

02-8511-01-SI

**FINAL REPORT
SITE INSPECTION REPORT
AND HAZARD RANKING SYSTEM MODEL
SABRE PARK
NIAGARA, NEW YORK**

PREPARED UNDER

**TECHNICAL DIRECTIVE DOCUMENT NO. 02-8511-01
CONTRACT NO. 68-01-6699**

FOR THE

**ENVIRONMENTAL SERVICES DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY**

APRIL 15, 1986

**NUS CORPORATION
SUPERFUND DIVISION**

SUBMITTED BY



**VANCE. M. MATTHEWS
PROJECT MANAGER**

REVIEWED/APPROVED BY



**RONALD M. NAMAN
REGIONAL PROJECT MANAGER**



RARITAN PLAZA III, FIELDCREST AVENUE
EDISON, NEW JERSEY 08837
201-225-6160

our **3**th year

C-584-04-86-64

April 10, 1986

Ms. Diana Messina
U.S. Environmental Protection Agency
Region II
Edison, New Jersey 08817

Dear Diana:

Enclosed are the Site Inspection Report (EPA Form 2070-13) and the MITRE Hazard Ranking System (HRS) documents for Sabre Park, Niagara, Niagara County, New York. The site inspection was authorized under TDD #02-8511-01.

Very truly yours,

A handwritten signature in cursive script that reads "Vance M. Matthews".

Vance M. Matthews

VMM/jls

Enclosures

cc: Lou DiGuardia
Carol Price

Reviewed and Approved

A handwritten signature in cursive script that reads "J. B. Taylor".

SECTION 1

SITE INSPECTION REPORT EXECUTIVE SUMMARY



**POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
EXECUTIVE SUMMARY**

Sabre Park
Site Name

New Site
EPA Site ID Number

Third Avenue
Niagara, New York
Address

02-8511-01
TDD Number

SITE DESCRIPTION

The Sabre Park Site, located on Third Avenue in Niagara, Niagara County, New York, is a residential trailer development consisting of more than 200 units. The property, approximately 43 acres in size, is located immediately to the east of the CECOS landfill and lies approximately one-quarter mile to the north of the former 64th Street North Disposal Area.

In September 1978, Amherst Paving, under contract to Hooker Chemical to do paving work in connection with construction at the Hooker caustic soda and chlorine facilities, inadvertently deposited contaminated fill from the Hooker property at the Sabre Park Site. Twelve hundred cubic yards of potentially contaminated fill materials were removed to remediate this error.

Samples to determine if residual contamination exists at this property were collected by FIT II personnel on November 21, 1985. A total of fourteen (14) soil samples were collected from across the surface area of the Sabre Park Site. Six (6) soil samples were collected from within the residential trailer complex and eight (8) soil samples were collected from the southern site perimeter where contaminated fill was deposited and subsequently removed. Soil samples were collected at a depth of 0 to 6 inches, and subsequently analyzed for HSL pollutants.

All samples collected from across the surface of the Sabre Park site contained polycyclic aromatic hydrocarbons (PAHs) or substituted PAHs with concentrations of individual compounds as high as 20,000 ug/kg. 1,2,4-trichlorobenzene, hexachlorobutadiene, hexachlorobenzene, and dibenzofuran were also detected in or more samples. Low concentrations of the pesticides gamma BHC(lindane), dieldrin, and endrin ketone were detected in four samples. The polychlorinated biphenyl mixture Aroclor 1254 was detected in two samples in concentrations up to 500 ug/kg. Finally, mercury was present in twelve of fourteen samples collected from across the site in concentrations up to 80 mg/kg.

HAZARD RANKING SCORE: $S_M=10.56$ ($S_{gw}=3.28$, $S_{sw}=17.98$, $S_a=0$) $S_{FE}=0$ $S_{DC}=50.00$

Prepared by: Vance Matthews
of NUS Corporation

Date: 4/9/86

SECTION 2

ENVIRONMENTAL PROTECTION AGENCY FORM 2070-13

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

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY NEW SITE

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site) Sabre Park
02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER Third Avenue
03 CITY Niagara
04 STATE NY 05 ZIP CODE 14304 06 COUNTY Niagara 07 COUNTY CODE 063 08 CONG DIST. NY36
09 COORDINATES
LATITUDE LONGITUDE
4 30 0 5' 4 0".N 7 80 5 8' 5 7" W.
10 TYPE OF OWNERSHIP (Check one)
☒ A. PRIVATE ☐ B. FEDERAL ☐ C. STATE
☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER
☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION 11 / 21 / 85
02 SITE STATUS ☒ ACTIVE ☐ INACTIVE
03 YEARS OF OPERATION 1970 / Present UNKNOWN
BEGINNING YEAR ENDING YEAR
AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ☒ B. EPA CONTRACTOR NUS Corporation (Name of firm)
☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR (Name of firm)
☐ G. OTHER (Specify)

05 CHIEF INSPECTOR Vance Matthews
06 TITLE Ecologist
07 ORGANIZATION NUS Corporation
08 TELEPHONE NO. 201-225-6160
09 OTHER INSPECTORS Joseph Mayo
10 TITLE Environmental Scientist
11 ORGANIZATION NUS Corporation
12 TELEPHONE NO. 201-225-6160
Rich Friend
10 TITLE Geologist
11 ORGANIZATION NUS Corporation
12 TELEPHONE NO. 201-225-6160

13 SITE REPRESENTATIVES INTERVIEWED John Gross, Jr.
14 TITLE Owner
15 ADDRESS Sabre Park Office
3rd Ave., Niagara, NY
16 TELEPHONE NO. 716-297-4445

17 ACCESS GAINED BY (Check one) ☒ PERMISSION ☐ WARRANT
18 TIME OF INSPECTION 0945
19 WEATHER CONDITIONS Cloudy, wind from northwest, 290F

IV. INFORMATION AVAILABLE FROM

01 CONTACT Diana Messina
02 OF (Agency/Organization) U.S. EPA
03 TELEPHONE NO. (201) 321-6685

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM Vance Matthews
05 AGENCY NUS Corp. Region II FIT
06 ORGANIZATION (201) 225-6160
07 TELEPHONE NO. 08 DATE 01 / 20 / 86
MONTH DAY YEAR
EPA FORM 2070-13 (7-81)

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

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY NEW SITE

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)		02 WASTE QUANTITY AT SITE	03 WASTE CHARACTERISTICS (Check all that apply)	
☒ A. SOLID	☐ E. SLURRY	(Measures of waste quantities must be independent)	☒ A. TOXIC	☐ E. SOLUBLE
☐ B. POWDER, FINES	☐ F. LIQUID		☐ B. CORROSIVE	☐ F. INFECTIOUS
☐ C. SLUDGE	☐ G. GAS		☐ C. RADIOACTIVE	☐ G. FLAMMABLE
☐ D. OTHER _____			☒ D. PERSISTENT	☐ H. IGNITABLE
(Specify)		TONS CUBIC YARDS 1200 NO. OF DRUMS	☐ I. HIGHLY VOLATILE ☐ J. EXPLOSIVE ☐ K. REACTIVE ☐ L. INCOMPATIBLE ☐ M. NOT APPLICABLE	

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			*Total Chlorinated Hydrocarbons were present in allegedly contaminated soil sample collected 9/28/78, prior to remediation of onsite contamination by the removal of 1200 cubic yards of potentially contaminated fill materials
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

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

CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
OCC	1,2,4-Trichlorobenzene	91-20-3	Fill Materials	J	
OCC	Hexachlorobutadiene	87-68-3	Fill Materials	J	
OCC	2-Methylnaphthalene	999	Fill Materials	J	
OCC	Acenaphthylene	83-32-9	Fill Materials	2300	ug/kg
OCC	Dibenzofuran	132-64-9	Fill Materials	1400	ug/kg
OCC	Fluorene	86-73-7	Fill Materials	2300	ug/kg
OCC	Hexachlorobenzene	118-74-1	Fill Materials	J	
OCC	Phenanthrene	85-01-8	Fill Materials	20000	ug/kg
OCC	Anthracene	120-12-7	Fill Materials	4500	ug/kg
OCC	Fluoranthene	206-44-0	Fill Materials	5000	ug/kg
OCC	Pyrene	129-00-0	Fill Materials	4300	ug/kg
OCC	Benzo(a) Anthracene	56-55-3	Fill Materials	11000	ug/kg
OCC	Chrysene	218-01-9	Fill Materials	11000	ug/kg

SEE ATTACHMENT

V. FEEDSTOCKS (See Appendix for CAS Numbers)

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

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

Recre Research Report to Niagara County Health Department dated 10/25/78.
U.S. EPA Contract Laboratory Program: Organic and Inorganic sample analyses for Case #5263.

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

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY NEW SITE

ATTACHMENT

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

CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
OCC	Benzo(b) Fluoranthene	205-99-2	Fill Materials	11000	ug/kg
OCC	Benzo(a) Pyrene	50-32-8	Fill Materials	9000	ug/kg
OCC	Indeno (1,2,3-cd) Pyrene	193-39-5	Fill Materials	J	
OCC	Benzo(g,h,i) Perylene	191-42-2	Fill Materials	2500	ug/kg
OCC	Aroclor 1254	11097-69-1	Fill Materials	500	ug/kg
PSD	Gamma BHC (Lindane)	58-89-9	Fill Materials	28	ug/kg
PSD	Endosulfan I	959-98-8	Fill Materials	13	ug/kg
PSD	Dieldrin	60-57-1	Fill Materials	18	ug/kg
PSD	Endrin Ketone	999	Fill Materials	25	ug/kg
MES	Mercury	7439-97-6	Fill Materials	80	mg/kg

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero.

SUBSTANCE NAME

SPECIFIED INSTRUMENT DETECTION LIMIT

1,2,4-Trichlorobenzene	330 ug/kg
Hexachlorobutadiene	330 ug/kg
2-Methylnaphthalene	330 ug/kg
Hexachlorobenzene	330 ug/kg
Indeno (1,2,3-cd) Pyrene	330 ug/kg

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

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY NEW SITE

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 X A. GROUNDWATER CONTAMINATION 02 OBSERVED (DATE:) X POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0 04 NARRATIVE DESCRIPTION

Residual contamination is present onsite; pollutants have the potential to contaminate the groundwater. However, groundwater is not used for potable water supplies.

01 X B. SURFACE WATER CONTAMINATION 02 OBSERVED (DATE:) X POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 70,000 04 NARRATIVE DESCRIPTION

Residual contamination is present onsite; pollutants have the potential to leach from the soils and contaminate the surface waters. Seventy thousand people utilize surface waters for potable water supply within 3 miles of the site.

01 C. CONTAMINATION OF AIR 02 OBSERVED (DATE:) _ POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0 04 NARRATIVE DESCRIPTION

No potential exists. Volatile organic compounds were not detected with air monitoring equipment used during the Site Inspection conducted on 11/21/85.

01 D. FIRE/EXPLOSIVE CONDITIONS 02 OBSERVED (DATE:) _ POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0 04 NARRATIVE DESCRIPTION

No potential exists.

01 X E. DIRECT CONTACT 02 X OBSERVED (DATE: 9/28/78) _ POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 800 04 NARRATIVE DESCRIPTION

A resident of Sabre Park informed the Niagara County Department of Health on 9/28/78 that she developed a skin rash after gardening in the soils at 148 Sabre Park during the spring of 1978.

01 X F. CONTAMINATION OF SOIL 02 X OBSERVED (DATE: 9/28/78, 11/21/85) _ POTENTIAL _ ALLEGED
03 AREA POTENTIALLY AFFECTED: 43 (ACRES) 04 NARRATIVE DESCRIPTION

Piles of allegedly contaminated fill materials covering 0.26 acres were sampled and analyzed for total chlorinated hydrocarbons by Recra Research, Inc., Tonawanda, New York on 9/28/78. Analytical results for Site Inspection conducted on 11/21/85 show contamination of surface soils across the of the majority of the site surface.

01 X G. DRINKING WATER CONTAMINATION 02 OBSERVED (DATE:) X POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 70,000 04 NARRATIVE DESCRIPTION

Potential exists for contaminated surface water runoff to contaminate the potable water supply of the City of Niagara Falls, 2.75 miles downstream from Sabre Park.

01 H. WORKER EXPOSURE/INJURY 02 OBSERVED (DATE:) _ POTENTIAL _ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: 0 04 NARRATIVE DESCRIPTION

No potential exists. The Sabre Park is a residential housing development.

01 X I. POPULATION EXPOSURE/INJURY 02 OBSERVED (DATE:) X POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 800 04 NARRATIVE DESCRIPTION

The potential exists for the exposure of the residential population inhabiting the site. Over 200 residential trailer units are situated onsite in a housing development.

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

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY NEW SITE

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☒ J. DAMAGE TO FLORA
04 NARRATIVE DESCRIPTION

02 _ OBSERVED (DATE: _____)

☒ POTENTIAL _ ALLEGED

Residual contamination is present onsite; offsite transport of contaminants by surface water runoff has the potential to impact upon the flora. Contaminants present onsite have the potential to cause damage to lawns and vegetable gardens.

