	–	–	–
1,2-Dichlorobenzene	78000 J	35000 J	37000 J	–	–	–
2-Methylphenol (o-cresol)	–	–	–	–	–	–
4-Methylphenol (p-cresol)	–	–	–	–	–	–
Nitrobenzene	370000 J	190000 J	130000 J	–	–	–
2,4-Dimethylphenol	–	–	–	–	–	–
2,4-Dichlorophenol	–	–	–	–	52000 J	13000 J
1,2,4-Trichlorobenzene	–	–	–	–	–	–
Naphthalene	–	–	–	–	–	–
4-Chloroaniline	–	–	–	–	–	20000 J
2-Methylnaphthalene	–	–	–	–	–	–
2,4,6-Trichlorophenol	–	–	–	–	–	11000 J
2,4,5-Trichlorophenol	–	–	–	–	–	–
2-Nitroaniline	–	–	–	–	–	–
Dimethylphthalate	–	–	–	–	14000 J	–
Acenaphthene	–	–	–	–	–	–
Dibenzofuran	–	–	–	–	–	–
Diethylphthalate	–	–	–	–	–	–
Fluorene	–	–	–	–	–	–
4-Nitroaniline	–	–	–	–	–	–
N-Nitrosodiphenylamine	–	–	–	–	–	–
Pentachlorophenol	–	–	–	–	–	–
Phenanthrene	–	–	–	–	–	–
Anthracene	–	–	–	–	–	–
Carbazole	–	–	–	–	–	–
Di-n-butylphthalate	–	–	–	–	–	–
Fluoranthene	–	–	–	–	–	–
Pyrene	–	–	–	–	–	–
Butylbenzylphthalate	–	–	–	–	39000 J	3300 J
3,3'-Dichlorobenzidine	–	–	–	–	–	–
Benzo(a)anthracene	–	–	–	–	–	–
Chrysene	–	–	–	–	–	–
bis(2-Ethylhexyl)phthalate	–	–	–	–	–	–
Di-n-octylphthalate	–	–	–	–	–	–
Benzo(b)fluoranthene	–	–	–	–	–	–
Benzo(k)fluoranthene	–	–	–	–	–	–
Benzo(a)pyrene	–	–	–	–	–	–
Indeno(1,2,3-cd)pyrene	–	–	–	–	–	–
Benzo(g,h,i)perylene	–	–	–	–	–	–
Aniline	–	–	–	–	–	4100 J
2-Chloroaniline	110000 J	280000 J	140000 J	–	170000 J	41000 J
3-Chloroaniline	–	–	–	–	–	5200 J
Total SVOCs	812000	746000	513000	–	1475000	372100

ug/L	Micrograms per liter.
ug/kg	Micrograms per kilogram.
J	Estimated value.
D	Concentration determined at a secondary dilution factor.
R	Unusable value.
E	Exceeded the instrument calibration range.
–	Not detected.
SVOCs	Semivolatile organic compounds.

Only those compounds detected are listed.

Table 5-9. Summary of Target Compound List Semivolatile Organic Compounds Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	SB-9	SB-9	SB-10	SB-10	SB-10	SB-11
Sample Depth:	28-30 ft	30-32 ft	6-8 ft	18-20 ft	24-26 ft	14-16 ft
Sample Date:	5/13/92	5/13/92	5/14/92	5/14/92	5/14/92	5/19/92
Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Parameter						
Phenol	680000	2100000	280000 J	1300000 J	230000	470000
bis(2-Chloroethyl)ether	–	–	–	–	–	–
2-Chlorophenol	140000 J	670000	–	–	12000 J	–
1,3-Dichlorobenzene	–	–	–	–	–	–
1,4-Dichlorobenzene	24000 J	86000 J	–	–	–	–
1,2-Dichlorobenzene	46000 J	200000 J	–	100000 J	–	–
2-Methylphenol (o-cresol)	–	–	–	–	–	–
4-Methylphenol (p-cresol)	–	–	–	440000 J	18000 J	–
Nitrobenzene	52000 J	250000 J	–	–	2900 J	–
2,4-Dimethylphenol	–	–	–	150000 J	2800 J	–
2,4-Dichlorophenol	530000 J	2900000	–	200000 J	34000 J	160000 J
1,2,4-Trichlorobenzene	41000 J	200000 J	–	–	–	41000 J
Naphthalene	–	–	–	–	–	–
4-Chloroaniline	32000 J	–	130000 J	2000000 J	23000 J	–
2-Methylnaphthalene	–	–	–	–	–	–
2,4,6-Trichlorophenol	–	–	–	–	8600 J	130000 J
2,4,5-Trichlorophenol	–	–	–	–	–	–
2-Nitroaniline	–	–	–	1000000 J	13000 J	–
Dimethylphthalate	–	–	–	–	–	–
Acenaphthene	–	–	–	–	–	–
Dibenzofuran	–	–	–	–	–	–
Diethylphthalate	–	–	–	–	–	–
Fluorene	–	–	–	–	–	–
4-Nitroaniline	–	–	–	–	–	41000 J
N-Nitrosodiphenylamine	–	–	–	–	–	–
Pentachlorophenol	–	–	–	–	–	–
Phenanthrene	–	–	–	–	–	–
Anthracene	–	–	–	–	–	–
Carbazole	–	–	–	–	–	–
Di-n-butylphthalate	–	–	–	–	–	–
Fluoranthene	–	–	–	–	–	–
Pyrene	–	–	–	–	–	–
Butylbenzylphthalate	–	–	–	–	–	–
3,3'-Dichlorobenzidine	–	–	–	–	–	–
Benzo(a)anthracene	–	–	–	–	–	–
Chrysene	–	–	–	–	–	–
bis(2-Ethylhexyl)phthalate	–	–	370000 J	–	–	–
Di-n-octylphthalate	–	–	–	–	–	–
Benzo(b)fluoranthene	–	–	–	–	–	–
Benzo(k)fluoranthene	–	–	–	–	–	–
Benzo(a)pyrene	–	–	–	–	–	–
Indeno(1,2,3-cd)pyrene	–	–	–	–	–	–
Benzo(g,h,i)perylene	–	–	–	–	–	–
Aniline	23000 J	70000 J	–	100000 J	7800 J	–
2-Chloroaniline	590000 J	2500000	200000 J	4900000	110000	–
3-Chloroaniline	15000 J	–	–	190000 J	–	–
Total SVOCs	2173000	8976000	980000	10380000	462100	842000

ug/L Micrograms per liter.
ug/kg Micrograms per kilogram.
J Estimated value.
D Concentration determined at a secondary dilution factor.
R Unusable value.
E Exceeded the instrument calibration range.
– Not detected.
SVOCs Semivolatile organic compounds.

Only those compounds detected are listed.

Table 5-9. Summary of Target Compound List Semivolatile Organic Compounds Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	SB-11	SB-11	SB-12	SB-12	SB-12	SB-12
Sample Depth:	16-18 ft	30-32 ft	8-10 ft	22-24 ft	32-34 ft	32-34 ft
Sample Date:	5/19/92	5/20/92	5/15/92	5/18/92	5/18/92	5/18/92
Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Parameter						
Phenol	480000 J	9700 J	1800 J	5100000	1200000 E	710000 D
bis(2-Chloroethyl)ether	–	–	–	–	–	–
2-Chlorophenol	–	–	–	470000 J	130000	130000
1,3-Dichlorobenzene	–	–	–	–	–	–
1,4-Dichlorobenzene	–	–	–	–	3000 J	3000 J
1,2-Dichlorobenzene	–	–	–	610000 J	390000	390000
2-Methylphenol (o-cresol)	–	–	–	–	–	–
4-Methylphenol (p-cresol)	–	–	–	–	21000 J	21000 J
Nitrobenzene	–	–	–	–	16000 J	16000 J
2,4-Dimethylphenol	–	–	–	–	5000 J	5000 J
2,4-Dichlorophenol	–	19000 J	480 J	2800000	580000 E	370000 D
1,2,4-Trichlorobenzene	–	–	–	230000 J	84000	84000
Naphthalene	–	–	–	–	–	–
4-Chloroaniline	–	23000 J	–	–	–	–
2-Methylnaphthalene	–	–	–	–	–	–
2,4,6-Trichlorophenol	–	–	–	630000 J	93000	93000
2,4,5-Trichlorophenol	–	–	–	–	–	–
2-Nitroaniline	–	–	–	–	–	–
Dimethylphthalate	–	–	–	–	–	–
Acenaphthene	–	–	–	–	–	–
Dibenzofuran	–	–	–	–	–	–
Diethylphthalate	–	–	350 J	–	–	–
Fluorene	–	–	–	–	–	–
4-Nitroaniline	–	–	–	–	–	–
N-Nitrosodiphenylamine	–	–	–	–	–	–
Pentachlorophenol	–	–	–	–	25000 J	25000 J
Phenanthrene	–	–	–	–	–	–
Anthracene	–	–	–	–	–	–
Carbazole	–	–	–	–	–	–
Di-n-butylphthalate	–	–	–	–	–	–
Fluoranthene	–	–	–	–	–	–
Pyrene	–	–	–	–	–	–
Butylbenzylphthalate	–	–	–	–	–	–
3,3'-Dichlorobenzidine	–	–	–	–	–	–
Benzo(a)anthracene	–	–	–	–	–	–
Chrysene	–	–	–	–	–	–
bis(2-Ethylhexyl)phthalate	–	–	–	–	–	–
Di-n-octylphthalate	–	–	–	–	–	–
Benzo(b)fluoranthene	–	–	–	–	–	–
Benzo(k)fluoranthene	–	–	–	–	–	–
Benzo(a)pyrene	–	–	–	–	–	–
Indeno(1,2,3-cd)pyrene	–	–	–	–	–	–
Benzo(g,h,i)perylene	–	–	–	–	–	–
Aniline	–	–	440 J	990000 J	–	120000 DJ
2-Chloroaniline	–	230000 J	590 J	–	170000	170000 J
3-Chloroaniline	–	8200 J	–	–	19000 J	19000 J
Total SVOCs	480000	289900	3660	10830000	2736000	2156000

ug/L Micrograms per liter.
ug/kg Micrograms per kilogram.
J Estimated value.
D Concentration determined at a secondary dilution factor.
R Unusable value.
E Exceeded the instrument calibration range.
– Not detected.
SVOCs Semivolatile organic compounds.

Only those compounds detected are listed.