01 ☒ K. DAMAGE TO FAUNA

04 NARRATIVE DESCRIPTION (Include name(s) of species)

02 _ OBSERVED (DATE: _____)

☒ POTENTIAL _ ALLEGED

Residual contamination is present onsite; offsite transport of contaminants by surface water runoff has the potential to impact upon the fauna. Red-tailed hawks and other raptors actively feed in the open field adjacent to the site.

01 ☒ L. CONTAMINATION OF FOOD CHAIN

04 NARRATIVE DESCRIPTION

02 _ OBSERVED (DATE: _____)

☒ POTENTIAL _ ALLEGED

Chlorinated hydrocarbons have the potential to bioaccumulate within the food chain.

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES
(Spills/runoff/standing liquids/leaking drums)
03 POPULATION POTENTIALLY AFFECTED: 800

02 _ OBSERVED (DATE: _____)

☒ POTENTIAL _ ALLEGED

04 NARRATIVE DESCRIPTION

Residual contamination is present on site; disturbance of the soil has the potential for exposure to the residential population inhabiting the site.

01 _ N. DAMAGE TO OFFSITE PROPERTY

04 NARRATIVE DESCRIPTION

02 _ OBSERVED (DATE: _____)

☒ POTENTIAL _ ALLEGED

Damage to offsite property was not observed during the Site Inspection on 11/21/85, nor reported in the past. Offsite transport of contaminants found in surface soils by surface runoff has the potential to cause damage to offsite flora.

01 ☒ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs
04 NARRATIVE DESCRIPTION

02 _ OBSERVED (DATE: _____)

☒ POTENTIAL _ ALLEGED

Residual contamination is present onsite; offsite transport of contaminants by surface water runoff has the potential to contaminant storm drains.

01 ☒ P. ILLEGAL/UNAUTHORIZED DUMPING

04 NARRATIVE DESCRIPTION

02 ☒ OBSERVED (DATE: 9/28/78)

_ POTENTIAL _ ALLEGED

Allegedly contaminated fill materials were deposited at the Sabre Park Site for use as fill material to expand the residential trailer development.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: 70,000

IV. COMMENTS

Twelve hundred cubic yards of potentially contaminated fill materials were removed in 1978 to remediate onsite contamination of the Sabre Park Site.

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

Site Inspection 11/21/85, conducted by NUS Corporation FIT II.
Files of the Niagara County Department of Health.
Telecon Note dated 10/17/85, re: Population served by surface water.

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

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY NEW SITE

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☒ J. NONE				

III. SITE DESCRIPTION

01 Storage/Disposal (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE	04 TREATMENT (Check all that apply)	05 OTHER
☐ A. SURFACE IMPOUNDMENT			☐ A. INCINERATION	☒ A. BUILDINGS ON SITE
☐ B. PILES			☐ B. UNDERGROUND INJECTION	
☐ C. DRUMS, ABOVE GROUND			☐ C. CHEMICAL/PHYSICAL	200 trailers
☐ D. TANK, ABOVE GROUND			☐ D. BIOLOGICAL	06 AREA OF SITE
☐ E. TANK, BELOW GROUND			☐ E. WASTE OIL PROCESSING	
☒ F. LANDFILL	1200	cubic yards	☐ F. SOLVENT RECOVERY	43
☐ G. LANDFARM			☐ G. OTHER RECYCLING/RECOVERY	(Acres)
☐ H. OPEN DUMP			☐ H. OTHER None	
☐ I. OTHER (Specify)			(Specify)	

07 COMMENTS

In September 1978, allegedly contaminated fill materials derived from construction activities at the Hooker caustic soda and chlorine facilities were inadvertently deposited at the Sabre Park Site. Twelve hundred cubic yards of soils were removed from the site to remediate this error.

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

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

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

Residual contamination is present at this site, pollutants were encountered in surface soils at a depth of 0 to 6 inches.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☒ YES ☐ NO

02 COMMENTS

Disturbance of the shallow soil cover onsite would expose any potential soil contaminants remaining at this site.

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

Site Inspection, 11/21/85, conducted by NUS Corporation FIT II
Files of the Niagara County Department of Health.

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

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY NEW SITE

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY
(Check as applicable)

02 STATUS

03 DISTANCE TO SITE

COMMUNITY	SURFACE	WELL	ENDANGERED	AFFECTED	MONITORED	A.	2.75	(mi)
NON-COMMUNITY	A. ☒ C. ☐	B. ☐ D. ☐	A. ☐ D. ☐	B. ☐ E. ☐	C. ☒ F. ☒	B.		(mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

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

02 POPULATION SERVED BY GROUND WATER: 0 03 DISTANCE TO NEAREST DRINKING WATER WELL: 3 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
2-15 (ft)	Southwest	13-30 (ft)	106 (gpd)	YES ☐ NO ☒

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

Olin Corporation located on Buffalo Avenue, 2.3 miles downgradient from the Sabre Park Site, maintains a deep production well for cooling process water.

10 RECHARGE AREA

11. DISCHARGE AREA

☒ YES ☐ NO COMMENTS

☒ YES ☐ NO COMMENTS

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

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

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
Niagara River	☐	1.75 (mi)
Cayuga Creek	☐	0.75 (mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

02 DISTANCE TO NEAREST POPULATION

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE	
A. 6,691 NO. OF PERSONS	B. 33,850 NO. OF PERSONS	C. 56,578 NO. OF PERSONS	0.01 (mi)

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

04 DISTANCE TO NEAREST OFF-SITE BUILDING

12,476 0.01 (mi)

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

A residential trailer complex consisting of approximately 200 units is located at the Sabre Park site. The City of Niagara Falls is located immediately south of the site, with 5200 inhabitants living within 1 mile of the site.

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

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY NEW SITE

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. 10^{-6} - 10^{-8} cm/sec ☐ B. 10^{-4} - 10^{-6} cm/sec ☒ C. 10^{-4} - 10^{-3} cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☒ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☐ B. RELATIVELY IMPERMEABLE (10^{-4} - 10^{-6} cm/sec) ☐ C. RELATIVELY PERMEABLE (10^{-2} - 10^{-4} cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)
*Note Permeability is influenced by the degree of fracturing of the bedrock.

03 DEPTH TO BEDROCK

5-12 (ft)

04 DEPTH OF CONTAMINATED SOIL ZONE

Unknown (ft)

05 SOIL pH

7 - 8

06 NET PRECIPITATION

6 (in)

07 ONE YEAR 24 HOUR RAINFALL

2.5 (in)

08 SLOPE

SITE SLOPE

0-2 %

DIRECTION OF SITE SLOPE

South

TERRAIN AVERAGE SLOPE

0-2 %

09 FLOOD POTENTIAL

10

SITE IS IN 500 YEAR FLOODPLAIN

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

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE

A. N/A (mi)

OTHER

B. 2.30 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

> 1.0 (mi)

ENDANGERED SPECIES: Not Applicable

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL

A. 0.01 (mi)

RESIDENTIAL AREAS: NATIONAL/STATE PARKS,
FORESTS, OR WILDLIFE RESERVES

B. Residential - 0.01 (mi)
Others - N/A

PRIME AG LAND

C. 3.17 (mi)

AGRICULTURAL LANDS

AG LAND

D. 3.17 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The Sabre Park Site has a land area of approximately 43 acres, with a 0-2 percent slope toward the south. The property is located immediately to the east of the CECOS landfill and lies approximately one-quarter mile to the north of the former 64th Street North Disposal Area. Third Avenue and I-190 bound the site to the west, and Niagara Mohawk Power Corporation maintains an easement to the south of the site. Land areas to the north, east, and south of the site have the same slope and elevation as the site; the CECOS landfill to the west of the site is at a higher elevation.

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

Soil Survey of Niagara County, N.Y.; Soil Conservation Service, October 1972.
Groundwater in the Niagara Falls Area. NY Conservation Department, 1964.
U.S.G.S. Maps: Niagara Falls, NY and ONT; Tonawanda West, NY Quad. 1980.
Master Area Reference File (MARF) of the 1980 Census. General Software Corporation, Landover, MD 6/25/84.

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

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY NEW SITE

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER		Organic Soil Samples Sent To:	
SURFACE WATER		ETC Corporation	
		284 Raritan Center Parkway	
		Edison, New Jersey 08818 ~	02/20/86
WASTE			
AIR			
RUNOFF			
SOIL	14	Inorganic Soil Samples Sent To:	
		Hittman-Ebasco Associates Inc.	
		9151 Ramsey Road	
		Columbia, Maryland 21045	02/20/86
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
Air Monitoring HNu	No readings detected above background levels.

IV. PHOTOGRAPHS AND MAPS

01 TYPE	☒ GROUND ☐ AERIAL	02 IN CUSTODY OF	NUS Corporation FIT II Edison, N.J. (Name of organization or individual)
03 MAPS	04 LOCATION OF MAPS		
☒ YES ☐ NO	Site and Sampling Location Maps, NUS Corporation FIT II Project Files		

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

Field notebook with photolog, filed under TDD #02-8511-01; written and photographic documentation of all field activities.

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

Site Reconnaissance 11/13/85, Site Inspection 11/21/85 conducted by NUS Corporation FIT II.

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

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY NEW SITE

II. CURRENT OWNER(S)

PARENT COMPANY (If applicable)

01 NAME	02 D + B NUMBER	08 NAME	09 D + B NUMBER
Sabre Park Trailer Park		John J. Gross, Jr.	
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD#, etc.)	11 SIC CODE
Third Avenue		2104 Niagara Street	
05 CITY	06 STATE	12 CITY	13 STATE
Niagara	NY	Niagara Falls	NY
	07 ZIP CODE		14 ZIP CODE
	14303		14303

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

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

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

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

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

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

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

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

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

Files of the Niagara County Health Department.

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

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY NEW SITE

II. CURRENT OPERATOR(S)			OPERATOR'S PARENT COMPANY (If applicable)		
01 NAME	02 D + B Number	10 NAME	11 D + B NUMBER		
Sabre Park Trailer Park		John J. Gross, Jr.			
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD#, etc.)	13 SIC CODE		
Third Avenue		2104 Niagara Street			
05 CITY	06 STATE	14 CITY	15 STATE		
Niagara	NY	Niagara Falls	NY		
08 YEARS OF OPERATION	09 NAME OF OWNER	14303	16 ZIP CODE		
16					

III. PREVIOUS OPERATOR(S) (List most recent first: Provide only if different from owner)			PREVIOUS OPERATOR'S PARENT COMPANIES (If applicable)		
01 NAME	02 D + B Number	10 NAME	11 D + B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD#, etc.)	13 SIC CODE		
05 CITY	06 STATE	14 CITY	15 STATE		
08 YEARS OF OPERATION	09 NAME OF OWNER	16 ZIP CODE			

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

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

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

Files of the Niagara County Health Department.

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

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY NEW SITE

II ON-SITE GENERATOR

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

III OFF-SITE GENERATOR(S)

01 NAME	02 D + B NUMBER	01 NAME	02 D + B NUMBER	
Occidental Chemical (Formerly Hooker Chemical)				
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	
360 Rainbow Blvd.				
05 CITY	06 STATE	05 CITY	06 STATE	07 ZIP CODE
Niagara Falls	NY	14303		

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

IV. TRANSPORTER(S)

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

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

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

Files of the Niagara County Health Department

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

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY NEW SITE

II. PAST RESPONSE ACTIVITIES

01 A. WATER SUPPLY CLOSED
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history

01 B. TEMPORARY WATER SUPPLY PROVIDED
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history

01 C. PERMANENT WATER SUPPLY PROVIDED
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history

01 D. SPILLED MATERIAL REMOVED
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history

01 X E. CONTAMINATED SOIL REMOVED
04 DESCRIPTION

02 DATE: 9/78

03 AGENCY: Niagara County
Health Department

Twelve hundred cubic yards of contaminated fill materials were removed from the site in September 1978.

01 F. WASTE REPACKAGED
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history

01 G. WASTE DISPOSED ELSEWHERE
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history

01 H. ON SITE BURIAL
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history

01 I. IN SITU CHEMICAL TREATMENT
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history

01 J. IN SITU BIOLOGICAL TREATMENT
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history

01 K. IN SITU PHYSICAL TREATMENT
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history

01 L. ENCAPSULATION
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history

01 M. EMERGENCY WASTE TREATMENT
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history

01 N. CUTOFF WALLS
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history

01 O. EMERGENCY DIKING/SURFACE WATER DIVERSION
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history

01 P. CUTOFF TRENCHES/SUMP
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history

01 Q. SUBSURFACE CUTOFF WALL
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history

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

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY NEW SITE

II. PAST RESPONSE ACTIVITIES

01 R. BARRIER WALLS CONSTRUCTED
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history

01 X S. CAPPING/COVERING
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

The exposed surfaces of the site have been covered with 4 inches of topsoil.

01 T. BULK TANKAGE REPAIRED
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history

01 U. GROUT CURTAIN CONSTRUCTED
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history

01 V. BOTTOM SEALED
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history

01 W. GAS CONTROL
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history

01 X. FIRE CONTROL
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history

01 Y. LEACHATE TREATMENT
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history

01 Z. AREA EVACUATED
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history

01 1. ACCESS TO SITE RESTRICTED
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history

01 2. POPULATION RELOCATED
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history

01 3. OTHER REMEDIAL ACTIVITIES
04 DESCRIPTION

02 DATE: _____

03 AGENCY: _____

No previous history

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

Site Inspection 11/21/85 conducted by NUS Corporation FIT II.
Files of the Niagara County Health Department.