Table 5-9. Summary of Target Compound List Semivolatile Organic Compounds Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	SB-13	SB-13	SB-13	SB-14	SB-14	SB-14
Sample Depth:	16-18 ft	18-20 ft	30-32 ft	10-12 ft	20-22 ft	30-32 ft
Sample Date:	5/21/92	5/21/92	5/21/92	5/22/92	5/26/92	5/26/92
Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Parameter						
Phenol	140 J	21000 J	460000	6500 J	2800000	890000
bis(2-Chloroethyl)ether	31 J	–	–	–	–	–
2-Chlorophenol	430 J	260000 EJ	120000	–	840000 J	220000 J
1,3-Dichlorobenzene	–	–	–	–	–	–
1,4-Dichlorobenzene	–	–	–	15000	–	–
1,2-Dichlorobenzene	–	–	–	9600 J	9100 J	440000
2-Methylphenol (o-cresol)	–	990 J	–	–	–	–
4-Methylphenol (p-cresol)	–	–	33000 J	4800 J	59000 J	59000 J
Nitrobenzene	–	–	–	–	5700 J	87000 J
2,4-Dimethylphenol	–	–	–	660 J	–	–
2,4-Dichlorophenol	39 J	230000 EJ	150000	1800 J	120000 J	690000
1,2,4-Trichlorobenzene	–	–	–	940 J	–	170000 J
Naphthalene	24 J	27000	23000 J	1500 J	–	–
4-Chloroaniline	–	85000 DJ	–	9700 J	–	–
2-Methylnaphthalene	20 J	–	–	–	–	–
2,4,6-Trichlorophenol	–	67000	22000 J	640 J	42000 J	130000 J
2,4,5-Trichlorophenol	–	–	–	–	–	–
2-Nitroaniline	–	–	–	3000 J	–	–
Dimethylphthalate	–	–	–	–	–	–
Acenaphthene	–	–	–	–	–	–
Dibenzofuran	–	–	–	–	–	–
Diethylphthalate	–	–	–	–	–	–
Fluorene	–	–	–	–	–	–
4-Nitroaniline	–	–	–	8300000 D	–	–
N-Nitrosodiphenylamine	–	–	–	–	–	–
Pentachlorophenol	–	790000 EJ	–	–	–	–
Phenanthrene	–	–	–	–	–	–
Anthracene	–	–	–	–	–	–
Carbazole	–	–	–	–	–	–
Di-n-butylphthalate	20 J	–	–	–	–	–
Fluoranthene	–	–	–	–	–	–
Pyrene	–	–	–	–	–	–
Butylbenzylphthalate	17 J	–	–	–	–	–
3,3'-Dichlorobenzidine	–	–	–	–	–	–
Benzo(a)anthracene	–	–	–	–	–	–
Chrysene	–	–	–	–	–	–
bis(2-Ethylhexyl)phthalate	–	–	–	–	–	–
Di-n-octylphthalate	17 J	–	–	–	–	–
Benzo(b)fluoranthene	–	–	–	–	–	–
Benzo(k)fluoranthene	–	–	–	–	–	–
Benzo(a)pyrene	–	–	–	–	–	–
Indeno(1,2,3-cd)pyrene	–	–	–	–	–	–
Benzo(g,h,i)perylene	–	–	–	–	–	–
Aniline	–	–	–	–	–	–
2-Chloroaniline	–	39000 DJ	–	8000 J	29000 J	43000 J
3-Chloroaniline	–	28000 DJ	–	9400 J	–	–
Total SVOCs	738	1547990	808000	8371540	3904800	2729000

ug/L	Micrograms per liter.
ug/kg	Micrograms per kilogram.
J	Estimated value.
D	Concentration determined at a secondary dilution factor.
R	Unusable value.
E	Exceeded the instrument calibration range.
–	Not detected.
SVOCs	Semivolatile organic compounds.

Only those compounds detected are listed.

Table 5-9. Summary of Target Compound List Semivolatile Organic Compounds Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	SB-15	SB-15	SB-15	SB-16	SB-16	SB-16
Sample Depth:	16-18 ft	18-20 ft	26-28 ft	6-8 ft	16-18 ft	28-30 ft
Sample Date:	5/27/92	5/28/92	5/28/92	5/29/92	5/29/92	5/29/92
Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Parameter						
Phenol	640000 J	150000 J	7300 J	R	–	–
bis(2-Chloroethyl)ether	–	–	–	–	–	–
2-Chlorophenol	1100000 J	220000 J	–	R	230000 D	950000
1,3-Dichlorobenzene	–	–	–	–	–	–
1,4-Dichlorobenzene	–	–	–	–	–	–
1,2-Dichlorobenzene	–	30000 J	–	12000 J	6200 J	–
2-Methylphenol (o-cresol)	–	–	–	–	–	–
4-Methylphenol (p-cresol)	–	–	–	R	–	–
Nitrobenzene	580000 J	97000 J	–	1900 J	8500 J	–
2,4-Dimethylphenol	–	–	–	16000 J	–	–
2,4-Dichlorophenol	16000000 D	2600000 D	19000 J	46000	58000	240000 J
1,2,4-Trichlorobenzene	–	–	–	5800 J	3300 J	–
Naphthalene	–	–	–	–	–	–
4-Chloroaniline	–	–	–	–	40000	–
2-Methylnaphthalene	–	–	–	–	–	–
2,4,6-Trichlorophenol	1900000	540000	–	23000	9800 J	51000 J
2,4,5-Trichlorophenol	–	–	–	–	–	–
2-Nitroaniline	–	–	–	–	–	–
Dimethylphthalate	–	–	–	–	–	–
Acenaphthene	–	–	–	–	–	–
Dibenzofuran	–	–	–	–	–	–
Diethylphthalate	–	–	–	–	–	–
Fluorene	–	–	–	–	–	–
4-Nitroaniline	–	–	–	350000 DJ	–	–
N-Nitrosodiphenylamine	–	–	–	–	–	–
Pentachlorophenol	–	–	–	86000	–	–
Phenanthrene	–	–	–	–	–	–
Anthracene	–	–	–	–	–	–
Carbazole	–	–	–	–	–	–
Di-n-butylphthalate	–	–	–	–	–	–
Fluoranthene	–	–	–	–	–	–
Pyrene	–	–	–	–	–	–
Butylbenzylphthalate	–	–	–	–	160 J	–
3,3'-Dichlorobenzidine	–	–	–	–	–	–
Benzo(a)anthracene	–	–	–	–	–	–
Chrysene	–	–	–	–	–	–
bis(2-Ethylhexyl)phthalate	–	–	–	–	–	–
Di-n-octylphthalate	–	–	–	–	–	–
Benzo(b)fluoranthene	–	–	–	–	–	–
Benzo(k)fluoranthene	–	–	–	–	–	–
Benzo(a)pyrene	–	–	–	–	–	–
Indeno(1,2,3-cd)pyrene	–	–	–	–	–	–
Benzo(g,h,i)perylene	–	–	–	–	–	–
Aniline	–	–	–	–	–	–
2-Chloroaniline	720000 J	190000 J	–	8600 J	190000 D	160000 J
3-Chloroaniline	–	–	–	–	44000 DJ	–
Total SVOCs	20940000	3827000	26300	549300	589960	1401000

ug/L	Micrograms per liter.
ug/kg	Micrograms per kilogram.
J	Estimated value.
D	Concentration determined at a secondary dilution factor.
R	Unusable value.
E	Exceeded the instrument calibration range.
–	Not detected.
SVOCs	Semivolatile organic compounds.

Only those compounds detected are listed.

SUBSEM.XLS

Table 5-9. Summary of Target Compound List Semivolatile Organic Compounds Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Parameter	Sample Location: SB-16 Sample Depth: 30-32 ft Sample Date: 5/29/92 Units: ug/kg
Phenol	420000 EJ
bis(2-Chloroethyl)ether	–
2-Chlorophenol	460000 EJ
1,3-Dichlorobenzene	–
1,4-Dichlorobenzene	–
1,2-Dichlorobenzene	–
2-Methylphenol (o-cresol)	–
4-Methylphenol (p-cresol)	36000 J
Nitrobenzene	690 J
2,4-Dimethylphenol	–
2,4-Dichlorophenol	420000 DJ
1,2,4-Trichlorobenzene	–
Naphthalene	–
4-Chloroaniline	–
2-Methylnaphthalene	–
2,4,6-Trichlorophenol	51000 J
2,4,5-Trichlorophenol	–
2-Nitroaniline	–
Dimethylphthalate	–
Acenaphthene	–
Dibenzofuran	–
Diethylphthalate	–
Fluorene	–
4-Nitroaniline	–
N-Nitrosodiphenylamine	–
Pentachlorophenol	–
Phenanthrene	–
Anthracene	–
Carbazole	–
Di-n-butylphthalate	–
Fluoranthene	–
Pyrene	–
Butylbenzylphthalate	–
3,3'-Dichlorobenzidine	–
Benzo(a)anthracene	–
Chrysene	–
bis(2-Ethylhexyl)phthalate	–
Di-n-octylphthalate	–
Benzo(b)fluoranthene	–
Benzo(k)fluoranthene	–
Benzo(a)pyrene	–
Indeno(1,2,3-cd)pyrene	–
Benzo(g,h,i)perylene	–
Aniline	–
2-Chloroaniline	49000
3-Chloroaniline	–
Total SVOCs	1436690

ug/L	Micrograms per liter.
ug/kg	Micrograms per kilogram.
J	Estimated value.
D	Concentration determined at a secondary dilution factor.
R	Unusable value.
E	Exceeded the instrument calibration range.
–	Not detected.
SVOCs	Semivolatile organic compounds.

Only those compounds detected are listed.

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Table 5-9. Summary of Target Compound List Semivolatile Organic Compounds Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank
Sample Depth:						
Sample Date:	4/9/92	4/10/92	4/13/92	4/14/92	4/16/92	4/21/92
Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter						
Phenol	–	–	–	–	–	–
bis(2-Chloroethyl)ether	–	–	–	–	–	–
2-Chlorophenol	–	–	–	–	–	–
1,3-Dichlorobenzene	–	–	–	–	–	–
1,4-Dichlorobenzene	–	–	–	–	–	–
1,2-Dichlorobenzene	–	–	–	–	–	–
2-Methylphenol (o-cresol)	–	–	–	–	–	–
4-Methylphenol (p-cresol)	–	–	–	–	–	–
Nitrobenzene	–	–	–	–	–	–
2,4-Dimethylphenol	–	–	–	–	–	–
2,4-Dichlorophenol	–	–	–	–	–	–
1,2,4-Trichlorobenzene	–	–	–	–	–	–
Naphthalene	–	–	–	–	–	–
4-Chloroaniline	–	–	–	–	–	–
2-Methylnaphthalene	–	–	–	–	–	–
2,4,6-Trichlorophenol	–	–	–	–	–	–
2,4,5-Trichlorophenol	–	–	–	–	–	–
2-Nitroaniline	–	–	–	–	–	–
Dimethylphthalate	–	–	–	–	–	–
Acenaphthene	–	–	–	–	–	–
Dibenzofuran	–	–	–	–	–	–
Diethylphthalate	–	–	–	–	–	–
Fluorene	–	–	–	–	–	–
4-Nitroaniline	–	–	–	–	–	–
N-Nitrosodiphenylamine	–	–	–	–	–	–
Pentachlorophenol	–	–	–	–	–	–
Phenanthrene	–	–	–	–	–	–
Anthracene	–	–	–	–	–	–
Carbazole	–	0.3 J	–	–	–	–
Di-n-butylphthalate	–	–	–	–	–	–
Fluoranthene	–	–	–	–	–	–
Pyrene	–	1 J	–	–	–	–
Butylbenzylphthalate	–	–	–	–	–	–
3,3'-Dichlorobenzidine		–	–	–	–	–
Benzo(a)anthracene		–	–	–	–	–
Chrysene	0.8 J	360 D	0.7 J	–	4 J	6 J
bis(2-Ethylhexyl)phthalate	–	–	–	–	–	–
Di-n-octylphthalate	–	–	–	–	–	–
Benzo(b)fluoranthene	–	–	–	–	–	–
Benzo(k)fluoranthene	–		–	–	–	–
Benzo(a)pyrene	–	–	–	–	–	–
Indeno(1,2,3-cd)pyrene	–	–	–	–	–	–
Benzo(g,h,i)perylene	–	–	–	–	–	–
2-Chloroaniline	–	–	–	–	–	–
3-Chloroaniline	–	–	–	–	–	–
Total SVOCs	0.8	361.3	0.7	–	4	6

ug/L	Micrograms per liter.
ug/kg	Micrograms per kilogram.
J	Estimated value.
D	Concentration determined at a secondary dilution factor.
R	Unusable value.
E	Exceeded the instrument calibration range.
–	Not detected.
SVOCs	Semivolatile organic compounds.

Only those compounds detected are listed.

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SUBSEM.XLS

Table 5-9. Summary of Target Compound List Semivolatile Organic Compounds Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank
Sample Depth:						
Sample Date:	4/23/92	4/27/92	5/4/92	5/5/92	5/6/92	5/7/92
Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter						
Phenol	–	0.4 J	–	–	–	–
bis(2-Chloroethyl)ether	–	–	–	–	–	–
2-Chlorophenol	–	–	–	–	–	–
1,3-Dichlorobenzene	–	–	–	–	–	–
1,4-Dichlorobenzene	–	–	–	–	–	–
1,2-Dichlorobenzene	–	–	–	–	–	–
2-Methylphenol (o-cresol)	–	–	–	–	–	–
4-Methylphenol (p-cresol)	–	–	–	–	–	–
Nitrobenzene	–	–	2 J	1 J	–	–
2,4-Dimethylphenol	–	–	–	–	–	–
2,4-Dichlorophenol	–	–	–	–	–	–
1,2,4-Trichlorobenzene	–	–	–	–	–	–
Naphthalene	–	0.7 J	–	–	6 J	0.3 J
4-Chloroaniline	–	–	–	–	–	–
2-Methylnaphthalene	–	–	–	–	–	–
2,4,6-Trichlorophenol	–	–	–	–	–	–
2,4,5-Trichlorophenol	–	–	–	–	–	–
2-Nitroaniline	–	–	–	–	–	–
Dimethylphthalate	–	–	–	–	–	–
Acenaphthene	–	–	–	–	–	–
Dibenzofuran	–	–	–	–	–	–
Diethylphthalate	–	–	–	–	–	–
Fluorene	–	–	–	–	–	–
4-Nitroaniline	–	–	–	–	–	–
N-Nitrosodiphenylamine	–	–	–	–	–	–
Pentachlorophenol	–	–	–	–	–	–
Phenanthrene	–	–	–	–	–	–
Anthracene	–	–	–	–	–	–
Carbazole	–	–	–	–	–	–
Di-n-butylphthalate	–	–	–	–	–	–
Fluoranthene	–	–	–	–	–	–
Pyrene	–	–	–	–	–	–
Butylbenzylphthalate	–	–	–	–	–	–
3,3'-Dichlorobenzidine	–	–	–	–	–	–
Benzo(a)anthracene	–	–	–	–	–	–
Chrysene	13 J	–	–	–	–	–
bis(2-Ethylhexyl)phthalate	–	–	–	–	–	–
Di-n-octylphthalate	–	–	–	–	–	–
Benzo(b)fluoranthene	–	–	–	–	–	–
Benzo(k)fluoranthene	–	–	–	–	–	–
Benzo(a)pyrene	–	–	–	–	–	–
Indeno(1,2,3-cd)pyrene	–	–	–	–	–	–
Benzo(g,h,i)perylene	–	–	–	–	–	–
2-Chloroaniline	–	–	–	–	–	–
3-Chloroaniline	–	–	–	–	–	–
Total SVOCs	13	1.1	2	1	6	0.3

ug/L	Micrograms per liter.
ug/kg	Micrograms per kilogram.
J	Estimated value.
D	Concentration determined at a secondary dilution factor.
R	Unusable value.
E	Exceeded the instrument calibration range.
–	Not detected.
SVOCs	Semivolatile organic compounds.

Only those compounds detected are listed.

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Table 5-9. Summary of Target Compound List Semivolatile Organic Compounds Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank
Sample Depth:						
Sample Date:	5/8/92	5/13/92	5/14/92	5/15/92	5/18/92	5/19/92
Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter						
Phenol	–	–	–	–	–	–
bis(2-Chloroethyl)ether	–	–	–	–	–	–
2-Chlorophenol	–	–	–	–	–	–
1,3-Dichlorobenzene	–	–	–	–	–	–
1,4-Dichlorobenzene	–	–	–	–	–	–
1,2-Dichlorobenzene	–	–	–	–	–	–
2-Methylphenol (o-cresol)	–	–	–	–	–	–
4-Methylphenol (p-cresol)	–	–	–	–	–	–
Nitrobenzene	–	–	–	–	–	–
2,4-Dimethylphenol	–	–	–	–	–	–
2,4-Dichlorophenol	–	–	–	–	–	–
1,2,4-Trichlorobenzene	–	–	–	–	–	–
Naphthalene	–	–	–	–	–	–
4-Chloroaniline	–	–	–	–	–	–
2-Methylnaphthalene	–	–	–	–	–	–
2,4,6-Trichlorophenol	–	–	–	–	–	–
2,4,5-Trichlorophenol	–	–	–	–	–	–
2-Nitroaniline	–	–	–	–	–	–
Dimethylphthalate	–	–	–	–	–	–
Acenaphthene	–	–	–	–	–	–
Dibenzofuran	–	–	–	–	–	–
Diethylphthalate	–	–	–	–	–	–
Fluorene	–	–	–	–	–	–
4-Nitroaniline	–	–	–	–	–	–
N-Nitrosodiphenylamine	–	–	–	–	–	–
Pentachlorophenol	–	–	–	–	–	–
Phenanthrene	–	–	–	–	–	–
Anthracene	–	–	–	–	–	–
Carbazole	–	–	–	–	–	–
Di-n-butylphthalate	–	–	–	–	–	–
Fluoranthene	–	–	–	–	–	–
Pyrene	–	–	–	–	–	–
Butylbenzylphthalate	–	–	–	–	–	R
3,3'-Dichlorobenzidine	–	–	–	–	–	–
Benzo(a)anthracene	–	–	–	–	–	–
Chrysene	–	–	–	–	–	–
bis(2-Ethylhexyl)phthalate	–	–	–	–	–	–
Di-n-octylphthalate	–	–	–	–	–	–
Benzo(b)fluoranthene	–	–	–	–	–	–
Benzo(k)fluoranthene	–	–	–	–	–	–
Benzo(a)pyrene	–	–	–	–	–	–
Indeno(1,2,3-cd)pyrene	–	–	–	–	–	–
Benzo(g,h,i)perylene	–	–	–	–	–	–
2-Chloroaniline	–	–	–	–	–	–
3-Chloroaniline	–	–	–	–	–	–
Total SVOCs	–	–	–	–	–	–

ug/L	Micrograms per liter.
ug/kg	Micrograms per kilogram.
J	Estimated value.
D	Concentration determined at a secondary dilution factor.
R	Unusable value.
E	Exceeded the instrument calibration range.
–	Not detected.
SVOCs	Semivolatile organic compounds.

Only those compounds detected are listed.

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Table 5-9. Summary of Target Compound List Semivolatile Organic Compounds Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank
Sample Depth:						
Sample Date:	5/20/92	5/21/92	5/22/92	5/26/92	5/27/92	5/28/92
Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter						
Phenol	–	–	–	–	–	–
bis(2-Chloroethyl)ether	–	–	–	–	–	–
2-Chlorophenol	–	–	–	–	–	–
1,3-Dichlorobenzene	–	–	–	–	–	–
1,4-Dichlorobenzene	–	–	–	–	–	–
1,2-Dichlorobenzene	–	–	–	–	–	–
2-Methylphenol (o-cresol)	–	–	–	–	–	–
4-Methylphenol (p-cresol)	–	–	–	–	–	–
Nitrobenzene	–	–	–	–	–	–
2,4-Dimethylphenol	–	–	–	–	–	–
2,4-Dichlorophenol	–	–	–	1 J	–	–
1,2,4-Trichlorobenzene	–	–	–	–	–	–
Naphthalene	–	–	–	–	–	–
4-Chloroaniline	–	–	–	–	–	–
2-Methylnaphthalene	–	–	–	–	–	–
2,4,6-Trichlorophenol	–	–	–	–	–	–
2,4,5-Trichlorophenol	–	–	–	–	–	–
2-Nitroaniline	–	–	–	–	–	–
Dimethylphthalate	–	–	–	–	–	–
Acenaphthene	–	–	–	–	–	–
Dibenzofuran	–	–	–	–	–	–
Diethylphthalate	–	–	–	–	–	–
Fluorene	–	–	–	–	–	–
4-Nitroaniline	–	–	–	–	–	–
N-Nitrosodiphenylamine	–	–	–	–	–	–
Pentachlorophenol	–	–	–	–	–	–
Phenanthrene	–	–	–	–	–	–
Anthracene	–	–	–	–	–	–
Carbazole	–	–	–	–	–	–
Di-n-butylphthalate	–	–	–	–	–	–
Fluoranthene	–	–	–	–	–	–
Pyrene	–	–	–	–	–	–
Butylbenzylphthalate	R	R	–	–	–	–
3,3'-Dichlorobenzidine	–	–	–	–	–	–
Benzo(a)anthracene	–	–	–	–	–	–
Chrysene	–	–	–	–	–	–
bis(2-Ethylhexyl)phthalate	–	–	–	–	–	–
Di-n-octylphthalate	–	–	–	–	–	–
Benzo(b)fluoranthene	–	–	–	–	–	–
Benzo(k)fluoranthene	–	–	–	–	–	–
Benzo(a)pyrene	–	–	–	–	–	–
Indeno(1,2,3-cd)pyrene	–	–	–	–	–	–
Benzo(g,h,i)perylene	–	–	–	–	–	–
2-Chloroaniline	–	–	–	–	–	–
3-Chloroaniline	–	–	–	–	–	–
Total SVOCs	–	–	–	1	–	–

ug/L	Micrograms per liter.
ug/kg	Micrograms per kilogram.
J	Estimated value.
D	Concentration determined at a secondary dilution factor.
R	Unusable value.
E	Exceeded the instrument calibration range.
–	Not detected.
SVOCs	Semivolatile organic compounds.

Only those compounds detected are listed.

Table 5-9. Summary of Target Compound List Semivolatile Organic Compounds Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	Equipment Blank
Sample Depth:	
Sample Date:	5/29/92
Units:	ug/L
Parameter	
Phenol	5 J
bis(2-Chloroethyl)ether	–
2-Chlorophenol	–
1,3-Dichlorobenzene	–
1,4-Dichlorobenzene	–
1,2-Dichlorobenzene	–
2-Methylphenol (o-cresol)	1 J
4-Methylphenol (p-cresol)	3 J
Nitrobenzene	–
2,4-Dimethylphenol	–
2,4-Dichlorophenol	–
1,2,4-Trichlorobenzene	–
Naphthalene	8 J
4-Chloroaniline	–
2-Methylnaphthalene	2 J
2,4,6-Trichlorophenol	–
2,4,5-Trichlorophenol	–
2-Nitroaniline	–
Dimethylphthalate	–
Acenaphthene	–
Dibenzofuran	–
Diethylphthalate	–
Fluorene	–
4-Nitroaniline	–
N-Nitrosodiphenylamine	–
Pentachlorophenol	–
Phenanthrene	–
Anthracene	–
Carbazole	–
Di-n-butylphthalate	–
Fluoranthene	–
Pyrene	–
Butylbenzylphthalate	–
3,3'-Dichlorobenzidine	–
Benzo(a)anthracene	–
Chrysene	6 J
bis(2-Ethylhexyl)phthalate	–
Di-n-octylphthalate	–
Benzo(b)fluoranthene	–
Benzo(k)fluoranthene	–
Benzo(a)pyrene	–
Indeno(1,2,3-cd)pyrene	–
Benzo(g,h,i)perylene	–
2-Chloroaniline	–
3-Chloroaniline	–
Total SVOCs	25

ug/L	Micrograms per liter.
ug/kg	Micrograms per kilogram.
J	Estimated value.
D	Concentration determined at a secondary dilution factor.
R	Unusable value.
E	Exceeded the instrument calibration range.
–	Not detected.
SVOCs	Semivolatile organic compounds.

Only those compounds detected are listed.