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

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY NEW SITE

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION

☒ YES

☐ NO

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

During September of 1978, Amherst Paving, under contract to Hooker Chemical to do paving work in connection with construction activities at the Hooker caustic soda and chlorine facilities, inadvertently deposited contaminated fill from the Hooker property at the Sabre Park site. On October 3, 1978, John J. Gross Jr., owner of the Sabre Park Trailer Park facilities was advised by the Niagara County Health Department to cease onsite construction activities until the absence of toxic chemicals could be confirmed. Eleven soil samples were collected from the site and sent to Recra Research, Tonawanda, New York for analysis on October 3, 1978. Two of the soil samples were subsequently found to contain high concentrations of Total Chlorinated Hydrocarbons. As a result, 1200 cubic yards of potentially contaminated fill materials were removed to remediate onsite contamination.

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

Files of the Niagara County Health Department

SECTION 3

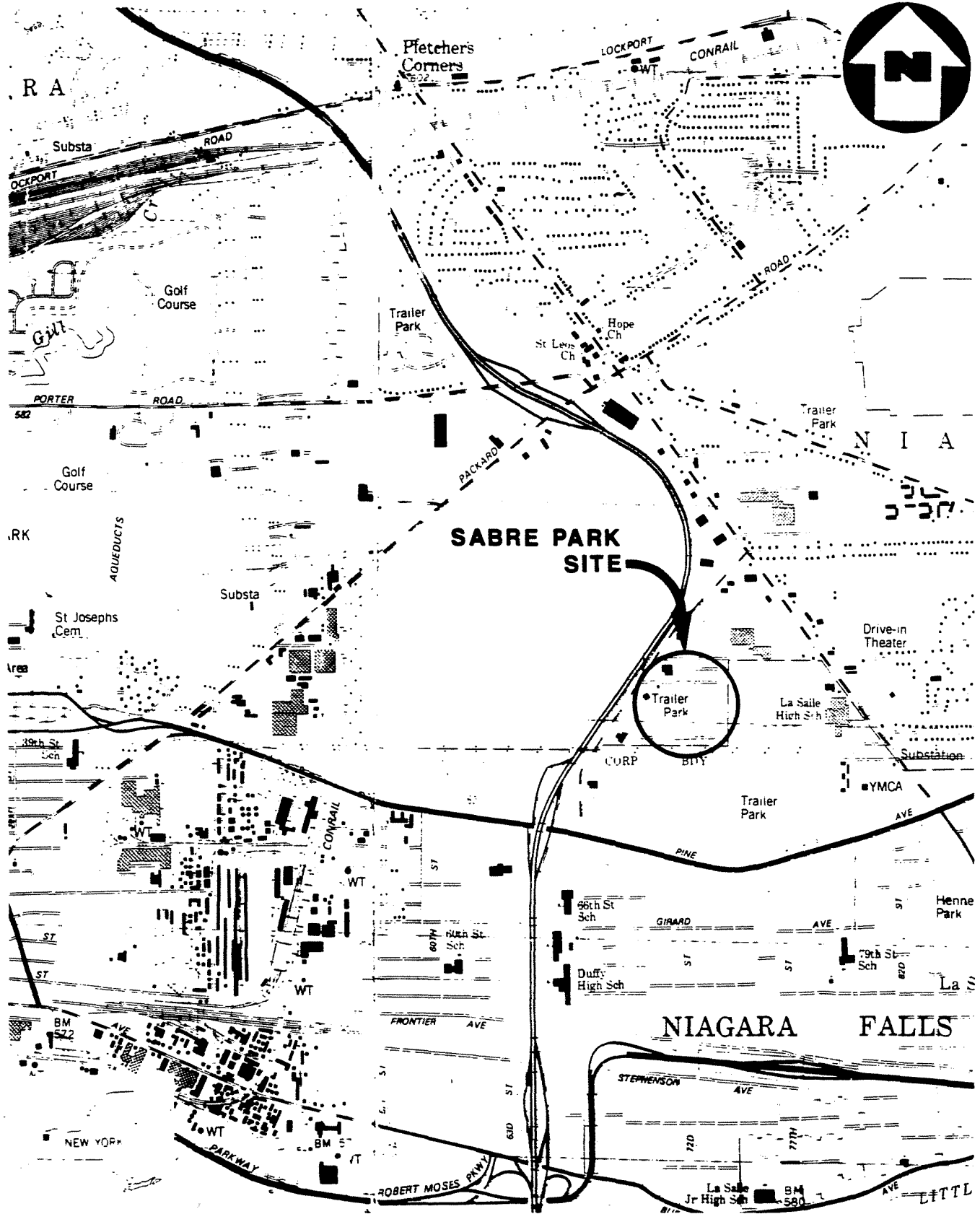
MAPS AND PHOTOGRAPHS

MAPS AND PHOTOGRAPHS

Figure A-1 provides a Site Location Map.

Figure A-2 provides a Sample Location Map.

Exhibit A-1 provides Photographic Documentation
of onsite activities.



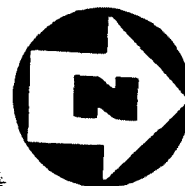
(QUAD) TONAWANDA WEST, N.Y.

SITE LOCATION MAP
SABRE PARK SITE, NIAGARA FALLS, N.Y.

SCALE: 1"=2000'

FIGURE A-1





W.S JOHNSON
BUILDING CO.

OPPORTUNITIES
UNLIMITED
CENTER

ANDERSON
ELECTRIC
SUPPLY

SABRE PARK
OFFICE

NYE5-S10

NYE5-S11

NYE5-S12

NYE5-S13

NYE5-S14

NYE5-S9

NYE5-S8

NYE5-S7

NYE5-S6

NYE5-S5

NYE5-S4

NYE5-S3

NYE5-S2

NYE5-S1

LEGEND

● SURFACE SOIL SAMPLE

SAMPLE LOCATION MAP SABRE PARK, NIAGARA FALLS, N.Y.

(NOT TO SCALE)

FIGURE A-2



EXHIBIT A-1 PHOTOGRAPHIC DOCUMENTATION
SABRE PARK
NIAGARA, NEW YORK
PHOTOGRAPHER: V. MATTHEWS

SABRE PARK
NIAGARA, NEW YORK
TDD# 02-8511-01
NOVEMBER 21, 1985

PHOTOGRAPHIC INDEX

<u>Photo Number</u>	<u>Description</u>	<u>Time</u>
1P-1	Soil sample NYE5-S1 collected from front lawn area at 111 Sabre Park. Sampler: R. Friend.	1055
1P-2	Soil sample NYE5-S2 collected from front lawn area at 128 Sabre Park (Sabre Drive). Sampler: R. Friend.	1100
1P-3	Soil sample NYE5-S3 collected from front lawn area at 147 Sabre Park (Nathan Drive). Sampler: R. Friend.	1108
1P-4	Soil sample NYE5-S4 collected from front lawn area at 166 Sabre Park (Manny Drive). Sampler: R. Friend.	1115
1P-5	Soil sample NYE5-S5 collected from front lawn area at 183 Sabre Park (Paul Drive). Sampler: R. Friend.	1120
1P-6	Soil sample NYE5-S6 collected at 207 Sabre Park. Sampler: R. Friend.	1130
1P-7	Soil sample NYE5-S7 collected from the former fill area behind the 1st trailer from the eastern corner of the southern site boundary. Sampler: R. Friend.	1145
1P-8	Soil sample NYE5-S8 collected from the former fill area behind the 2nd trailer from the eastern corner of the southern site boundary. Sampler: R. Friend.	1200
1P-9	Soil sample NYE5-S9 collected from the former fill area behind the 4th trailer at the south-eastern corner of the site. Sampler: R. Friend.	1205
1P-10	Soil sample NYE5-S10 collected from the former fill area behind the 2nd trailer from the western corner of the southern site boundary. Sampler: R. Friend.	1230

SABRE PARK
NIAGARA, NEW YORK
TDD# 02-8511-01
NOVEMBER 21, 1985

PHOTOGRAPHIC INDEX

<u>Photo Number</u>	<u>Description</u>	<u>Time</u>
1P-11	Soil sample NYE5-S11 collected from the former fill area behind the 6th trailer from the southwestern corner of the site. Sampler: R. Friend.	1235
1P-12	Soil sample NYE5-S12 collected from the former fill area behind the 10th trailer from the southwestern corner of the site. Sampler: R. Friend.	1240
1P-13	Soil sample NYE5-S13 collected from the former fill area behind the 14th trailer from the southwestern corner of the site. Sampler: R. Friend.	1245
1P-14	Soil sample NYE5-S14 collected from the former fill area behind the 18th trailer from the southwestern corner of the site. Sampler: R. Friend.	1250
1P-15	Former onsite fill area showing present location of residential trailer development.	1255



SABRE PARK, NIAGARA, NEW YORK



1P-1 November 21, 1985 1055
Soil sample NYE5-S1 collected from front lawn area at 111 Sabre Park.
Sampler: R. Friend.



SABRE PARK, NIAGARA, NEW YORK



1P-2 November 21, 1985 1100
Soil sample NYE5-S2 collected from front lawn area at 128 Sabre Park
(Sabre Drive).
Sampler: R. Friend.



SABRE PARK, NIAGARA, NEW YORK



1P-3 November 21, 1985 1108
Soil sample NYE5-S3 collected from front lawn area at 147 Sabre Park
(Nathan Drive).
Sampler: R. Friend.



SABRE PARK, NIAGARA, NEW YORK



1P-4 November 21, 1985 1115
Soil sample NYE5-S4 collected from front lawn area at 166 Sabre Park
(Manny Drive).
Sampler: R. Friend.



1P-5 November 21, 1985 1120
Soil sample NYE5-S5 collected from front lawn area at 183 Sabre Park
(Paul Drive). Sampler: R. Friend.



1P-6 November 21, 1985 1130
Soil sample NYE5-S6 collected at 207 Sabre Park.
Sampler: R. Friend.



SABRE PARK, NIAGARA, NEW YORK



1P-7 November 21, 1985 1145
Soil sample NYE5-S7 collected from the former fill area behind the
1st trailer from the eastern corner of the southern site boundary.
Sampler: R. Friend.



SABRE PARK, NIAGARA, NEW YORK



1P-8 November 21, 1985 1200
Soil sample NYE5-S8 collected from the former fill area behind the
2nd trailer from the eastern corner of the southern site boundary.
Sampler: R. Friend.



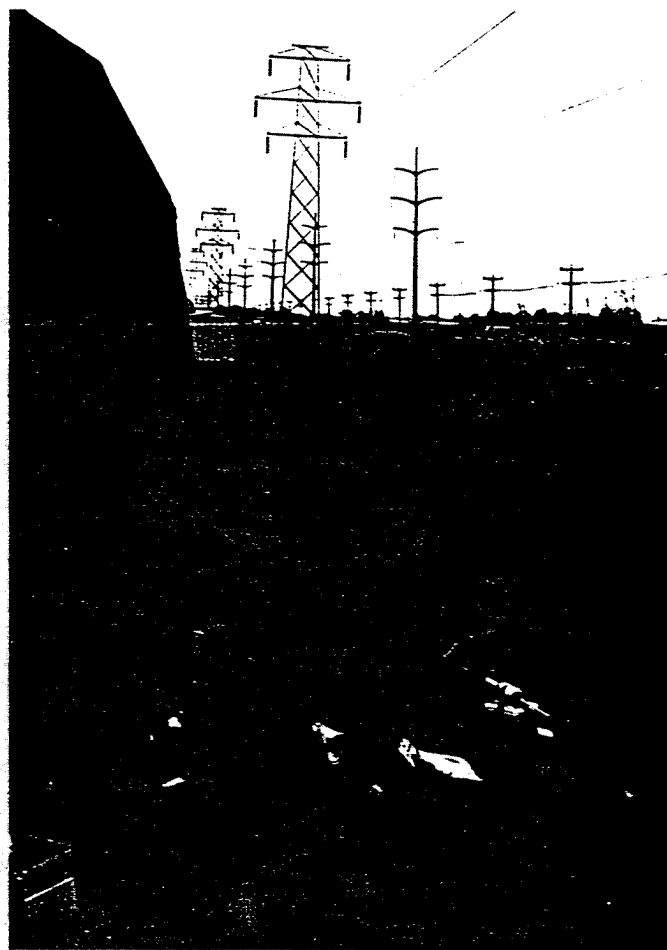
SABRE PARK, NIAGARA, NEW YORK



1P-9 November 21, 1985 1205
Soil sample NYE5-S9 collected from the former fill area behind the
4th trailer at the southeastern corner of the site.
Sampler: R. Friend.



SABRE PARK, NIAGARA, NEW YORK



1P-10 November 21, 1985 1230
Soil sample NYE5-S10 collected from the former fill area behind the
2nd trailer from the western corner of the southern site boundary.
Sampler: R. Friend.



SABRE PARK, NIAGARA, NEW YORK



1P-11 November 21, 1985 1235
Soil sample NYE5-S11 collected from the former fill area behind the
6th trailer from the southwestern corner of the site.
Sampler: R. Friend.



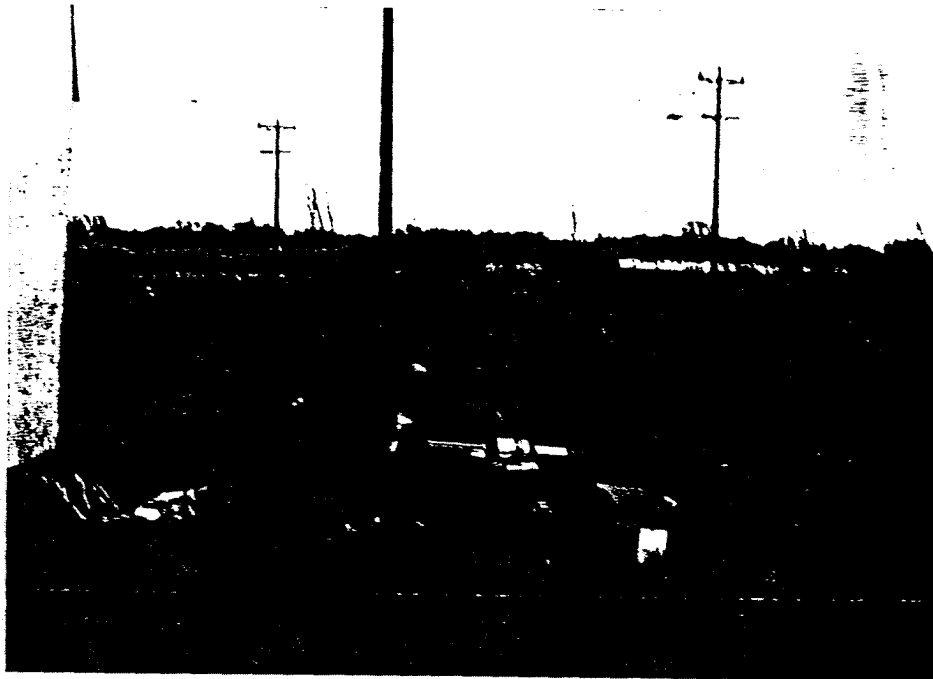
SABRE PARK, NIAGARA, NEW YORK



1P-12 November 21, 1985 1240
Soil sample NYE5-S12 collected from the former fill area behind the
10th trailer from the southwestern corner of the site.
Sampler: R. Friend.



SABRE PARK, NIAGARA, NEW YORK



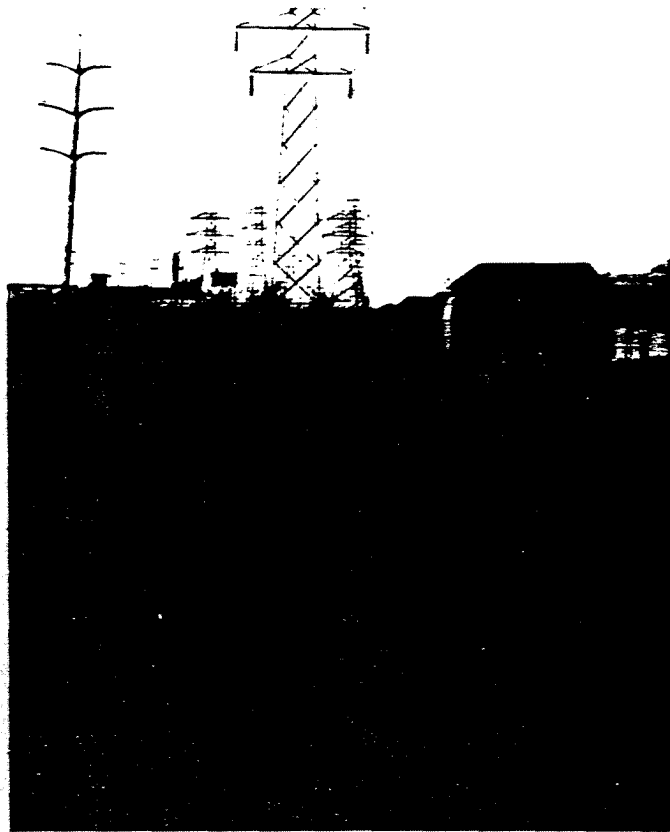
1P-13 November 21, 1985 1245
Soil sample NYE5-S13 collected from the former fill area behind the
14th trailer from the southwestern corner of the site.
Sampler: R. Friend.



1P-14 November 21, 1985 1250
Soil sample NYE5-S14 collected from behind the 18th trailer at the
southwestern corner of the site. Sampler: R. Friend.



SABRE PARK, NIAGARA, NEW YORK



1P-15 November 21, 1985 1255
Former onsite fill area showing present location of residential
trailer development.

SECTION 4

DOCUMENTATION RECORDS FOR HAZARD RANKING SYSTEM

FIT QUALITY ASSURANCE TEAM
DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

INSTRUCTIONS: As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference. Include the location of the document.

FACILITY NAME: Sabre Park

LOCATION: Third Avenue, Niagara, New York

DATE SCORED: February 10, 1986

PERSON SCORING: Vance M. Matthews

PRIMARY SOURCE(S) OF INFORMATION (e.g., EPA region, state, FIT, etc.):

FIT Region II Files.

FIT Region II Library.

FACTORS NOT SCORED DUE TO INSUFFICIENT INFORMATION:

The observed release for the groundwater route was scored zero as no groundwater samples were collected in the vicinity of the site. The observed release for the surface water route was scored zero as no surface water samples were collected in the vicinity of the site.

COMMENTS OR QUALIFICATIONS:

An HNu photoionization detector was used during the Site Inspection conducted in November 21, 1985. No sustained readings above background were detected and no specific compound analyses were performed. On this basis, the Air Route of the MITRE Model was scored zero.

GROUNDWATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum):

No groundwater samples were collected; therefore, the observed release is scored zero.

Ref: #1, #12

Rationale for attributing the contaminants to the facility:

Not Applicable.

* * *

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifer(s) of concern:

The aquifer of concern is located in the Lockport Dolomite Formation, 13 to 30 feet beneath the soil surface.

Ref: #7, #8

Depth(s) from the ground surface to the highest seasonal level of the saturated zone water table(s) of the aquifer of concern:

13 feet.

Ref: #8

Depth from the ground surface to the lowest point of waste disposal/storage:

Large surface areas of the Sabre Park site have been back-filled as part of construction of the onsite residential trailer development. However, the depth from the ground surface to the lowest point of waste disposal is unknown.

Ref: #12

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

Mean annual precipitation: 32 inches

Ref: #3, #4

Mean annual lake or seasonal evaporation (list months for seasonal):

Mean annual lake evaporation: 26 inches

Ref: #3, #4

Net precipitation (subtract the above figures):

6 inches.

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

The soil type in the unsaturated zone is Urban fill. Below the fill, deposits of lacustrine silt, clay, and sand are encountered.

Ref: #7, #13

Permeability associated with soil type:

10^{-4} - 10^{-3} cm/sec

Ref: #1

Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

Solid, unconsolidated or unstabilized: allegedly contaminated construction rubble and fill materials.

Ref: #1, #9

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Allegedly contaminated fill materials were deposited along the southern perimeter of the site. Twelve hundred cubic yards of potentially contaminated fill materials were subsequently removed to remediate onsite contamination. However, contaminants were detected in soil samples collected from across the surface of the Sabre Park site.

Ref: #9, #19

Method with highest score:

Contaminants are uncontained. Contaminants are found in surface soils, the site is unlined, and no other methods of containment are employed onsite.

Ref: #1

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Mercury, Gamma BHC, Dieldrin, and Endrin Ketone were detected in soil samples from the Sabre Park site. These compounds have the potential to leach into the groundwater, contaminating the local aquifer.

Ref: #11, #19

Compound with highest score:

Mercury.

Ref: #1, #11

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Twelve hundred cubic yards of allegedly contaminated fill materials were removed from Sabre park to remediate potential contamination. The total quantity of hazardous substances at this site is unknown.

Ref: #1, #9, #12

Basis of estimating and/or computing waste quantity:

Mercury and the Polychlorinated biphenyl Aroclor 1254 were found in surface soil samples collected from across the Sabre Park site. However, the total quantity of contaminants present onsite is unknown.

Ref: #9, #19

5 TARGETS

Groundwater Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

The aquifer of concern within a 3-mile radius of the site is used for commercial process water. Groundwater within a 3-mile radius is not used for potable water supplies.

Ref: #14, #15

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

A deep production well used for cooling process water is located at the Olin property on Buffalo Avenue, Niagara Falls, 2.3 miles downgradient from the site. The Olin property is served by a public water supply.

Ref: #14

Distance to above well or building:

2.3 miles

Ref: #17

Population Served by Groundwater Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

Not Applicable: Groundwater is not used for potable water supply.

Ref: #14, #15

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre).

Not Applicable: Groundwater is not used for irrigation.

Ref: #14

Total population served by groundwater within a 3-mile radius:

The total population served by groundwater is zero.

Ref: #15

SURFACE WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

No surface waters were collected; therefore, the observed release is scored zero.

Ref: #1, #12

Rationale for attributing the contaminants to the facility:

Not Applicable.

* * *

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

0-2 percent

Ref: #12, #17

Name/description of nearest downslope surface water:

Cayuga Creek is 0.75 miles downslope from Sabre Park. Cayuga Creek flows into the Niagara River 1.75 miles downstream from the site.

Ref: #17

Average slope of terrain between facility and above-cited surface water body in percent:

0-2 percent

Ref: #12, #17

Is the facility located either totally or partially in surface water?

No.

Ref: #12, #17

Is the facility completely surrounded by areas of higher elevation?

No. The Sabre Park site is at an equal elevation to land areas to the north, east, and south. The CECOS Industrial Landfill to the west of the site has a higher elevation.

Ref: #12, #17

1-Year 24-Hour Rainfall in Inches

2.5 inches

Ref: #3, #14

Distance to Nearest Downslope Surface Water

Cayuga Creek is 0.75 miles downslope from Sabre Park. Cayuga Creek flows into the Niagara River 1.75 miles downstream from the site.

Ref: #17

Physical State of Waste

Solid, unconsolidated or unstabilized: allegedly contaminated construction rubble and fill materials.

Ref: #1, #9

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Allegedly contaminated fill materials were deposited along the southern perimeter of the site. Twelve hundred cubic yards of potentially contaminated fill materials were subsequently removed to remediate onsite contamination. However, contaminants were detected in soil samples collected from across the surface of the Sabre Park site.

Ref: #9, #19

Method with highest score:

Contaminants are uncontained. Contaminants are found in surface soils, the site is unlined, and no other methods of containment are employed onsite.

Ref: #1

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated

Mercury, Aroclor 1254, Dibenzofuran, Gamma BHC, and Endrin Ketone were detected in soil samples collected from the Sabre Park site. Storm water runoff has the potential to transport contaminants from the soil to surface waters.

Ref: #11

Compound with highest scores

Mercury.

Ref: #1, #11

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Twelve hundred cubic yards of allegedly contaminated fill materials were removed from Sabre Park to remediate potential contamination. The total quantity of hazardous substances at this site is unknown.

Ref: #1, #9, #12

Basis of estimating and/or computing waste quantity:

Mercury and the Polychlorinated biphenyl Aroclor 1254 were found in surface soil samples collected from across the Sabre Park site. However, the total quantity of contaminants present onsite is unknown.

Ref: #9 #19

* * *

5 TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

The potable water intakes for the City of Niagara Falls are located on the Niagara River 2.75 miles downstream from the Sabre Park Site.

Ref: #14

Is there tidal influence?

No

Ref: #17

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

Not Applicable.

Ref: #17

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

Not Applicable. The nearest freshwater wetlands are located on the Niagara River 2.30 miles from the site.

Ref: #17

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

Not Applicable. The Sabre Park site borders a highly industrialized area of Niagara Falls, New York.

Ref: #12, #17

Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

The potable water intakes for the City of Niagara Falls are located on the Niagara River 2.75 miles downstream from the Sabre Park Site. Seventy thousand people use the Niagara River for a potable water source.

Ref: #14, #15

Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):

Not Applicable. Potable water supply is not used for irrigation.

Ref: #14

Total population served:

Seventy thousand people use the Niagara River for a potable water source.

Ref: #14

Name/description of nearest of above water bodies:

Not Applicable. Potable water intakes for the City of Niagara Falls are located on the Niagara River 2.75 miles downstream from the site; however, potable water is not used for irrigation.

Ref: #14

Distance to above-cited intakes, measured in stream miles.

2.75 miles

Ref: #17

AIR ROUTE

1 OBSERVED RELEASE

Contaminants detected:

An HNu and OVA were used onsite for health and safety screening. No air samples were taken for analysis during the site inspection conducted on November 21, 1985.
Ref: #14

Date and location of detection of contaminants

An HNu and OVA were used onsite for health and safety screening. No air samples were taken for analysis during the site inspection conducted on November 21, 1985.
Ref: #14

Methods used to detect the contaminants

HNu Photoionization detector.

Foxboro Organic Vapor Analyzer (Flame Ionization Detector, FID).