SUBSEM.XLS

Table 5-10. Summary of Target Compound List Pesticides, PCBs, and Herbicides Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	SB-1	SB-1	SB-1	SB-2	SB-2	SB-2	SB-3
Sample Depth:	12-14 ft	26-28 ft	32-34 ft	12-14 ft	14-16 ft	28-30 ft	12-14 ft
Sample Date:	4/9/92	4/9/92	4/9/92	4/10/92	4/10/92	4/13/92	4/16/92
Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Parameter							
Pesticides/PCBs							
beta-BHC	–	–	–	–	–	–	–
delta-BHC	–	–	–	–	–	–	–
Heptachlor epoxide	–	–	–	–	–	–	–
Endosulfan I	–	–	–	–	3000 JN	R	–
4,4'-DDE	–	–	–	–	–	–	22000 J
Endrin	–	R	R	–	–	–	4600 J
Endosulfan II	R	–	–	–	R	–	–
4,4'-DDD	–	–	–	–	–	–	–
4,4'-DDT	–	–	–	1400	–	–	–
Methoxychlor	–	–	–	–	–	–	–
Endrin ketone	R	R	R	–	R	R	R
Endrin aldehyde	–	–	–	–	–	–	5900 JN
alpha-Chlordane	–	–	–	–	–	–	–
gamma-Chlordane	–	–	–	–	–	–	–
Aroclor-1248	–	–	–	–	–	–	4800000 J
Aroclor-1254	–	–	–	–	–	–	–
Aroclor-1260	–	–	–	–	–	–	–
Herbicides							
2,4-D	NA	NA	NA	NA	NA	NA	NA

ug/kg Micrograms per kilogram.
ug/L Micrograms per liter.
D Concentration determined at a secondary dilution factor.
NA Not analyzed.
J Estimated value.
R Unusable value.
N Presumptive evidence of the compound present.
– Not detected.
PCBs Polychlorinated biphenyls.

Only those compounds detected are listed.

Table 5-10. Summary of Target Compound List Pesticides, PCBs, and Herbicides Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	SB-3	SB-3	SB-4	SB-4	SB-4	SB-5	SB-5
Sample Depth:	14-16 ft	32-34 ft	10-12 ft	12-14 ft	30-32 ft	12-14 ft	20-22 ft
Sample Date:	4/16/92	4/16/92	4/14/92	4/14/92	4/14/92	5/4/92	5/4/92
Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Parameter							
Pesticides/PCBs							
beta-BHC	–	–	7600 JN	–	–	–	–
delta-BHC	–	–	–	–	–	–	–
Heptachlor epoxide	–	–	–	–	–	–	–
Endosulfan I	–	–	–	–	–	–	–
4,4'-DDE	–	–	–	–	–	–	–
Endrin	–	–	–	–	–	–	–
Endosulfan II	–	3300	R	–	–	–	–
4,4'-DDD	720	–	–	–	–	–	–
4,4'-DDT	–	–	52000	–	–	–	–
Methoxychlor	–	–	–	–	–	–	–
Endrin ketone	R	15000	4600	–	99000 JN	11000	–
Endrin aldehyde	2000 J	–	–	–	–	–	–
alpha-Chlordane	–	420	–	–	–	–	–
gamma-Chlordane	–	–	–	–	–	–	–
Aroclor-1248	900000 J	–	–	–	–	470000 J	62000 J
Aroclor-1254	–	–	–	–	–	1100000 J	120000 JN
Aroclor-1260	–	–	–	100000	–	–	–
Herbicides							
2,4-D	NA	NA	NA	NA	NA	NA	NA

ug/kg Micrograms per kilogram.
ug/L Micrograms per liter.
D Concentration determined at a secondary dilution factor.
NA Not analyzed.
J Estimated value.
R Unusable value.
N Presumptive evidence of the compound present.
– Not detected.
PCBs Polychlorinated biphenyls.

Only those compounds detected are listed.

0180

Table 5-10. Summary of Target Compound List Pesticides, PCBs, and Herbicides Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	SB-5	SB-6	SB-6	SB-6	SB-7	SB-7	SB-7
Sample Depth:	28-30 ft	18-20 ft	20-22 ft	28-30 ft	16-18 ft	20-22 ft	24-26 ft
Sample Date:	5/4/92	5/5/92	5/5/92	5/6/92	5/7/92	5/7/92	5/7/92
Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Parameter							
Pesticides/PCBs							
beta-BHC	–	–	–	–	–	–	–
delta-BHC	–	–	–	–	–	–	–
Heptachlor epoxide	–	600 DJ	–	–	–	–	–
Endosulfan I	–	–	–	–	–	–	–
4,4'-DDE	–	–	–	–	–	–	–
Endrin	–	–	–	–	–	–	–
Endosulfan II	–	–	45000 DJ	–	–	–	–
4,4'-DDD	–	–	–	–	–	–	–
4,4'-DDT	–	–	–	–	–	–	–
Methoxychlor	–	–	–	–	–	–	–
Endrin ketone	–	–	–	–	–	–	–
Endrin aldehyde	–	–	29000 DJ	–	–	–	–
alpha-Chlordane	–	1700 DJ	–	–	–	–	–
gamma-Chlordane	–	300 J	–	–	–	–	–
Aroclor-1248	12000 J	–	1200000 DJ	26000 J	–	–	–
Aroclor-1254	22000 J	–	–	–	–	–	–
Aroclor-1260	–	–	–	–	–	–	–
Herbicides							
2,4-D	NA	NA	NA	NA	NA	NA	NA

ug/kg Micrograms per kilogram.
ug/L Micrograms per liter.
D Concentration determined at a secondary dilution factor.
NA Not analyzed.
J Estimated value.
R Unusable value.
N Presumptive evidence of the compound present.
– Not detected.
PCBs Polychlorinated biphenyls.

Only those compounds detected are listed.

0181

Table 5-10. Summary of Target Compound List Pesticides, PCBs, and Herbicides Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	SB-8	SB-9	SB-9	SB-9	SB-9	SB-10	SB-10
Sample Depth:	6-8 ft	18-20 ft	20-22 ft	28-30 ft	30-32 ft	6-8 ft	18-20 ft
Sample Date:	5/8/92	5/13/92	5/13/92	5/13/92	5/13/92	5/14/92	5/14/92
Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Parameter							
Pesticides/PCBs							
beta-BHC	–	–	–	–	–	–	–
delta-BHC	–	–	–	–	–	–	330 J
Heptachlor epoxide	–	–	–	–	–	440 J	R
Endosulfan I	–	–	–	–	–	–	–
4,4'-DDE	–	–	–	–	–	–	–
Endrin	–	–	–	–	–	–	–
Endosulfan II	3500 J	–	–	–	–	1100 J	–
4,4'-DDD	–	–	–	–	–	–	–
4,4'-DDT	–	–	–	–	–	–	–
Methoxychlor	–	–	–	–	R	–	–
Endrin ketone	–	–	–	–	–	–	–
Endrin aldehyde	R	–	–	–	–	–	–
alpha-Chlordane	–	–	–	–	–	–	290 J
gamma-Chlordane	–	–	–	–	–	450 J	620 J
Aroclor-1248	270000 J	16000 J	7200 J	7000 J	160000 JN	130000 J	130000 J
Aroclor-1254	–	–	–	–	–	–	–
Aroclor-1260	–	3700 J	1000 J	14000 J	100000 J	9500 J	34000 J
Herbicides							
2,4-D	NA	NA	NA	NA	NA	970 J	NA

ug/kg Micrograms per kilogram.
ug/L Micrograms per liter.
D Concentration determined at a secondary dilution factor.
NA Not analyzed.
J Estimated value.
R Unusable value.
N Presumptive evidence of the compound present.
– Not detected.
PCBs Polychlorinated biphenyls.

Only those compounds detected are listed.

0102

Table 5-10. Summary of Target Compound List Pesticides, PCBs, and Herbicides Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	SB-10	SB-11	SB-11	SB-11	SB-12	SB-12	SB-12
Sample Depth:	24-26 ft	14-16 ft	16-18 ft	30-32 ft	8-10 ft	22-24 ft	32-34 ft
Sample Date:	5/14/92	5/19/92	5/19/92	5/20/92	5/15/92	5/18/92	5/18/92
Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Parameter							
Pesticides/PCBs							
beta-BHC	–	–	–	–	–	–	–
delta-BHC	–	–	–	–	–	–	–
Heptachlor epoxide	–	–	–	–	–	–	–
Endosulfan I	–	–	–	–	–	–	–
4,4'-DDE	–	–	–	–	–	–	–
Endrin	–	–	–	–	–	–	–
Endosulfan II	–	R	–	–	–	6100 J	–
4,4'-DDD	–	–	–	–	–	–	–
4,4'-DDT	–	–	–	–	–	–	–
Methoxychlor	–	–	–	–	–	–	–
Endrin ketone	–	–	–	–	–	–	–
Endrin aldehyde	–	–	–	–	–	–	–
alpha-Chlordane	–	–	–	–	–	–	–
gamma-Chlordane	–	–	–	–	–	3500 J	–
Aroclor-1248	49000 J	25000 J	19000 J	8400 J	–	800000 J	75 J
Aroclor-1254	–	–	11000 J	–	–	–	–
Aroclor-1260	24000 J	–	–	–	–	–	–
Herbicides							
2,4-D	2600	NA	1700	–	7.5 J	NA	3200

ug/kg Micrograms per kilogram.
ug/L Micrograms per liter.
D Concentration determined at a secondary dilution factor.
NA Not analyzed.
J Estimated value.
R Unusable value.
N Presumptive evidence of the compound present.
– Not detected.
PCBs Polychlorinated biphenyls.

Only those compounds detected are listed.

0183

Table 5-10. Summary of Target Compound List Pesticides, PCBs, and Herbicides Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	SB-13	SB-13	SB-13	SB-14	SB-14	SB-14	SB-15
Sample Depth:	16-18 ft	18-20 ft	30-32 ft	10-12 ft	20-22 ft	30-32 ft	16-18 ft
Sample Date:	5/21/92	5/21/92	5/21/92	5/22/92	5/26/92	5/26/92	5/27/92
Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Parameter							
Pesticides/PCBs							
beta-BHC	–	–	–	–	–	–	–
delta-BHC	–	–	–	–	–	–	–
Heptachlor epoxide	–	–	–	–	–	–	–
Endosulfan I	–	–	–	–	–	–	–
4,4'-DDE	–	–	–	–	–	–	–
Endrin	–	–	–	–	–	–	–
Endosulfan II	–	–	–	–	–	–	–
4,4'-DDD	–	–	–	–	–	–	–
4,4'-DDT	–	–	–	–	–	–	R
Methoxychlor	–	–	–	–	–	–	–
Endrin ketone	–	–	–	–	–	–	–
Endrin aldehyde	–	–	–	–	–	–	–
alpha-Chlordane	–	–	–	–	–	–	–
gamma-Chlordane	–	–	–	–	–	–	–
Aroclor-1248	–	–	–	–	–	–	–
Aroclor-1254	–	–	–	–	–	–	–
Aroclor-1260	–	–	–	–	–	–	–
Herbicides							
2,4-D	110	NA	96	NA	23000	130000	720000

ug/kg Micrograms per kilogram.
ug/L Micrograms per liter.
D Concentration determined at a secondary dilution factor.
NA Not analyzed.
J Estimated value.
R Unusable value.
N Presumptive evidence of the compound present.
– Not detected.
PCBs Polychlorinated biphenyls.

Only those compounds detected are listed.

Table 5-10. Summary of Target Compound List Pesticides, PCBs, and Herbicides Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	SB-15	SB-15	SB-16	SB-16	SB-16	SB-16
Sample Depth:	18-20 ft	26-28 ft	6-8 ft	16-18 ft	28-30 ft	30-32 ft
Sample Date:	5/28/92	5/28/92	5/29/92	5/29/92	5/29/92	5/29/92
Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Parameter						
Pesticides/PCBs						
beta-BHC	–	–	–	–	–	–
delta-BHC	–	–	–	–	–	–
Heptachlor epoxide	–	–	–	–	–	–
Endosulfan I	–	–	–	–	–	–
4,4'-DDE	–	–	–	240 J	–	–
Endrin	–	–	–	–	–	19
Endosulfan II	–	–	–	–	–	–
4,4'-DDD	–	–	–	–	–	–
4,4'-DDT	–	–	420	–	11 J	–
Methoxychlor	–	–	–	–	–	–
Endrin ketone	–	–	–	–	–	–
Endrin aldehyde	–	–	R	–	–	–
alpha-Chlordane	–	–	–	–	–	–
gamma-Chlordane	–	–	–	–	–	–
Aroclor-1248	–	–	–	–	–	–
Aroclor-1254	–	–	–	–	–	–
Aroclor-1260	–	–	–	–	–	–
Herbicides						
2,4-D	NA	5200	NA	310	8900	NA

ug/kg Micrograms per kilogram.
ug/L Micrograms per liter.
D Concentration determined at a secondary dilution factor.
NA Not analyzed.
J Estimated value.
R Unusable value.
N Presumptive evidence of the compound present.
– Not detected.
PCBs Polychlorinated biphenyls.