Ref: #14

Rationale for attributing the contaminants to the site:

Specific compound analyses were not performed with the Foxboro Organic Vapor Analyzer (Flame Ionization Detector, FID). Therefore, no airborne contaminants can be attributed to the site.

Ref: #14

* * *

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

Not Applicable.

Most incompatible pair of compounds:

Not Applicable.

Toxicity

Most toxic compound:

Not Applicable.

Hazardous Waste Quantity

• Total quantity of hazardous waste:

Twelve hundred cubic yards of allegedly contaminated fill materials were removed from Sabre Park to remediate potential contamination. The total quantity of hazardous substances at this site is unknown.

Ref: #1, #9

Basis of estimating and/or computing waste quantity:

Mercury and the Polychlorinated biphenyl Aroclor 1254 were found in surface soil samples collected from across the Sabre Park site. However, the total quantity of contaminants present onsite is unknown.

Ref: #1, #9, #19

* * *

3 TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

0 to 4 mi	0 to 1 mi	0 to 1/2 mi	0 to 1/4 mi
92,148	6691	800	

Master Area Reference File of the 1980 Census

Ref: #10

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

Not Applicable.

Ref: #17

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

Not Applicable. The nearest fresh-water wetlands are located on the Niagara River 2.30 miles from the site.

Ref: #17

Distance to critical habitat of an endangered species, if 1 mile or less:

Not Applicable. The Sabre Park site borders a highly industrialized area of Niagara Falls, New York.

Ref: #12

Land Use

Distance to commercial/industrial area, if 1 mile or less:

0.01 miles. Third Avenue bordering the Sabre Park site is zoned for commercial use.

Ref: #12

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Not Applicable. Buckhorn Island State Park is located 2.30 miles to the south of the site.

Ref: #12

Distance to residential area, if 2 miles or less:

0.01 miles. The Sabre Park site is a residential trailer housing development.

Ref: #10, #12

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Not Applicable. Agricultural land is located on Lockport and Walmore Roads 3.17 miles northeast from the Sabre Park site,

Ref: #14

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Not Applicable. Prime agricultural land is located on Lockport and Walmore Roads 3.17 miles northwest from the Sabre Park site.

Ref: #14

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

No

Ref: #12

FIRE AND EXPLOSION

1 CONTAINMENT

Hazardous substances present:

Dibenzofuran, Phenanthrene, Chrysene, Aroclor 1254.

Ref: #19

Type of containment, if applicable:

All contaminants present onsite are found in the surface soils.

Ref: #12, #19

* * *

2 WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

No direct evidence of the potential for fire and explosion was observed during the Site Inspection conducted on November 21, 1985. The local fire marshall has not declared this site to be a fire hazard.

Ref: #12

Ignitability

Compound used:

Polyaromatic hydrocarbons are present in onsite soils in concentrations which would not readily ignite.

Ref: #1, #19

Reactivity

Most reactive compound:

Compounds found onsite are not reactive.

Ref: #1

Incompatibility

Most incompatible pair of compounds:

None observed or detected during the Site Inspection conducted on November 21, 1985.

Ref: #1, #12, #19

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

Twelve hundred cubic yards of allegedly contaminated fill materials were removed from Sabre Park to remediate potential contamination. The total quantity of hazardous substances at this site is unknown.

Ref: #1, #9

Basis of estimating and/or computing waste quantity:

Polyaromatic hydrocarbons, dibenzofuran, and Polychlorinated biphenyl Aroclor 1254 were found in surface soils collected from across the Sabre Park site.

However, the total quantity of contaminants present onsite is unknown.

Ref: #9, #19

* * *

3 TARGETS

Distance to Nearest Population

0.01 miles. The Sabre Park site is a residential trailer housing development.

Ref: #10, #12

Distance to Nearest Building

0.01 miles.

Ref: #10, #12

Distance to Sensitive Environment

Distance to wetlands:

Freshwater wetlands are located on the Niagara River 2.30 miles to the south of Sabre Park.

Ref: #17

Distance to critical habitats:

Not Applicable. The Sabre Park site borders a highly industrialized area of Niagara Falls, New York.

Ref: #12

Land Use

Distance to commercial/industrial area, if 1 mile or less:

0.01 miles. Third Avenue bordering the Sabre Park site is zoned for commercial use.

Ref: #10, #12

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Not Applicable. Buckhorn Island State Park is located 2.30 miles to the south of the site.

Ref: #17

Distance to residential area, if 2 miles or less:

0.01 miles. The Sabre Park site is a residential trailer housing development.

Ref: #10, #12

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Not Applicable. Agricultural land is located on Lockport and Walmore Roads 3.17 miles northeast from the Sabre Park site.

Ref: #14

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Not Applicable. Prime agricultural land is located on Lockport and Walmore Roads 3.17 miles northeast from the Sabre Park site.

Ref: #14

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

No.

Ref: #12

Population Within 2-Mile Radius

33,850

Ref: #10

Buildings Within 2-Mile Radius

12,680

Ref: #10

DIRECT CONTACT

1 OBSERVED INCIDENT

Date, location, and pertinent details of incident:

A resident of 148 Sabre Park complained to the Niagara County Health Department that she had developed a skin rash after gardening in the soils during the spring of 1978. This incident was reported to Health Department officials on 10/3/78.

Ref: #9

* * *

2 ACCESSIBILITY

Describe type of barrier(s):

Potential contaminants found onsite are readily accessible. The Sabre Park residential development is constructed upon potentially contaminated fill materials, with Mercury, Dibenzofuran, and Aroclor 1254 detected in surface soil samples.

Ref: #9, #19

* * *

3 CONTAINMENT

Type of containment, if applicable:

Potentially contaminated fill materials have been covered with 4 inches of topsoil.

Ref: #12

* * *

4 WASTE CHARACTERISTICS

Toxicity

Compounds evaluated:

Mercury, Dibenzofuran, Aroclor 1254

Ref: #1, #11, #19

Compound with highest score:

Mercury

Ref: #11

5 TARGETS

Population Within One-Mile Radius

6,690

Ref: #10

Distance to Critical Habitat (of Endangered Species)

Not Applicable. The Sabre Park site borders a highly industrialized area of Niagara Falls, New York.

Ref: #12

SECTION 5

HAZARD RANKING SYSTEM SCORING FORMS

Facility name: Sabre Park

Location: Third Avenue, Niagara, New York

EPA Region: II

Persons(s) in charge of the facility: John J. Gross Jr.

Name of Reviewer: Vance M. Matthews **Date:** March 1, 1986

General description of the facility:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; type of information needed for rating; agency action, etc.)

The Sabre Park site is a residential trailer development consisting of more than 200 units. In September 1978, Amherst Paving, under contract to Hooker Chemical to do paving work in connection with construction at the Hooker caustic soda and chlorine facilities, inadvertently deposited allegedly contaminated fill from the Hooker property at the Sabre Park site. Twelve hundred cubic yards of potentially contaminated fill materials were removed to remediate this error.

Samples to determine if residual contamination exists at this site were collected by FIT II personnel on November 21, 1985. Significant concentrations of mercury were detected in soil samples collected from across the site. In addition to mercury, polyaromatic hydrocarbons and pesticides were detected in low concentrations. The surface water migratory pathway is the contamination route of major concern. The impact of potential groundwater contamination is minimal since groundwater is not used for potable water supply, and, contamination of the air migratory pathway is lessened by the soil covering across areas of onsite fill.

Score: $S_M = 10.56$ ($S_{gw} = 3.28$ $S_{sw} = 17.98$ $S_a = 0$)

$S_{FE} = 0$

$S_{DC} = 50.00$

HRS COVER SHEET

Ground Water Route Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi- plier	Score	Max. Score	Ref. (Section)	
1 Observed Release	0 45	1	0	45	3.1	
If observed release is given a score of 45, proceed to line 4 . If observed release is given a score of 0, proceed to line 2 .						
2 Route Characteristics					3.2	
Depth to Aquifer of Concern	0 1 2 3	2	6	6		
Net Precipitation	0 1 2 3	1	2	3		
Permeability of the Unsaturated Zone	0 1 2 3	1	2	3		
Physical State	0 1 2 3	1	1	3		
Total Route Characteristics Score			11	18		
3 Containment	0 1 2 3	1	3	3	3.3	
4 Waste Characteristics					3.4	
Toxicity/Persistence	0 3 6 9 12 15 18	1	18	18		
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8 - 1	1	1	8		
Total Waste Characteristics Score			19	26		
5 Targets					3.5	
Ground Water Use	0 1 2 3	3	3	9		
Distance to Nearest Well/Population Served	1 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40		
Total Targets Score			3	49		
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			1881	57.330		
7 Divide line 6 by 57.330 and multiply by 100			S _{gw} = 3.28			

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi- plier	Score	Max. Score	Ref. (Section)	
1 Observed Release	① 45	1	0	45	4.1	
If observed release is given a value of 45, proceed to line 4 . If observed release is given a value of 0, proceed to line 2 .						
2 Route Characteristics					4.2	
Facility Slope and Intervening Terrain	① 1 2 3	1	0	3		
1-yr. 24-hr. Rainfall	0 1 ② 3	1	2	3		
Distance to Nearest Surface Water	0 1 ② 3	2	4	6		
Physical State	0 ① 2 3	1	1	3		
Total Route Characteristics Score			7	15		
3 Containment	0 1 2 ③	1	3	3	4.3	
4 Waste Characteristics					4.4	
Toxicity/Persistence	0 3 6 9 12 15 ①⑧	1	18	18		
Hazardous Waste Quantity	0 ① 2 3 4 5 6 7 8	1	1	8		
Total Waste Characteristics Score			19	28		
5 Targets					4.5	
Surface Water Use	0 1 2 ③	3	9	9		
Distance to a Sensitive Environment	① 1 2 3	2	0	6		
Population Served/Distance to Water Intake Downstream	0 4 8 8 10 12 16 18 ②③ 40 24 30 32 35	1	20	40		
Total Targets Score			29	55		
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			11,571	64,350		
7 Divide line 6 by 64,350 and multiply by 100			S _{sw} = 17.98			

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)	
1 Observed Release	(0) 45	1	()	45	5.1	
Date and Location:						
Sampling Protocol:						
If line 1 is 0, the $S_a = 0$. Enter on line 5 . If line 1 is 45, then proceed to line 2 .						
2 Waste Characteristics					5.2	
Reactivity and Incompatibility	0 1 2 3	1		3		
Toxicity	0 1 2 3	3		9		
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8		
Total Waste Characteristics Score				20		
3 Targets					5.3	
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30		
Distance to Sensitive Environment	0 1 2 3	2		6		
Land Use	0 1 2 3	1		3		
Total Targets Score				39		
4 Multiply 1 x 2 x 3			()	35,100		
5 Divide line 4 by 35,100 and multiply by 100			$S_a = ()$			

FIGURE 9
AIR ROUTE WORK SHEET

	s	s ²
Groundwater Route Score (S _{gw})	-3.28	10.76
Surface Water Route Score (S _{sw})	17.98	323.28
Air Route Score (S _a)	0	0
$s_{gw}^2 + s_{sw}^2 + s_a^2$		334.04
$\sqrt{s_{gw}^2 + s_{sw}^2 + s_a^2}$		18.27
$\sqrt{s_{gw}^2 + s_{sw}^2 + s_a^2} / 1.73 = S_M$		10.56

FIGURE 10
WORKSHEET FOR COMPUTING S_M

Fire and Explosion Work Sheet						
Rating Factor	Assigned Value (Circle One)		Multi- plier	Score	Max. Score	Ref. (Section)
1 Containment	1	3	1		3	7.1
2 Waste Characteristics						7.2
Direct Evidence	0	3	1		3	
Ignitability	0	1 2 3	1		3	
Reactivity	0	1 2 3	1		3	
Incompatibility	0	1 2 3	1		3	
Hazardous Waste Quantity	0	1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score					20	
3 Targets						7.3
Distance to Nearest Population	0	1 2 3 4 5	1		5	
Distance to Nearest Building	0	1 2 3	1		3	
Distance to Sensitive Environment	0	1 2 3	1		3	
Land Use	0	1 2 3	1		3	
Population Within 2-Mile Radius	0	1 2 3 4 5	1		5	
Buildings Within 2-Mile Radius	0	1 2 3 4 5	1		5	
Total Targets Score					24	
4 Multiply 1 x 2 x 3					1,440	
5 Divide line 4 by 1,440 and multiply by 100				SFE =		

**FIGURE 11
FIRE AND EXPLOSION WORK SHEET**

SECTION 6

BIBLIOGRAPHY OF INFORMATION SOURCES

BIBLIOGRAPHY OF INFORMATION SOURCES
HRS MODEL

SOURCE	LOCATION
1. Barrett, Kris W., S.S. Chang, S.A. Haus, and A.M. Platt. <u>Uncontrolled Hazardous Waste Site Ranking System, A User's Manual</u> , MITRE Corp. August, 1982.	NUS Corp. Region II
2. Bohn, Heinrich L., <u>Soil Chemistry</u> . John Wiley and Sons, Inc. 1979.	NUS Corp. Region II
3. <u>Climatic Atlas of the United States</u> . U.S. Department of Commerce, National Climatic Center, Ashville, N.C. 1979.	NUS Corp. Region II
4. <u>Climates of the States</u> . National Oceanic and Atmospheric Administration Narrative Summaries, Tables, and Maps for Each State. Gale Research Company. Detroit, Michigan.	NUS Corp. Region II
5. Fish and Wildlife Service List of Endangered and Threatened Wildlife and Plants 50 CFR 17.11, 17.12. January 9, 1985.	NUS Corp. Region II
6. Flood Insurance Rate Map. City of Niagara Falls, New York, Niagara County. Federal Emergency Management Agency March 16, 1983.	NUS Corp. Region II
7. Frontier Chemical: Hydrogeologic Investigation Evaluation of Groundwater Quality. Prepared by Empire Soils Investigations, Inc. for the Frontier Chemical Waste Process, Inc., June 1985.	NUS Corp. Region II
8. Ground Water in the Niagara Falls Area, New York. State of New York Conservation Department. Water Resources Commission. 1964.	NUS Corp. Region II
9. Hopkins, Michael. 1985. Case file of the Niagara Falls Health Department for the Sabre Park site. October 24, 1985.	NUS Corp. Region II
10. Master Area Reference File (MARF) of the 1980 Census. General Software Corp., Landover, Maryland. June 26, 1984.	NUS Corp. Region II
11. Sax, N. Irving, <u>Dangerous Properties of Industrial Materials</u> . Sixth Edition. Van Nostrand Reinhold Company. New York 1984.	NUS Corp. Region II
12. Site Inspection Field Notebook #1620, Sabre Park, TDD #02-8511-01.	NUS Corp. Region II
13. Soil Survey of Niagara County, New York. U.S. Department of Agriculture. Soil Conservation Service. October 1972.	NUS Corp. Region II
14. Telecon Note between M. Hopkins of the Niagara County Health Department and J. Crystall of NUS Corp. FIT II re: Water supply intake location and location of agricultural lands in Niagara Falls, New York. August 8, 1985.	NUS Corp. Region II

BIBLIOGRAPHY OF INFORMATION SOURCES (Cont'd)

HRS MODEL

SOURCE	LOCATION
15. . Telecon Note between J. Traves - Superintendent of the City of Niagara Falls Water Department and J. Mayo of NUS Corp. FIT II re: Population served by city of Niagara Falls Water Department. October 17, 1985.	NUS Corp. Region II
16. Telecon Note between S. Smith - Niagara Falls Waste Water Treatment Plant City of Niagara Falls and R. Adkisson of NUS Corporation FIT II re: Storm water collection routes. January 10, 1986.	NUS Corp. Region II
17. Topographic Map, Lewiston , Ransomville, Tonawanda West, and Niagara Falls, N.Y.-N.Y. Quadrangle, 7.5 Minute Series, Department of Interior, U.S. Geological Survey, 1967, photo-revised 1981.	NUS Corp. Region II
18. <u>Water-Related Environmental Fate of 129 Priority Pollutants, Volume I.</u> U.S. Environmental Protection Agency, EPA-440/4-79-029a, December, 1979.	NUS Corp. Region II
19. U.S. EPA Contract Laboratory Program: Organic and inorganic sample analyses for Case #5263.	NUS Corp. Region II

SECTION 7

PRESS RELEASE SUMMARY-MITRE HAZARD RANKING SYSTEM

SUMMARY STATEMENT
SABRE PARK
NIAGARA, NEW YORK

The Sabre Park Site, located on Third Avenue in Niagara, Niagara County, New York, is a residential trailer development consisting of more than 200 units. The property, approximately 43 acres in size, is located immediately to the east of the CECOS landfill and lies approximately one quarter mile to the north of the former 64th Street North Disposal Area. In September 1978, Amherst Paving, subcontracted by Hooker Chemical for paving work at the Hooker caustic soda and chlorine facilities, inadvertently deposited allegedly contaminated fill from the Hooker property at the Sabre Park Site. Twelve hundred cubic yards of potentially contaminated fill materials were removed to remediate this error.

Soil samples were collected on November 21, 1985 to determine if residual contamination was present at the Sabre Park site. Concentrations of mercury were detected in soil samples collected from within both the residential area and along the southern perimeter of the site bordering the residential trailer complex. Low concentrations of polyaromatic hydrocarbons and pesticides were also detected in soil samples collected from across the surface area of the site.

The surface water migratory pathway is the contamination route of major concern. Surface runoff has the potential to transport contaminants from onsite soils into Cayuga Creek 0.75 miles downgradient from the site to the east. In addition to natural surface water flow, a stormwater sewer bordering the site to the west diverts surface water runoff in the vicinity of I-190 to the Niagara River, the primary source of drinking water for the Niagara Falls area. The impact of potential groundwater contamination is minimal since groundwater is not used for potable water supply. The air migratory pathway is of minor consequence since soil areas of the site have been covered with topsoil and seeded with grass.

SECTION 8

ATTACHMENTS- CITED DOCUMENTS

REFERENCE #4

CLIMATES OF THE STATES

**National Oceanic and Atmospheric Administration
Narrative Summaries, Tables, and Maps
for Each State**

with

Overview of State Climatologist Programs

Second Edition

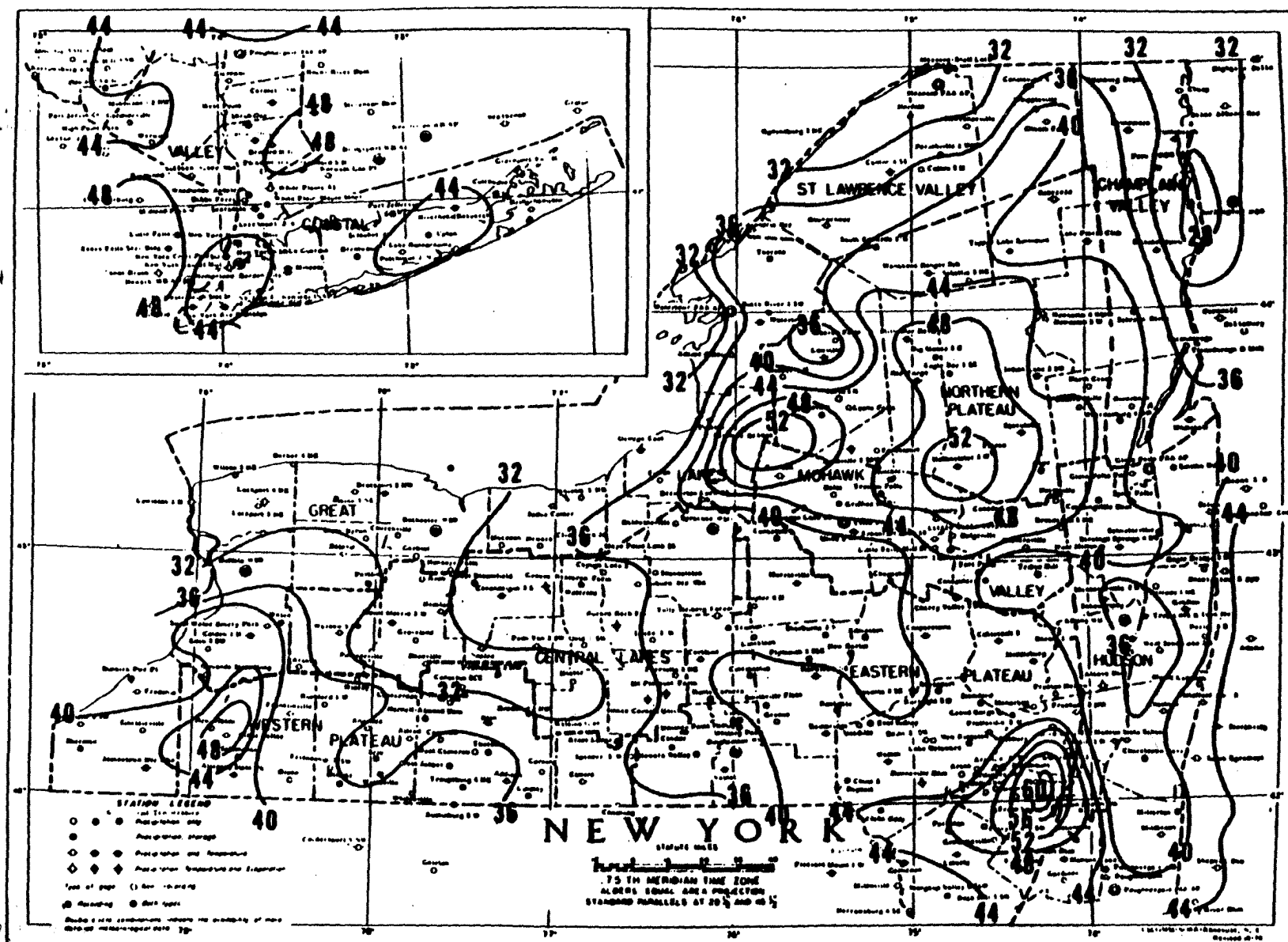
New Material by
James A. Ruffner

Volume 1

Alabama — North Dakota

GALE RESEARCH COMPANY • BOOK TOWER • DETROIT, MICHIGAN 48226

MEAN ANNUAL PRECIPITATION, INCHES



Data are based on the period 1931-55. Isolines are drawn through points of approximately equal value. Caution should be used in interpolating on these maps, particularly in mountainous areas.

REFERENCE #7



FRONTIER CHEMICAL
HYDROGEOLOGIC INVESTIGATION
EVALUATION OF
GROUNDWATER QUALITY

FOR
Frontier Chemical Waste Process, Inc.

Job No. BD-84-142
June 1985

105 CORONA AVENUE, GROTON, NY 13073, 607-898-5881
M4

2.0 FINDINGS OF INVESTIGATION

2.1 Geology

The borings encountered between 11.0 and 18.2 feet of unconsolidated deposits overlying dolostone bedrock. The unconsolidated deposits consisted of between 0.6 and 7.5 feet of fill on top of silt and sand. Except at borings MW-10, MW-14, and MW-17, lacustrine silt, clay and sand deposits were encountered below the fill, with red brown glacial till consisting of silt and sand with some gravel found between the lacustrine deposits and bedrock. Only lacustrine silts and clays were encountered below the fill in borings MW-10 and MW-17. At boring MW-14 only glacial till was encountered below the fill.

Bedrock beneath the site is Lockport Dolomite of Upper Silurian age. (Richard and Fisher, 1970). The dolostone encountered was gray, weathered, hard, thin bedded to bedded with occasional carbon partings and some solution cavities and voids.

2.2 Groundwater Flow

Water elevations in the wells were monitored over a five week period (see Table 1). Water table contours are shown on Figure 2. Water table contours are based on water levels measured on February 8, 1985. Ground water flow in the bedrock aquifer is from the northwest corner of the site toward the east and south (Royal Avenue and 46th Streets). Wells MW-14, MW-15 and MW-17 are upgradient of the facility. Wells MW-9, MW-11, MW-12 and MW-13 are downgradient of the facility. Well MW-10 is downgradient of the inactive sludge settler.

DEPTH	ELEVATION	SAMPLES	SAMPLE NO.	CHEM. SMPL	RECOVERY (Inches)	N	SOIL or ROCK CLASSIFICATION	UNIFIED SOIL CLASSIF.	DENSITY (pcf)	WATER CONTENT (Percent)	PERMEABILITY (cm/sec)	MONITOR/PIEZOMETER CONSTRUCTION DETAILS		WATER PROBE READINGS				NOTES
												Water Level		Temp. (°C)	Cond. (µmhos/cm)	Eh (mV)	pH	
												2-1	2-8					
0	571.8		1			7	TOPSOIL											
			2			6	Gray-Green SILT, trace clay, trace sand, trace brick (FILL) (Moist-Loose) becomes wet, firm, contains occasional fine Sand partings and seams 8.5'											
5			3			12												
			4			12												
			5			17												
10			6			15	Red-Brown Silty CLAY (Moist-Stiff) 10.5'											
							Red-Brown Clayey SILT and fine- coarse SAND, little fine gravel (Wet-Medium) 16.7'											
15			7			105												
			8			-												
20			1A	22.00	0.8		Gray Dolostone ROCK, Hard, sound bedded, minor pitting, occasional carbon partings											
			1B	00	0.8													
25							Contains Red Sandstone pebbles											
			2B	95.00	0.2													
30			3B	00	100		Occasional mineral precipitates											
35							Boring Terminated @ 33.0'											

NOTE: See key and explanation to log.	RUN NO.	RECOVERY (Percent)	ROD	Surface Elevation <u>571.8</u>	Project No. <u>BD-84-142</u>	HYDROGEOLOGIC LOG	
				Date Started <u>1-30-85</u>	Project Title <u>Frontier Chemicals</u>	THOMSEN ASSOCIATES	MONITOR NO. MW-9
				Date Completed <u>1-31-85</u>	Location <u>Niagara Falls, NY</u>		
				Number of Installations in Boring <u>1</u>	Classified By <u>A.K. & O.W.</u>	Checked <u>MR-L</u>	
				Method of Installation <u>Hollow Stem Auger</u>			
				NX Core and <u>3 1/2"</u> Roller Bit			Sheet <u>1</u> of <u>1</u>

WELL CONSTRUCTION
Well Screen: 2" ID PVC
0.01" machine
slots
Riser Pipe: 2" ID PVC,
threaded flush
joint

PROTECTIVE CASING
4" ID locking steel pipe

REFERENCE ELEVATION:
573.9 (Top of PVC)

ROCK CORING
Run #1A 16.7'-21.7'
Run #1B 16.7'-26.7'
Run #2B 26.7'-28.7'
Run #3B 28.7'-33.0'
Roller bit from 16.7'-33.0'

NOTES
1. Boring drilled to 21.7'
on 12-17-84 and well
installed with bottom of
well at 20.1'. Rock
cored from 16.7'-21.7'
(Run #1A). Free standing
water at 5.7' before
coring.
2. Boring redrilled deeper
on 1-31-85 and new well
installed. Original well
dry before redrilling.
Rock cored from 16.7'
to 33.0' (Runs #1B, 2B, 3B)

REFERENCE #8

GROUND WATER IN THE NIAGARA FALLS AREA, NEW YORK

With Emphasis
on the
Water-Bearing
Characteristics
of the Bedrock

BY
RICHARD H. JOHNSTON
GEOLOGIST

U.S. GEOLOGICAL SURVEY

STATE OF NEW YORK
CONSERVATION DEPARTMENT
WATER RESOURCES COMMISSION



BULLETIN GW-53

1964

because studies made on the Lockport may contribute to a better understanding of the occurrence of ground water in bedrock generally. The Queenston Shale and Clinton and Albion Groups are poor aquifers in comparison to the Lockport Dolomite, and less is known of their water-bearing characteristics.