Only those compounds detected are listed.

0185

Table 5-10. Summary of Target Compound List Pesticides, PCBs, and Herbicides Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank
Sample Depth:							
Sample Date:	4/9/92	4/10/92	4/13/92	4/14/92	4/16/92	4/23/92	4/27/92
Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter							
Pesticides/PCBs							
beta-BHC	–	–	–	–	–	–	–
delta-BHC	–	–	–	–	–	–	–
Heptachlor epoxide	–	–	–	–	–	–	–
Endosulfan I	–	–	–	–	–	–	–
4,4'-DDE	–	–	–	–	–	–	–
Endrin	–	–	–	–	–	–	–
Endosulfan II	–	–	–	–	–	–	–
4,4'-DDD	–	–	–	–	–	–	–
4,4'-DDT	–	–	–	–	–	–	–
Methoxychlor	–	–	–	–	–	–	–
Endrin ketone	–	–	–	–	–	–	–
Endrin aldehyde	–	–	–	–	–	–	–
alpha-Chlordane	–	–	–	–	–	–	–
gamma-Chlordane	–	–	–	–	–	–	–
Aroclor-1248	–	–	–	–	–	–	–
Aroclor-1254	–	–	–	–	–	–	–
Aroclor-1260	–	–	–	–	–	–	–
Herbicides							
2,4-D	NA	NA	NA	NA	NA	NA	NA

ug/kg Micrograms per kilogram.
ug/L Micrograms per liter.
D Concentration determined at a secondary dilution factor.
NA Not analyzed.
J Estimated value.
R Unusable value.
N Presumptive evidence of the compound present.
– Not detected.
PCBs Polychlorinated biphenyls.

Only those compounds detected are listed.

0190

Table 5-10. Summary of Target Compound List Pesticides, PCBs, and Herbicides Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank
Sample Depth:							
Sample Date:	5/4/92	5/5/92	5/6/92	5/7/92	5/8/92	5/13/92	5/14/92
Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter							
Pesticides/PCBs							
beta-BHC	–	–	–	–	–	–	–
delta-BHC	–	–	–	–	–	–	–
Heptachlor epoxide	–	–	–	–	–	–	–
Endosulfan I	–	–	–	–	–	–	–
4,4'-DDE	–	–	–	–	–	–	–
Endrin	–	–	–	–	–	–	–
Endosulfan II	–	–	–	–	–	–	–
4,4'-DDD	–	–	–	–	–	–	–
4,4'-DDT	–	–	–	–	–	–	–
Methoxychlor	–	–	–	–	–	–	–
Endrin ketone	–	–	–	–	–	–	–
Endrin aldehyde	–	–	–	–	–	–	–
alpha-Chlordane	–	–	–	–	–	–	–
gamma-Chlordane	–	–	–	–	–	–	–
Aroclor-1248	–	–	–	–	–	–	–
Aroclor-1254	–	–	–	–	–	–	–
Aroclor-1260	–	–	–	–	–	–	–
Herbicides							
2,4-D	NA	NA	NA	NA	NA	NA	NA

ug/kg Micrograms per kilogram.
ug/L Micrograms per liter.
D Concentration determined at a secondary dilution factor.
NA Not analyzed.
J Estimated value.
R Unusable value.
N Presumptive evidence of the compound present.
– Not detected.
PCBs Polychlorinated biphenyls.

Only those compounds detected are listed.

Table 5-10. Summary of Target Compound List Pesticides, PCBs, and Herbicides Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank
Sample Depth:							
Sample Date:	5/15/92	5/18/92	5/19/92	5/20/92	5/21/92	5/22/92	5/26/92
Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter							
Pesticides/PCBs							
beta-BHC	–	–	–	–	–	–	–
delta-BHC	–	–	–	–	–	–	–
Heptachlor epoxide	–	–	–	–	–	–	–
Endosulfan I	–	–	–	–	–	–	–
4,4'-DDE	–	–	–	–	–	–	–
Endrin	–	–	–	–	–	–	–
Endosulfan II	–	–	–	–	–	–	–
4,4'-DDD	–	–	–	–	–	–	–
4,4'-DDT	–	–	–	–	–	–	–
Methoxychlor	–	–	–	–	–	–	–
Endrin ketone	–	–	–	–	–	–	–
Endrin aldehyde	–	–	–	–	–	–	–
alpha-Chlordane	–	–	–	–	–	–	–
gamma-Chlordane	–	–	–	–	–	–	–
Aroclor-1248	–	–	–	–	–	–	–
Aroclor-1254	–	–	–	–	–	–	–
Aroclor-1260	–	–	–	–	–	–	–
Herbicides							
2,4-D	NA	NA	NA	NA	NA	NA	NA

ug/kg Micrograms per kilogram.
ug/L Micrograms per liter.
D Concentration determined at a secondary dilution factor.
NA Not analyzed.
J Estimated value.
R Unusable value.
N Presumptive evidence of the compound present.
– Not detected.
PCBs Polychlorinated biphenyls.

Only those compounds detected are listed.

0188

Table 5-10. Summary of Target Compound List Pesticides, PCBs, and Herbicides Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	Equipment Blank	Equipment Blank	Equipment Blank
Sample Depth:			
Sample Date:	5/27/92	5/28/92	5/29/92
Units:	ug/L	ug/L	ug/L
Parameter			
Pesticides/PCBs			
beta-BHC	–	–	–
delta-BHC	–	–	–
Heptachlor epoxide	–	–	–
Endosulfan I	–	–	–
4,4'-DDE	–	–	–
Endrin	–	–	–
Endosulfan II	–	–	–
4,4'-DDD	–	–	–
4,4'-DDT	–	–	–
Methoxychlor	–	–	–
Endrin ketone	–	–	–
Endrin aldehyde	–	–	–
alpha-Chlordane	–	–	–
gamma-Chlordane	–	–	–
Aroclor-1248	–	–	–
Aroclor-1254	–	–	–
Aroclor-1260	–	–	–
Herbicides			
2,4-D	NA	NA	NA

ug/kg	Micrograms per kilogram.
ug/L	Micrograms per liter.
D	Concentration determined at a secondary dilution factor.
NA	Not analyzed.
J	Estimated value.
R	Unusable value.
N	Presumptive evidence of the compound present.
–	Not detected.
PCBs	Polychlorinated biphenyls.

Only those compounds detected are listed.

Table 5-11. Summary of Target Analyte List Parameters Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	SB-1	SB-1	SB-1	SB-2	SB-2	SB-2	SB-3
Sample Depth:	12-14 ft	26-28 ft	32-34 ft	12-14 ft	14-16 ft	28-30 ft	12-14 ft
Sample Date:	4/9/92	4/9/92	4/9/92	4/10/92	4/10/92	4/13/92	4/16/92
Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Parameter							
Aluminum	7890	6350	8660	4080	3280	10100	3870 J
Antimony	–	–	–	–	–	–	–
Arsenic	6.6	–	4.5	3.7	–	4.7	–
Barium	71.1	180	237	62.8	62.2	117	70.8
Beryllium	–	–	–	–	–	–	–
Cadmium	–	–	–	–	–	–	–
Calcium	11500	12700	15600	7580	4670	7620	5860
Chromium	20.4 J	11.6 J	14.7 J	13.0 J	11.4 J	14.7 J	19.6
Cobalt	27.1	18.6	17.9	81.5	43.6	10.9	16.5 B
Copper	78.8 J	13.4 J	15.2 J	183 J	120 J	16.6 J	219 J
Iron	12100	10100	14600	10100	11000	13900	13500
Lead	16.8 J	6.8 J	10.3 J	8.1 J	3.6 J	10.6 J	6.0 J
Magnesium	858 B	5360	5930	540 B	291 B	4700	335 B
Manganese	59.8	209	734	73.8	38.3	623	29.9
Mercury	0.44	–	–	–	–	–	–
Nickel	65.5	21.9	28.8	20.4	26.1	24.0	40.2
Potassium	580	1360	1730	501	432	1670	495 B
Selenium	–	–	–	–	–	–	–
Sodium	423 B	573 B	2050	606 B	250 B	3190	339 B
Vanadium	183 J	21.1 J	25.4 J	17.5 J	13.3 J	27.3 J	13.6 B
Zinc	167 J	39.6 J	52.9 J	61.5 J	53.9 J	R	79.7
Cyanide	–	–	–	–	–	–	–

– Not detected.
ug/L Micrograms per liter.
mg/kg Milligrams per kilogram.
J Estimated value.
R Unusable value.
B Compound is between the contract required detection limit and the instrument detection limit.

Only those compounds detected are listed.

0190

Table 5-11. Summary of Target Analyte List Parameters Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	SB-3	SB-3	SB-4	SB-4	SB-4	SB-5	SB-5
Sample Depth:	14-16 ft	32-34 ft	10-12 ft	12-14 ft	30-32 ft	12-14 ft	20-22 ft
Sample Date:	4/16/92	4/16/92	4/14/92	4/14/92	4/14/92	5/4/92	5/4/92
Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Parameter							
Aluminum	4980 J	8480 J	3630	3740	6630	861	8220
Antimony	–	–	–	–	–	–	–
Arsenic	3.2	5.2	–	4.1	–	–	8.6
Barium	197	155	247	162	129	68.2	167
Beryllium	–	–	–	–	–	–	–
Cadmium	–	–	–	–	–	–	–
Calcium	7520	8720	8690	8090	12700	13900	13800
Chromium	27.0	14.5	15.9	10.0	24.0	18.7	23.4
Cobalt	59.0	19.8	83.2	71.2	10.4 B	2.4 B	69
Copper	82.8 J	14.8 J	77.6	129	12.4	18.9	320
Iron	16300	13600	12600	13000	8540	4250	27200
Lead	17.2 J	13.4 J	6.3 J	7.2 J	3.2 J	2.1 J	9.1 J
Magnesium	577 B	4080	337 B	320 B	2110	71.8 B	1890
Manganese	43.6	543	58.1	65.3	81.7	6.0	94.2
Mercury	0.95	–	0.08	–	–	–	0.12
Nickel	44.4	17.4	52.6	69.3	12.5	–	24.3
Potassium	528 B	1280	461 B	496 B	1100 B	–	1050 B
Selenium	–	–	–	–	–	R	R
Sodium	765 B	1690	405 B	278 B	1260	164 B	1270
Vanadium	16.5	21.7	16.9	17.3	18.5	6.0 B	26.4
Zinc	64.6	52.9	125 J	114 J	–	–	–
Cyanide	–	–	–	–	–	–	–

–	Not detected.
ug/L	Micrograms per liter.
mg/kg	Milligrams per kilogram.
J	Estimated value.
R	Unusable value.
B	Compound is between the contract required detection limit and the instrument detection limit.

Only those compounds detected are listed.