LOCKPORT DOLOMITE

Character and extent

The Lockport Dolomite is the uppermost bedrock formation in about one-third of the Niagara Falls area. Its outcrop area extends from the Niagara escarpment on the north to the southern boundary of the area covered by this report except in two small areas that may be underlain by the Salina Group. (See plate 3.) One of these areas is in the vicinity of the hamlet of Nashville and the other is in the extreme southeast corner. Because of a lack of rock outcrops in these areas the position of the contact between the Lockport and the Salina cannot be accurately determined. However, the Salina Group is not discussed as a separate water-bearing unit in this report because at most only a few feet of it occurs in the area. Continuous exposures of the Lockport are found along the gorge of the Niagara River and along the Niagara escarpment. The formation is about 150 feet thick in the southern part of the area but has been eroded to a thickness of only about 20 feet along the escarpment (pl. 2). The excellent exposures at Niagara Falls (fig. 5), where the Lockport forms the lip of the Falls, are shown in many geology textbooks as a classic example of flat-lying sedimentary rocks. Throughout most of the remainder of the area, which is relatively flat, the Lockport is concealed by a thin cover of glacial deposits.

As its name implies, the Lockport Dolomite consists mainly of dolomite; however, the formation also includes thin beds of limestone and shaly dolomite near the base. The Lockport consists of five lithologic types which, from top to bottom, are:

- (a) brownish-gray, coarse- to medium-grained dolomite, locally saccharoidal with thin intervals of curved bedding (algal structures).
- (b) gray to dark-gray, fine-grained dolomite, containing abundant carbonaceous partings.
- (c) tannish-gray, fine-grained dolomite.
- (d) light-gray, coarse-grained limestone containing abundant crinoid fragments (Gasport Limestone Member).
- (e) light-gray shaly dolomite, laminated in part (DeCew Limestone Member of Williams, 1919).

Fisher (1960) divides the Lockport Dolomite into six units based on fossils as well as rock types. An excellent discussion of the stratigraphy of the

Lockport, including measured sections in the Niagara Falls area, is given in the recent thesis by Zenger ^{1/}.

The detailed breakdowns by Fisher and Zenger, although helpful for geologic mapping and correlating the Lockport with rocks of similar age elsewhere, are not necessary in descriptions of the water-bearing properties of the formation. For this purpose the Lockport is subdivided as follows (figure 5 and table 1): (1) upper and middle parts of the Lockport, and (2) lower part of the Lockport, including the Gasport Limestone Member and DeCew Limestone Member of Williams (1919).

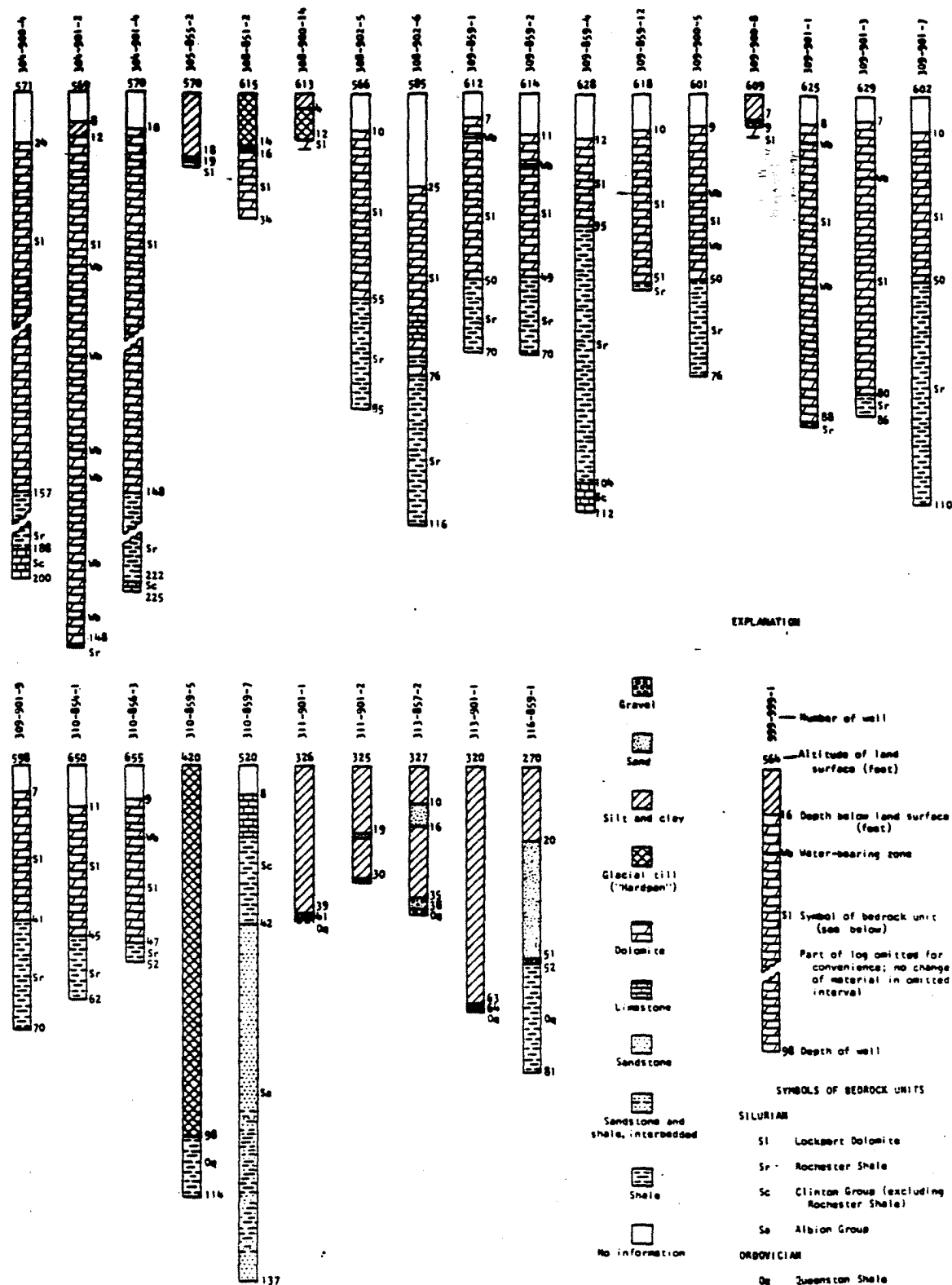
Most of the beds in the Lockport are described as either "thick" (1 foot to 3 feet) or "thin" (1 inch to 1 foot). However, massive beds up to eight feet thick and very thin beds (1/4 to 1 inch) occur within the formation. The bedding is generally straight, but curved bedding occurs in some places in the upper part of the formation. The curved bedding is caused by dome-shaped algal structures called "stromatolites" (Zenger, p. 140). These reefs (bioherms), which occur as lens-like masses up to 50 feet across and 10 to 20 feet thick, contain no bedding.

Gypsum (calcium sulfate) is common in the Lockport, occurring chiefly as small irregularly shaped masses (commonly 1/2 to 5 inches in diameter) and as selenite. Sulfide minerals, particularly sphalerite (zinc sulfide), galena (lead sulfide), and pyrite (iron sulfide) occur as particles disseminated throughout the formation.

Water-bearing openings

Types.--Ground-water occurs in the Lockport Dolomite in three types of openings: (1) bedding joints which constitute at least seven important water-bearing zones, (2) vertical joints, and (3) small cavities from which gypsum has been dissolved. Of these, the bedding joints are the most important and transmit nearly all the water moving through the formation. The three types of openings were observed in the dewatered excavations for the conduits of the Niagara Power Project. (See the description of the power project in the Introduction and the location of the conduits in figure 3.) The rock faces along the four-mile length of the conduits provided an unequalled opportunity to study water-bearing openings in the entire stratigraphic thickness of the Lockport and to observe the lateral extent of these openings for a few thousand feet. At the time the observations were made (July - August 1960), approximately one-third of the length of the conduits was available for inspection by the writer.

^{1/} Zenger, D. H., 1962, Stratigraphy of the Lockport Formation (Silurian) in New York State: Unpublished doctoral thesis, Cornell University.



Location of wells is shown in plates 1 and 2.

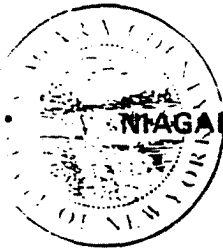
Figure 18.--Graphical logs of wells.

Table 7.--Records of selected wells in the Niagara Falls area (Continued)

Well number	Owner	Year completed	Type of well	Depth of well (feet)	Depth of casing (feet)	Diameter (inches)	Depth to bedrock (feet)	Water-bearing material	Altitude above sea level (feet)	Measuring point		Water level		Yield (gallons per minute)	Use	Remarks
										Description	Position	Below land surface (feet)	Date			
304-051-1	O. Froch	1955	Drl	68	--	6	r60	SI	575	Top of casing	0.9	18.8	10/20/60	68	D	Anal.; H ₂ S; salty; may obtain some water from overlying Salina Group.
304-057-1	Mondt Dairy	1935	Drl	r35	r22	8	r20	SI	570	--	--	--	--	r100	C, U	H ₂ S.
304-900-1	PASNY	1958	Drl	r120	--	12	a10	SI	570	--	--	--	--	>100	Dr	
-4	Hooker Chemical Co.	1935	Drl	r204	r25	r6	r25	SI	s571	--	LS	r22	2/26/36	r>350	I, A	Log; pumped at 150 gpm with 19 ft dd; rT 57; H ₂ S; abandoned because of poor chemical quality.
-5	do.	1907	Drl	r296	--	r8	r18	SI	s571	--	LS	r18	--	r>50	I, A	Pumped at 50 gpm with 37 ft dd; rT 51; H ₂ S; abandoned because of poor chemical quality and inadequate yield.
-6	do.	1910?	Drl	r300	--	r8	r18	SI	s571	--	LS	r18	--	--	I, A	Abandoned because of poor chemical quality and inadequate yield.
304-901-1	E. I. du Pont de Nemours & Co.	1934	Drl	r185	--	r6	r12	SI	s569	--	LS	r17	--	r750	T	
-2	do.	1934	Drl	r140	r14	24, 18	r12	SI	s569	--	LS	r17	2/27/37	2,200	I	Log; anal.; pumped at 1,750 gpm with 78 ft dd; pumped continuously at 1,700-1,800 gpm; rT 50-53 yearly variation.
-3	do.	--	Drl	r110	--	r6	--	SI	570	--	--	--	--	r400	T	
-4	do.	1932	Drl	r225	--	r8	r10	SI	570	--	--	--	--	r70	T	Log; pumped at 70 gpm with 150 ft dd.
-5	Olin Mathieson Chemical Corp.	1936	Drl	r125	r25	24, 18	r10	SI	s570	Center of pressure gage	1.0	p34	12/ 4/61	r3,450	I, U	Pumped at 3,450 gpm with 16 ft dd originally; present yield 1,700-1,800 gpm; yield affected by nearby pumping; rT 50-54.
-6	do.	1947	Drl	r125	r25	20, 19	r10	SI	s570	--	--	--	--	2,100	I	Anal; pumped at 1,900 gpm continuously in 1961; yield affected by nearby pumping; rT 50-54.
-7	do.	1947	Drl	r125	r25	20, 19	r10	SI	570	Center of pressure gage	LS	p78	12/ 4/61	2,100	I	Original static level reported 34 ft below LS; pumped at 2,100 gpm with 21 ft dd; rT 50-54.
-8	do.	1936	Drl	r125	--	r6	r10	SI	570	--	--	--	--	500	T	
305-053-1	F. Loebe	--	Dug, Drl	r50	--	36, 6	r25	Qd, SI	575	Top of brick curbing	LS	11.9	10/20/60	--	S	CI 60 10/20/60; H ₂ S.
-2	R. Licht	--	Dug, Drl	--	--	36, r6	--	SI	580	Top of wall cover	.3	8.8	10/26/60	--	D	CI 42 10/26/60; H ₂ S.
305-055-1	H. Hall	1952	Drl	25	--	6	--	SI	570	Top of casing	.6	7.4	10/20/60	--	D, U	H ₂ S.
-2	do.	1955	Drl	20	r18	6	r19	Qsg, SI	570	do.	1.5	11.1	10/20/60	b15	D, U	Log; aquifer is gravel at top of rock.
305-900-1	PASNY	1958	Drl	139	a20	12	a20	SI	s570	do.	1.0	P, c106.3 d10.4	12/20/60 1/ 5/61	950	Dr, D	Anal.; pt; water level controlled by PASNY conduits; pumped at 950 gpm with 82 ft dd; H ₂ S.
-2	do.	1960	Drl	190	--	6	--	SI	s583	do.	4.2	P, c25.3 d30.6	12/19/60 1/13/60	--	D	PASNY 84 149; water level controlled by PASNY conduits.
-3	Union Carbide Chemical Co.	1940	Drl	r100	r6	r6	r4	SI	s577	Floor level	2.0	r28	1940	>100	I, A	Anal.; pumped at 86 gpm with 4 ft dd; rT 52; H ₂ S; salty; abandoned because of poor chemical quality.
305-902-1	A. Spallino	1959	Drl	r110	--	8	a3	SI	595	--	--	--	--	r>100	C	
-2	do.	1961	Drl	113	3	6	3	SI	595	Top of rock surface	-3.0	82.8	9/12/61	b20	Dr	
305-903-1	Catact Theatre Corp.	1936	Drl	r112	r19	8	r12	SI	570	Center of pressure gage	-7.5	33	9/12/61	>250	C	Pumped at 250 gpm with 31 ft dd; T 62 9/12/61.
-2	S. S. Kroeger Co.	1938	Drl	r140	--	8	a4	SI	570	--	--	--	--	r90	C	rT 56 11/43; inadequate in summer.
306-053-1	E. Loeb	1952	Drl	49	r40	6	r40	SI	580	Top of casing	1.0	6.3	10/26/60	--	D	CI 45 10/26/60.