0191

Table 5-11. Summary of Target Analyte List Parameters Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	SB-5	SB-6	SB-6	SB-6	SB-7	SB-7	SB-7
Sample Depth:	28-20 ft	18-20 ft	20-22 ft	28-30 ft	16-18 ft	20-22 ft	24-26 ft
Sample Date:	5/4/92	5/5/92	5/5/92	5/7/92	5/7/92	5/7/92	5/7/92
Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Parameter							
Aluminum	11600	1360	1870	7190	4410	4620	3330
Antimony	–	–	–	–	–	–	–
Arsenic	9.4	–	–	6.4	5.7	5.7	3.7
Barium	255	300	293	132	170	158	154
Beryllium	–	–	–	–	–	–	–
Cadmium	–	–	–	–	–	–	–
Calcium	15000	15600	13000	8920	8430	9540	11500
Chromium	16.8	6.8 J	6.7 J	13.0	10.9	23.0	9.1
Cobalt	23.6	23.1	27.4	11.1 B	69.2	51.3	21.5
Copper	54.6	12.9	27.0	16.0	137	126	58.0
Iron	18100	3300	1760	9050	9640	11400	8010
Lead	11.7 J	21.1	24.4	8.2 J	5.5 J	5.5 J	5.8 J
Magnesium	7050	726 B	677 B	2180	4410	5220	5320
Manganese	787	4.8	2.9	132	93.5	92.3	114
Mercury	–	1.5	0.27	0.16	0.27	0.43	–
Nickel	26.7	–	14.0	14.4	11.1	14.9	10.2
Potassium	2250	795 B	821 B	1180 B	1060 B	1190 B	746 B
Selenium	R	–	–	R	R	R	R
Sodium	6610	1700	1810	2050	269 B	564 B	1130 B
Vanadium	27.8	–	–	22.7	47.9	32.4	19.4
Zinc	–	18.6	19.3	36.5	132	66.8	36.1
Cyanide	–	–	–	–	–	–	–

– Not detected.
ug/L Micrograms per liter.
mg/kg Milligrams per kilogram.
J Estimated value.
R Unusable value.
B Compound is between the contract required detection limit and the instrument detection limit.

Only those compounds detected are listed.

0192

Table 5-11. Summary of Target Analyte List Parameters Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	SB-8	SB-9	SB-9	SB-9	SB-9	SB-10	SB-10
Sample Depth:	6-8 ft	18-20 ft	20-22 ft	28-30 ft	30-32 ft	6-8 ft	18-20 ft
Sample Date:	5/8/92	5/13/92	5/13/92	5/13/92	5/13/92	5/14/92	5/14/92
Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Parameter							
Aluminum	8000	4720 J	4540 J	2350 J	17000 J	6290 J	7380 J
Antimony	–	R	R	R	R	R	R
Arsenic	5.0	3.8	5.8	3.9	5.3	147	14.9
Barium	331	210	195	61.3	198	114	111
Beryllium	–	–	–	–	–	1.7	–
Cadmium	1.2	1.2	–	–	–	4.3	1.2
Calcium	8620	10800	19500	7390	9060	14800	14700
Chromium	20.4	21.6	21.9	6.6	23.1	32.0	41.0
Cobalt	6.1 B	25.5	3.5 B	6.3 B	15.2	9.6 B	25.0
Copper	40.6	31.4	20.4	10.9	21.0	40.7	51.7
Iron	15900	42400	12300	6230	21200	42500	34600
Lead	15.1 J	19.5	8.6	4.4	12.9	15.6	26.8
Magnesium	3810	3050	1710	2550	4810	1290	561 B
Manganese	297	125	96.1	134	822	134	102
Mercury	0.80	0.24	1.1	–	–	1.5	0.51
Nickel	16.6	24.0	9.9	11.9	25.7	38.4	67.7
Potassium	671 B	1330	1450	458 B	2530	1620	1690
Selenium	R	–	–	–	–	2.8 J	4.2 J
Sodium	–	1140	1760	2150	4640	2870	1140 B
Vanadium	24.5	36.8	27.1	24.9	35.5	645	90.2
Zinc	336	175	43.1	33.1	72.7	718	2620
Cyanide	–	–	–	–	–	–	–

–	Not detected.
ug/L	Micrograms per liter.
mg/kg	Milligrams per kilogram.
J	Estimated value.
R	Unusable value.
B	Compound is between the contract required detection limit and the instrument detection limit.

Only those compounds detected are listed.

0193

Table 5-11. Summary of Target Analyte List Parameters Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	SB-10	SB-11	SB-11	SB-11	SB-12	SB-12	SB-12
Sample Depth:	24-26 ft	14-16 ft	16-18 ft	30-32 ft	8-10 ft	22-24 ft	32-34 ft
Sample Date:	5/14/92	5/19/92	5/19/92	5/20/92	5/15/92	5/18/92	5/18/92
Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Parameter							
Aluminum	2250 J	3450	3430	10200	5710 J	1660 J	11900 J
Antimony	R	–	–	–	R	R	R
Arsenic	–	6.2	4.0	5.9	9.3	–	–
Barium	85.8	89.6	73.0	173	86.4	49.6	260
Beryllium	–	–	–	–	–	–	–
Cadmium	–	–	–	–	1.5	–	–
Calcium	6950	21600	12200	7540	31100	3130	9990
Chromium	6.3	29.2	13.3	14.9	27.5	3.5	18.5
Cobalt	4.2 B	4.1 B	4.4 B	8.2 B	8.4 B	2.5 B	9.4 B
Copper	–	24.9	12.5	16.4	20.6	–	15.7
Iron	6220	16900	11600	16200	33900	3870	14400
Lead	4.1	13.7	9.2	10.6	12.1	3.2	12.4
Magnesium	2620	679 B	635 B	3670	785 B	1490	5410
Manganese	78.9	119	97.8	703	125	80.0	325
Mercury	–	43.0	1.3	–	19.4	0.33	–
Nickel	–	18.6	11.6	17.8	27.6	–	21.2
Potassium	562 B	759 B	578 B	1690	791 B	314 B	1720
Selenium	–	–	–	–	–	–	–
Sodium	409 B	3480	2180	–	485 B	1240	5090
Vanadium	9.1 B	17.4	15.5	24.4	36.5	5.5 B	27.9
Zinc	32.5	81.9	106	–	148	–	65.8
Cyanide	–	–	–	–	–	–	0.33

– Not detected.
ug/L Micrograms per liter.
mg/kg Milligrams per kilogram.
J Estimated value.
R Unusable value.
B Compound is between the contract required detection limit and the instrument detection limit.

Only those compounds detected are listed.

Table 5-11. Summary of Target Analyte List Parameters Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	SB-13	SB-13	SB-13	SB-14	SB-14	SB-14	SB-15
Sample Depth:	16-18 ft	18-20 ft	30-32 ft	10-12 ft	20-22 ft	30-32 ft	16-18 ft
Sample Date:	5/21/92	5/21/92	5/21/92	5/22/92	5/26/92	5/26/92	5/27/92
Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Parameter							
Aluminum	12200	12600	9010	3820	8410	6030	6470
Antimony	–	–	–	–	–	–	–
Arsenic	81.7	89.6	5.3	11.9	9.1	4.8	–
Barium	114	129	209	70.8	181	180	40.0 B
Beryllium	3.1	2.8	–	1.7	–	–	–
Cadmium	5.5	7.0	–	–	1.5	–	–
Calcium	28300	21300	11400	14800	13700	12800	12000
Chromium	39.5	40.9	14.0	11.7	17.6	11.5	18.9
Cobalt	11.1 B	11.5 B	7.0 B	7.9 B	9.4 B	6.3 B	3.3 B
Copper	29.5	31.7	13.3	22.7	19.3	9.9	13.2
Iron	21000	17400	13000	–	16800	11800	16700
Lead	59.4	64.7	9.1	14.1	45.0 J	8.2 J	5.0 J
Magnesium	2570	3160	6610	1110 B	4350	5380	546 B
Manganese	262	206	312	57.7	144	471	61.4
Mercury	0.14	–	–	4.8	6.1	–	3.1
Nickel	37.9	40.3	17.5	19.8	17.9	16.1	18.1
Potassium	1570 B	1950	1550	538 B	1930	1160 B	556 B
Selenium	2.4 J	1.9 J	–	1.7 J	–	–	–
Sodium	591 B	1500 B	1530	–	679 B	2260	–
Vanadium	77.9	82.7	24.2	21.5	26.4	18.5	28.6
Zinc	491	602	53.2	52.9	94.2	37.8	84.5
Cyanide	–	–	–	–	–	–	–

–	Not detected.
ug/L	Micrograms per liter.
mg/kg	Milligrams per kilogram.
J	Estimated value.
R	Unusable value.
B	Compound is between the contract required detection limit and the instrument detection limit.

Only those compounds detected are listed.

Table 5-11. Summary of Target Analyte List Parameters Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	SB-15	SB-15	SB-16	SB-16	SB-16	SB-16
Sample Depth:	18-20 ft	26-28 ft	6-8 ft	16-18 ft	28-30 ft	30-32 ft
Sample Date:	5/28/92	5/28/92	5/29/92	5/29/92	5/29/92	5/29/92
Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Parameter						
Aluminum	5240	230	7100	5290	6240	11400
Antimony	–	–	–	–	–	–
Arsenic	4.3	–	8.1	6.5	3.6	12.8
Barium	76.2	32.0 B	117	169	147	219
Beryllium	–	–	–	–	–	–
Cadmium	–	–	–	–	–	–
Calcium	9040	2050	85600	8690	9970	14900
Chromium	25.4	–	21.1	11.1	9.8	16.9
Cobalt	3.8 B	–	6.6 B	5.4 B	7.6 B	9.0 B
Copper	76.4	–	21.9	12.8	7.1	14.6
Iron	9500	–	17400	12200	13900	17300
Lead	8.8 J	2.4 J	14.3 J	15.5 J	7.4 J	14.5 J
Magnesium	1110 B	73.5 B	6570	3420	4980	6630
Manganese	65.0	7.1	457	269	266	619
Mercury	5.2	0.08	9.0	0.08	–	–
Nickel	16.8	–	22.9	15.6	19.4	22.5
Potassium	652 B	–	780 B	1060 B	1290	2100
Selenium	–	–	–	–	–	–
Sodium	–	–	–	988 B	10300	16600
Vanadium	30.0	–	22.5	19.6	18.6	31.8
Zinc	83.3	–	96.1	102	37.0	63.4
Cyanide	–	–	–	–	–	–

– Not detected.
ug/L Micrograms per liter.
mg/kg Milligrams per kilogram.
J Estimated value.
R Unusable value.
B Compound is between the contract required detection limit and the instrument detection limit.

Only those compounds detected are listed.

Table 5-11. Summary of Target Analyte List Parameters Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank
Sample Depth:							
Sample Date:	4/9/92	4/10/92	4/13/92	4/14/92	4/16/92	4/21/92	4/23/92
Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter							
Aluminum	–	–	–	–	–	–	–
Antimony	–	–	–	–	–	–	–
Arsenic	–	–	–	–	–	–	–
Barium	–	–	–	–	–	–	11.8
Beryllium	–	–	–	–	–	–	–
Cadmium	–	–	–	–	–	–	–
Calcium	66.0 B	80.6 B	92.9 B	84.9 B	113 B	138 B	–
Chromium	–	–	–	–	–	–	–
Cobalt	–	–	–	–	–	–	–
Copper	–	–	–	–	–	–	–
Iron	–	–	–	–	–	–	–
Lead	R	R	R	–	–	–	–
Magnesium	–	–	–	–	–	–	–
Manganese	–	–	–	–	–	–	–
Mercury	–	–	–	–	–	–	–
Nickel	–	–	–	–	–	–	–
Potassium	–	–	–	–	–	–	2180 B
Selenium	–	–	–	–	–	–	–
Sodium	–	–	–	–	–	–	–
Vanadium	–	–	–	–	–	–	–
Zinc	22.7 J	R	133 J	40.1	–	–	R
Cyanide	–	–	–	–	–	–	–

–	Not detected.
ug/L	Micrograms per liter.
mg/kg	Milligrams per kilogram.
J	Estimated value.
R	Unusable value.
B	Compound is between the contract required detection limit and the instrument detection limit.

Only those compounds detected are listed.

Table 5-11. Summary of Target Analyte List Parameters Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank
Sample Depth:							
Sample Date:	4/27/92	5/4/92	5/5/92	5/6/92	5/7/92	5/8/92	5/13/92
Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter							
Aluminum	–	–	–	–	–	–	–
Antimony	–	–	–	–	–	–	R
Arsenic	–	–	–	–	–	–	–
Barium	–	–	–	–	–	–	–
Beryllium	–	–	–	–	–	–	–
Cadmium	–	–	–	–	–	–	–
Calcium	18500	169 B	114 B	122 B	114 B	139 B	166 B
Chromium	–	–	–	–	–	–	–
Cobalt	–	–	–	–	–	–	–
Copper	–	–	–	–	–	–	–
Iron	–	–	–	–	–	–	–
Lead	–	–	–	–	–	–	–
Magnesium	6170	–	–	–	–	–	–
Manganese	–	–	–	–	–	–	–
Mercury	–	–	–	–	–	–	–
Nickel	–	–	–	–	–	–	–
Potassium	1690 B	–	–	–	–	–	–
Selenium	–	–	–	–	–	–	–
Sodium	9900	–	–	–	–	–	–
Vanadium	–	–	–	–	–	–	–
Zinc	539	34.9	–	–	–	23.9	–
Cyanide	–	–	–	–	–	–	–

– Not detected.
ug/L Micrograms per liter.
mg/kg Milligrams per kilogram.
J Estimated value.
R Unusable value.
B Compound is between the contract required detection limit and the instrument detection limit.

Only those compounds detected are listed.

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Table 5-11. Summary of Target Analyte List Parameters Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank
Sample Depth:							
Sample Date:	5/14/92	5/15/92	5/18/92	5/19/92	5/20/92	5/21/92	5/22/92
Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter							
Aluminum	–	–	–	–	–	–	–
Antimony	R	R	R	–	–	–	–
Arsenic	–	–	–	–	–	–	–
Barium	–	–	–	–	–	–	–
Beryllium	–	–	–	–	–	–	–
Cadmium	–	–	–	–	–	–	–
Calcium	192 B	165 B	252 B	226 B	251 B	230 B	271 B
Chromium	–	–	–	–	–	–	–
Cobalt	–	–	–	–	–	–	–
Copper	–	–	–	–	–	–	–
Iron	–	–	–	–	–	–	327
Lead	–	–	–	–	–	–	–
Magnesium	–	–	–	–	–	–	–
Manganese	–	–	–	–	–	–	–
Mercury	–	–	–	–	–	–	–
Nickel	–	–	–	–	–	–	–
Potassium	–	–	–	–	–	–	–
Selenium	–	–	–	–	–	–	–
Sodium	–	–	525 B	–	512 B	–	547 B
Vanadium	–	–	–	–	–	–	–
Zinc	–	–	21.6	–	39.6	–	–
Cyanide	–	–	–	–	–	–	–

– Not detected.
ug/L Micrograms per liter.
mg/kg Milligrams per kilogram.
J Estimated value.
R Unusable value.
B Compound is between the contract required detection limit and the instrument detection limit.

Only those compounds detected are listed.

Table 5-11. Summary of Target Analyte List Parameters Detected in Subsurface Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location:	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank
Sample Depth:				
Sample Date:	5/26/92	5/27/92	5/28/92	5/29/92
Units:	ug/L	ug/L	ug/L	ug/L
Parameter				
Aluminum	–	–	–	–
Antimony	–	–	–	–
Arsenic	–	–	–	–
Barium	–	–	–	–
Beryllium	–	–	–	–
Cadmium	–	–	–	–
Calcium	281 B	336 B	237 B	316 B
Chromium	–	–	–	–
Cobalt	–	–	–	–
Copper	–	–	–	–
Iron	145	2040	211	73.2 B
Lead	–	–	–	–
Magnesium	–	–	–	–
Manganese	–	10.6 B	–	–
Mercury	–	–	–	–
Nickel	–	–	–	–
Potassium	–	–	–	–
Selenium	–	–	–	–
Sodium	537 B	562 B	535 B	677 B
Vanadium	–	–	–	–
Zinc	–	20.8	–	–
Cyanide	–	–	–	–

– Not detected.
ug/L Micrograms per liter.
mg/kg Milligrams per kilogram.
J Estimated value.
R Unusable value.
B Compound is between the contract required detection limit and the instrument detection limit.

Only those compounds detected are listed.

0200

Table 5-12. Concentrations of Total Extractable, Chromatographable, Semivolatile Organic Compounds in Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Boring Number	Depth (feet below land surface)	Concentration (mg/kg)
SB-1	10-12	13,400
SB-1	14-16	14,700
SB-1	24-26	890/790*
SB-2	8-10	64.0
SB-2	10-12	9,980
SB-2	34-35	320
SB-3	6-8	2,040/880*
SB-3	6-8 Clay	87.0
SB-3	10-12	4,850
SB-3	24-26 Clay	96.3
SB-3	24-26 Sand	115
SB-4	6-8	1,020
SB-4	18-20	7,010
SB-4	26-28 Clay	563
SB-4	26-28 Sand	454
SB-5	10-12	11,500
SB-5	14-16	4,840
SB-5	26-28	619
SB-6	14-16	2,490
SB-6	16-18	4,930/4,220*
SB-6	22-24	4,660
SB-7	10-12	1,700
SB-7	18-20	5,440
SB-7	22-24	4,920
SB-8	10-12	981/1,670*
SB-9	14-16	8,160
SB-9	14-16 Clay	4,770
SB-9	16-18	834
SB-9	24-26	42.5
SB-10	4-6	2.20
SB-10	4-6 Clay	ND
SB-10	16-18	994
SB-10	26-28	205
SB-11	12-14	2,080
SB-11	20-22	31.1/2.80*
SB-11	28-30	4.00
SB-12	12-14	17,400
SB-12	16-18	9,850
SB-12	24-26	1,260
SB-13	14-16	ND
SB-13	20-22	1.90
SB-13	28-30	ND

See footnotes on page 2.

Table 5-12. Concentrations of Total Extractable, Chromatographable, Semivolatile Organic Compounds in Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Boring Number	Depth (feet below land surface)	Concentration (mg/kg)
SB-14	6-8	ND
SB-14	22-24	1060
SB-14	28-30	1520
SB-15	14-16	58.9
SB-15	20-22	969
SB-15	28-30	1.00/ND*
SB-16	14-16	136.8
SB-16	18-20	413
SB-16	26-28	108

mg/kg Milligrams per kilogram:
ND Not detected.
* Duplicate analysis.

0202

Table 5-13. Concentrations of Carbon and Chlorine Detected in Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location	Sample Depth	Sample Date	Total Organic Carbon	Total Halogens Calculated as Chlorine	Total Halides Calculated as Chloride	Total Organic Halogens Calculated as Chlorine (by difference)
SB-1	0-2 ft	4/9/92	16,200	19	<3	19
SB-1	2-4 ft	4/9/92	1,400	19	5	14
SB-1	4-6 ft	4/9/92	189,600	3,500	10	3,500
SB-1	6-8 ft	4/9/92	185,200	22,600	27	22,600
SB-1	16-18 ft	4/9/92	18,800	2,400	65	2,400
SB-1	18-20 ft	4/9/92	21,700	4,300	41	4,300
SB-1	22-24 ft	4/9/92	23,800	3,800	42	3,800
SB-1	28-30 ft	4/9/92	5,500	657	74	583
SB-1	30-32 ft	4/9/92	8,800	3,100	76	3,100
SB-1	34-36 ft	4/9/92	11,300	2,100	279	1,800
SB-2	0-2 ft	4/10/92	2,200	24	<4	24
SB-2	2-4 ft	4/10/92	1,800	26	10	16
SB-2	4-6 ft	4/10/92	2,700	44	18	26
SB-2	6-8 ft	4/10/92	123,400	133	26	107
SB-2	16-18 ft	4/10/92	124,800	26,400	32	26,400
SB-2	18-20 ft	4/13/92	55,800	8,100	38	8,100
SB-2	20-22 ft	4/13/92	18,900	4,700	53	4,600
SB-2	22-24 ft	4/13/92	14,200	5,200	63	5,100
SB-2	24-26 ft	4/13/92	16,100	2,000	65	1,900
SB-2	26-28 ft	4/13/92	23,100	9,200	69	9,100
SB-2	30-32 ft	4/13/92	25,700	6,700	85	6,600
SB-2	32-34 ft	4/13/92	12,300	3,200	43	3,200
SB-3	0-2 ft	4/16/92	1,200	15	<4	15
SB-3	2-4 ft	4/16/92	2,100	20	6	14
SB-3	4-6 ft	4/16/92	1,300	67	7	60
SB-3	8-10 ft	4/16/92	182,400	71,700	11	71,700
SB-3	16-18 ft	4/16/92	227,500	80,600	61	80,600
SB-3	18-20 ft	4/16/92	19,800	2,800	120	2,700
SB-3	20-22 ft	4/16/92	2,000	1,800	37	1,800
SB-3	22-24 ft	4/16/92	2,200	217	22	195
SB-3	26-28 ft	4/16/92	3,800	339	61	278

Concentrations are in milligrams per kilogram (mg/kg) for soil samples and milligrams per liter (mg/L) for water samples.

ft Feet.

0200

Table 5-13. Concentrations of Carbon and Chlorine Detected in Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location	Sample Depth	Sample Date	Total Organic Carbon	Total Halogens Calculated as Chlorine	Total Halides Calculated as Chloride	Total Organic Halogens Calculated as Chlorine (by difference)
SB-3	28-30 ft	4/16/92	7,400	1,000	140	900
SB-3	30-32 ft	4/16/92	19,900	5,200	200	5,000
SB-3	34-35 ft	4/16/92	12,000	5,700	63	5,700
SB-4	0-2 ft	4/14/92	1,600	22	8	15
SB-4	2-4 ft	4/14/92	2,000	29	13	16
SB-4	4-6 ft	4/14/92	7,500	109	67	42
SB-4	8-10 ft	4/14/92	90,100	13,100	96	13,100
SB-4	14-16 ft	4/14/92	458,800	7,100	99	7,100
SB-4	16-18 ft	4/14/92	209,800	40,900	250	40,700
SB-4	20-22 ft	4/14/92	45,300	9,000	200	8,800
SB-4	22-24 ft	4/14/92	34,200	5,500	250	5,300
SB-4	24-26 ft	4/14/92	3,600	1,400	150	1,300
SB-4	28-30 ft	4/14/92	18,700	1,300	330	1,000
SB-4	32-34 ft	4/14/92	44,800	8,200	560	7,600
SB-4	34-35 ft	4/14/92	41,200	11,400	460	10,900
SB-5	0-2 ft	5/4/92	1,900	177.0	134.0	43.0
SB-5	2-4 ft	5/4/92	1,500	198.0	10	98.0
SB-5	4-6 ft	5/4/92	226,900	251	50	201
SB-5	6-8 ft	5/4/92	128,800	3,000	290	2,700
SB-5	8-10 ft	5/4/92	167,300	27,000	155	26,700
SB-5	16-18 ft	5/4/92	141,700	24,700	104	24,600
SB-5	18-20 ft	5/4/92	39,600	24,700	157	24,500
SB-5	22-24 ft	5/4/92	64,300	53,500	355	53,100
SB-5	24-26 ft	5/4/92	27,200	11,200	940	10,300
SB-5	30-32 ft	5/4/92	11,500	2,400	741	1,600
SB-5	32-34 ft	5/4/92	6,600	6,300	692	5,600
SB-5	34-35 ft	5/4/92	22,100	8,300	509	7,800
SB-6	0-2 ft	5/5/92	21,100	320	106	309
SB-6	2-4 ft	5/5/92	1,000	129	7.0	59
SB-6	4-6 ft	5/5/92	2,600	217	10.0	117
SB-6	6-8 ft	5/5/92	67,800	3,200	766	3,100

Concentrations are in milligrams per kilogram (mg/kg) for soil samples and milligrams per liter (mg/L) for water samples.

ft Feet.

0204

CHLOR-92.XLS

Table 5-13. Concentrations of Carbon and Chlorine Detected in Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location	Sample Depth	Sample Date	Total Organic Carbon	Total Halogens Calculated as Chlorine	Total Halides Calculated as Chloride	Total Organic Halogens Calculated as Chlorine (by difference)
SB-6	8-10 ft	5/5/92	233,300	11,500	382	11,500
SB-6	10-12 ft	5/5/92	144,600	18,700	449.0	18,600
SB-6	12-14 ft	5/5/92	220,600	15,600	121	15,500
SB-6	24-26 ft	5/6/92	25,700	10,200	130	10,100
SB-6	26-28 ft	5/6/92	26,800	12,500	300	12,200
SB-6	30-32 ft	5/6/92	30,200	6,900	310	6,600
SB-6	32-34 ft	5/6/92	22,300	6,000	820	5,200
SB-6	34-35 ft	5/6/92	19,700	3,300	810	2,500
SB-7	0-2 ft	5/7/92	6,000	21	5	16
SB-7	2-4 ft	5/7/92	1,400	21	13	8
SB-7	4-6 ft	5/7/92	112,000	2,300	26	2,300
SB-7	6-8 ft	5/7/92	108,500	168	23	145
SB-7	8-10 ft	5/7/92	341,000	1,100	21	1,100
SB-7	12-14 ft	5/7/92	121,400	14,700	31	14,700
SB-7	14-16 ft	5/7/92	200,000	51,000	32	51,000
SB-7	26-28 ft	5/7/92	21,700	11,700	420	11,300
SB-7	28-30 ft	5/7/92	28,900	8,500	230	8,300
SB-7	30-32 ft	5/7/92	16,400	10,400	190	10,300
SB-7	32-34 ft	5/7/92	73,100	32,100	440	31,700
SB-7	34-35 ft	5/7/92	21,400	15,100	780	14,300
SB-8	0-2 ft	5/8/92	4,500	178	89	89
SB-8	2-4 ft	5/8/92	<100	132	78	54
SB-8	4-6 ft	5/8/92	1,700	226	77	149
SB-8	8-10 ft	5/8/92	621,300	19,200	467.0	19,200
SB-9	0-2 ft	5/12/92	4,100	56	47	9
SB-9	2-4 ft	5/12/92	131,300	672	190	482
SB-9	4-6 ft	5/12/92	700	1,900	649	1,200
SB-9	6-8 ft	5/12/92	2,900	3,000	857	2,100
SB-9	8-10 ft	5/12/92	365,100	11,400	111	11,300
SB-9	12-14 ft	5/12/92	250,600	2,700	411	2,300
SB-9	26-28 ft	5/12/92	7,500	1,800	626	1,200

Concentrations are in milligrams per kilogram (mg/kg) for soil samples and milligrams per liter (mg/L) for water samples.

ft Feet.

0203

Table 5-13. Concentrations of Carbon and Chlorine Detected in Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location	Sample Depth	Sample Date	Total Organic Carbon	Total Halogens Calculated as Chlorine	Total Halides Calculated as Chloride	Total Organic Halogens Calculated as Chlorine (by difference)
SB-9	32-34 ft	5/12/92	20,200	5,900	789	5,200
SB-9	34-35 ft	5/12/92	11,800	3,100	1,000	2,100
SB-10	0-2 ft	5/14/92	21,700	26	9	17
SB-10	2-4 ft	5/14/92	7,500	30	28	2
SB-10	8-10 ft	5/14/92	178,500	6,200	1,400	4,800
SB-10	10-12 ft	5/14/92	260,400	5,300	1,600	3,700
SB-10	12-14 ft	5/14/92	179,300	5,000	2,200	2,800
SB-10	14-16 ft	5/14/92	198,500	4,500	414	4,100
SB-10	20-22 ft	5/14/92	21,400	6,300	133	6,200
SB-10	22-24 ft	5/14/92	12,300	1,300	238	1,100
SB-10	28-30 ft	5/14/92	2,800	2,200	244	2,000
SB-10	30-32 ft	5/14/92	8,100	1,100	357	735
SB-10	32-34 ft	5/14/92	11,100	2,100	910	1,200
SB-10	34-35 ft	5/14/92	15,000	4,200	1,200	3,000
SB-11	0-2 ft	5/19/92	3,800	19	5	14
SB-11	2-4 ft	5/19/92	38,600	188	111	77
SB-11	4-6 ft	5/19/92	100,500	297	167	130
SB-11	6-8 ft	5/19/92	334,600	181	97	84
SB-11	8-10 ft	5/19/92	137,000	1,200	270	900
SB-11	10-12 ft	5/19/92	146,500	999	322	677
SB-11	18-20 ft	5/19/92	18,100	1,600	1,900	<100
SB-11	22-24 ft	5/19/92	3,200	3,500	3,000	500
SB-11	24-26 ft	5/20/92	3,700	3,200	2,900	300
SB-11	26-28 ft	5/20/92	1,600	1,900	1,600	300
SB-11	32-34 ft	5/20/92	5,100	649	442	207
SB-11	34-35 ft	5/20/92	1,800	503	471	32
SB-12	0-2 ft	5/15/92	18,100	25	4	21
SB-12	2-4 ft	5/15/92	1,700	19	8	11
SB-12	4-6 ft	5/15/92	1,450	17	6	11
SB- ,	6-8 ft	5/15/92	159,500	48	13	35
SB-12	10-12 ft	5/15/92	152,300	468	125	343

Concentrations are in milligrams per kilogram (mg/kg) for soil samples and milligrams per liter (mg/L) for water samples.

ft Feet.

Table 5-13. Concentrations of Carbon and Chlorine Detected in Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location	Sample Depth	Sample Date	Total Organic Carbon	Total Halogens Calculated as Chlorine	Total Halides Calculated as Chloride	Total Organic Halogens Calculated as Chlorine (by difference)
SB-12	14-16 ft	5/15/92	119,900	546	261	285
SB-12	18-20 ft	5/18/92	509,900	11,000	4,700	6,300
SB-12	20-22 ft	5/18/92	48,100	11,200	7,000	4,200
SB-12	26-28 ft	5/18/92	43,100	3,000	1,900	1,100
SB-12	28-30 ft	5/18/92	16,500	2,200	550	1,600
SB-12	30-32 ft	5/18/92	17,200	2,100	1,400	700
SB-12	34-35 ft	5/18/92	33,100	3,600	2,400	1,200
SB-13	0-2 ft	5/21/92	2,700	184.0	<3	18
SB-13	2-4 ft	5/21/92	1,300	15	5	10
SB-13	4-6 ft	5/21/92	5,800	19	6	13
SB-13	6-8 ft	5/21/92	84,200	27	6	21
SB-13	8-10 ft	5/21/92	40,000	<15	14	<1
SB-13	10-12 ft	5/21/92	41,500	12	15	<1
SB-13	12-14 ft	5/21/92	54,500	36	40	<1
SB-13	22-24 ft	5/21/92	2,900	121	57	64
SB-13	24-26 ft	5/21/92	100	20	11	9
SB-13	26-28 ft	5/21/92	250	20	6	14
SB-13	32-34 ft	5/21/92	6,300	420	472	<1
SB-13	34-35 ft	5/21/92	2,000	487	298	189
SB-14	0-2 ft	5/22/92	3,500	903.0	202.0	701.0
SB-14	2-4 ft	5/22/92	2,400	144	212.0	123
SB-14	4-6 ft	5/22/92	14,900	651	140	511
SB-14	8-10 ft	5/22/92	255,100	696	698	<5
SB-14	12-14 ft	5/26/92	129,000	1,300	1,000	300
SB-14	14-16 ft	5/26/92	126,500	4,200	3,000	1,200
SB-14	16-18 ft	5/26/92	175,800	1,100	920	180
SB-14	18-20 ft	5/26/92	206,500	650	362	288
SB-14	24-26 ft	5/26/92	20,500	5,900	420	5,500
SB-14	26-28 ft	5/26/92	37,700	2,900	420	2,500
SB-14	32-34 ft	5/26/92	16,500	3,200	1,100	2,100
SB-14	34-35 ft	5/26/92	35,900	3,800	890	2,900

Concentrations are in milligrams per kilogram (mg/kg) for soil samples and milligrams per liter (mg/L) for water samples.

ft Feet.

0207

Table 5-13. Concentrations of Carbon and Chlorine Detected in Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location	Sample Depth	Sample Date	Total Organic Carbon	Total Halogens Calculated as Chlorine	Total Halides Calculated as Chloride	Total Organic Halogens Calculated as Chlorine (by difference)
SB-15	0-2 ft	5/27/92	2,200	17	<3	17
SB-15	2-4 ft	5/27/92	3,800	22	6	16
SB-15	4-6 ft	5/27/92	5,400	26	21	5
SB-15	6-8 ft	5/27/92	26,300	467	86	381
SB-15	8-10 ft	5/27/92	32,200	138	61	77
SB-15	10-12 ft	5/27/92	19,500	207	75	132
SB-15	12-14 ft	5/27/92	46,100	114	38	76
SB-15	22-24 ft	5/28/92	8,500	877	331	546
SB-15	24-26 ft	5/28/92	1,900	408	191	217
SB-15	30-32 ft	5/28/92	4,900	677	272	405
SB-15	32-34 ft	5/28/92	10,100	3,200	1,200	2,000
SB-16	0-2 ft	5/29/92	5,800	189.0	<4	<189
SB-16	2-4 ft	5/29/92	8,500	207.0	53.0	154.0
SB-16	4-6 ft	5/29/92	2,200	477.0	402.0	75.0
SB-16	8-10 ft	5/29/92	152,800	3,300	45	3,200
SB-16	10-12 ft	5/29/92	229,200	1,100	66	1,000
SB-16	12-14 ft	5/29/92	85,600	920	68	850
SB-16	20-22 ft	5/29/92	9,300	740	230	510
SB-16	22-24 ft	5/29/92	600	797.0	603.0	194.0
SB-16	24-26 ft	5/29/92	3,000	405	277	128
SB-16	32-34 ft	5/29/92	12,100	3,700	1,600	2,100
SB-16	34-35 ft	5/29/92	15,900	444	484	<5
Field Blank		4/9/92	8	<5	<5	<5
Field Blank		4/10/92	10	<5	<5	<5
Field Blank		4/13/92	6	41.0	39.0	2.0
Field Blank		4/14/92	<5	<5	<5	<5
Field Blank		4/16/92	6	<5	<5	<5
Field Blank		5/4/92	<1	<8	<8	<8

Concentrations are in milligrams per kilogram (mg/kg) for soil samples and milligrams per liter (mg/L) for water samples.

ft Feet.

0203

Table 5-13. Concentrations of Carbon and Chlorine Detected in Soil Samples, Sauget Site R, Monsanto Company, Sauget, Illinois.

Sample Location	Sample Depth	Sample Date	Total Organic Carbon	Total Halogens Calculated as Chlorine	Total Halides Calculated as Chloride	Total Organic Halogens Calculated as Chlorine (by difference)
Field Blank		5/5/92	<1	57.0	44.0	13.0
Field Blank		5/6/92	<1	<5	<5	<5
Field Blank		5/7/92	<1	<5	<5	<5
Field Blank		5/8/92	<1	<5	<5	<5
Field Blank		5/12/92	<1	10	5	5
Field Blank		5/14/92	<1	<5	<5	<5
Field Blank		5/15/92	<1	<5	<5	<5
Field Blank		5/19/92	<1	5	<5	5
Field Blank		5/20/92	<1	<5	<5	<5
Field Blank		5/21/92	<1	<5	<5	<5
Field Blank		5/22/92	<1	<5	<5	<5
Field Blank		5/26/92	<1	<5	<5	<5
Field Blank		5/27/92	<1	5	<5	5
Field Blank		5/28/92	<1	<5	<5	<5
Field Blank		5/29/92	<1	<5	<5	<5

Concentrations are in milligrams per kilogram (mg/kg) for soil samples and milligrams per liter (mg/L) for water samples.

ft Feet.

0209