REFERENCE #9

0001-B
02-0511-01/NYES



NIAGARA COUNTY

HEALTH DEPARTMENT
HUMAN RESOURCES BUILDING
MAIN POST OFFICE BOX 428
10th AND EAST FALLS STREET
NIAGARA FALLS, NEW YORK 14302

October 24, 1985

Mr. Gary Rojek
NUS Corporation
Raritan Plaza
Fieldcrest Avenue
Edison, New Jersey 08837

RE: File on Sabre Park

Dear Mr. Rojek:

Attached to this letter is the information you asked Mike Hopkins for on October 16, 1985 regarding the Sabre Park site in Niagara Falls, NY.

Please call if you have any questions regarding this material at 716-284-3128.

Sincerely,

A handwritten signature in cursive script that reads "Paul R. Dicky".

Paul R. Dicky
Assistant Public Health Engineer

PRD:cs
Enclosure

cc: Mr. Steve Luftig/USEPA
Mr. M. Hopkins



NIAGARA COUNTY

HEALTH DEPARTMENT
HUMAN RESOURCES BUILDING
MAIN POST OFFICE BOX 428
10th AND EAST FALLS STREET
NIAGARA FALLS, NEW YORK 14302

October 3, 1978

John J. Gross, Jr.
Plumbing & Heating
2104 Niagara Street
Niagara Falls, New York 14303

Re: Contamination of Sabre Park
Construction Area with Fill
Containing Toxic Chemicals-
Third Avenue near Military Rd.
Town of Niagara

Dear Mr. Gross:

You are undoubtedly aware that this Department found soil, stone and concrete, which appeared to be contaminated with toxic chemicals dumped and being dumped on property allegedly owned by you and with your permission. The property is generally described as Sabre Park and adjacent property. Our investigation dates from September 27, 1978, and involves approximately forty (40) truckloads; Hooker agreed to remove the contaminated fill on September 28, 1978, to Newco secure landfill.

Approximately twelve (12) soil samples were taken by this Department to determine the extent of contaminated soil and rubble. These samples will be analyzed as soon as possible.

At the time of our investigation, it was noted that construction crews were installing and had installed water and sewer lines on land adjacent to the area where contaminated fill was dumped.

You are advised by this Department to cease all construction activity in this and adjacent areas until results of the soil samples show the absence of toxic chemicals. We are confident that you are aware of the

continued.....

October 3, 1978

public health problems that could result from constructing homes and home sites on or near land contaminated with chemicals. Water lines, sewer lines, foundation pads and other related construction may have to be removed or abandoned in place, if the area continues to be contaminated and occupancy is denied for public health reasons.

This Department will keep you advised of its analytical findings and solicits your full cooperation in this matter.

Very truly yours,



George R. Amery, P.E.
Sr. Public Health Engineer

GRA/kab

cc: Dr. Francis J. Clifford
Mr. Ernest R. Gedeon
Mr. W. M. Friedman, P.E. - R90

NIAGARA COUNTY HEALTH DEPARTMENT

MEMORANDUM

October 3, 1978

MEMO TO: Mr. M. Popovici
COPY TO: ~~Mr. J. Malinchock~~/Sabre Park File
FROM: Mr. M. N. Vaughan

Pursuant to an ongoing investigation being conducted by Mr. Malinchock's division, concerning contaminated material from Hooker that was deposited at Sabre Park Trailer Court, this writer would like to convey the following:

Attached you will find a copy of Mr. Malinchock's investigation and I wish to include the following.

Mr. Zaccarella, who was in receipt of a verbal complaint concerning a woman who stated she contracted redness of the skin while gardening at 118 Sabre Park. The report does not contain the location of 118 Sabre Park to the relative proximity to the recent illicit dumping. It would appear that this incident occurred prior to the current dumping. I offer the following as the suggested course of action:

1. That a door-to-door canvass be conducted to determine if any other individuals experienced any phenomenon related to chemicals in their backyards.
2. That core samples be taken in the area immediately north and west of the current illicit dumping site to determine if other materials of a chemical nature had been deposited at the site and sampled if necessary.
3. All ongoing trenching for water and sewer be observed to determine if any substances out of the ordinary are encountered.

MNV:cs
Enclosure

hooker specialty chemicals DIVISION

NIAGARA FALLS, NEW YORK 14302, PHONE (716) 278-7777

October 11, 1978

Mr. John Malinchock
Deputy Chief for Air Pollution Control
Niagara County Health Dept
P O Box 428
Niagara Falls, New York 14302

Dear Mr. Malinchock:

This letter is in response to your request for a report outlining facts leading up to and final resolution of the incident involving the deposit of excavated material adjacent to Sabre Park and on a lot near 13th Street.

Amherst Paving is under contract to Hooker to do paving work in connection with the construction program to expand and modernize Hooker's caustic soda and chlorine facilities at the Niagara Plant. While excavated materials were being removed and disposed of by Amherst Paving, several loads of contaminated soil, which were intended to go to a secure landfill, were inadvertently included in the loads of uncontaminated soil disposed of by the contractor. When Hooker was notified by your office of this situation, we immediately took steps as outlined below, to have all excavated materials removed from the locations where deposited by the contractor, and transferred to a secure landfill.

Sept 27 - Hooker was notified late in the day by NCHD of odor complaints from residents of Sabre Park regarding landfilled soil on vacant land near their trailer sites. Arrangements were made to meet at the site the following morning.

Sept 28 - J Glattly met with J Malinchock at the Sabre Park site along with the Hooker field construction supervisor and a representative of Amherst Paving Company. The material was identified as excavated pavement, gravel and soil which had been scraped from roadways at the Niagara Plant in preparation for new pavement. The paving contractor and the Hooker construction supervisor were instructed by J Glattly to remove all material deposited by Amherst Paving and haul it to Newco for approved disposal.

Samples were taken by NCHD and Hooker for analysis. Earth moving equipment was brought to the site and work started immediately.

Hooker

Page 2
John Malinchock - NCHD

Sept 29 - A NCHD representative and J Glattly inspected the 13th Street site. This material consisted mainly of clean slag used during construction. NCHD indicated they would be sampling the material. Hooker also has sampled the site.

Oct 9 - All of the original soil plus some additional material hauled to the Sabre Park site has been removed and delivered to Newco. The total quantity removed was approximately 2800 tons.

All the material deposited on the lot near 13th Street was scheduled for removal on this day and work was started and completed as scheduled. This material, which amounted to 350 tons, was also hauled to Newco for disposal.

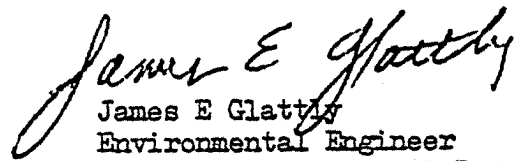
It is the policy of the Niagara Plant to approve the disposition of all excavated material prior to removal from the plant. As the result of an oversight by our Corporate Engineering group to consult with and obtain the approval of the plant Environmental Control Department, this policy was not followed. Steps have been taken to insure that all project personnel are aware of and comply with the Niagara Plant Standard Operating Procedure concerning disposal.

The excavated soil and gravel has been hauled to Newco and placed in a secure landfill. However, it is our belief that most of this material was not grossly contaminated as evidenced by on site inspection indicating that odors were essentially localized and there were no visible signs of soil discolored by chemicals.

In view of the reinforcement of our plant procedures, we fully expect that such an occurrence will not be repeated in the future.

Please feel free to contact me should you have any questions.

Very truly yours,


James E Glattly
Environmental Engineer
Environmental Control Department

JEG/cl

cc: Jim Walsh - Town of Niagara

NIAGARA COUNTY HEALTH DEPARTMENT

MEMORANDUM

October 12, 1978

TO: Mr. Ernest Gadeon
FROM: Mr. John Malinchock
RE: Saber Park Incident of 9/27/78

Please find attached to this memorandum Mr. A. Zaccarella's field report and resampling report of 10/10/78. As you will note, Hooker Chemical Company claims to have removed all material that was disposed of at this location.

Be advised that unless otherwise informed, I am planning to ship this second set of samples to Racra for analysis.

In addition, I was contacted by phone on 10/10/78 by Racra and the following information concerning analysis of samples taken on 9/28/78 by this department was given:

<u>Sample Number</u>	<u>TCH in Microgram/Gram</u>
#2	1.27
#3	7.67
#4	15.4
#8	11.4
#9	1,170
#11	1,060

Note that all samples were run on a dry bases and that Lindane was used as a standard.

Racra is in the process of forwarding you a written copy of the report on said samples.

Please advise on the next course of action that you would like regarding this matter.

JM/kb
copies to: G. Amery

ANALYTICAL REPORT
NIAGARA COUNTY HEALTH DEPARTMENT
TOTAL CHLORINATED HYDROCARBONS IN SOILS

Samples Received: 10/3/78 & 10/12/78

Report Date: 10/24/78

*SAMPLE IDENTIFICATION	TOTAL CHLORINATED HYDROCARBONS	
	µg/g (dry)	µg/g (dry)
	AS LINDANE	AS CHLORINE; LINDANE STANDARD
2	1.27	0.930
3	7.67	5.61
3A	22.1	16.2
4	15.4	11.3
7A	1.18	0.864
8	11.4	8.34
8A	0.382	0.280
9	1170	856
11	1060	776
148	0.211	0.154
150	55.7	40.8

*Sample Identification numbers were assigned by Niagara County Health Department Personnel.

COMMENTS: Samples 2, 3, 4, 8, 9 and 11 were received on 10/3/78 and were reported in communications dated 10/12/78. The remaining samples were received on 10/12/78. The difference between "Lindane" and "Chlorine; Lindane Standard" is the amount of Chlorine in Lindane (73.2%).



FOR RECRA RESEARCH, INC.

Rohit K. Lyeth

DATE 10/25/78

RECRA RESEARCH, INC. 111 Wales Avenue/Tonawanda, New York 14150/(716) 692-7620
TOTAL CHEMICAL WASTE MANAGEMENT THROUGH APPLIED RESEARCH

ANALYTICAL REPORT
NIAGARA COUNTY HEALTH DEPARTMENT
TOTAL CHLORINATED HYDROCARBONS IN SOILS

Samples Received: 10/3/78

Report Date : 10/12/78

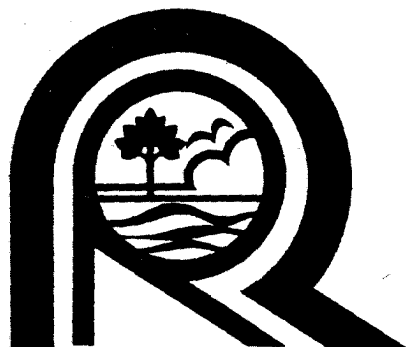
SAMPLE IDENTIFICATION	UNITS OF MEASURE	TOTAL CHLORINATED HYDROCARBONS
2	µg/g (dry) as Lindane	1.27
3	µg/g (dry) as Lindane	7.67
4	µg/g (dry) as Lindane	15.4
8	µg/g (dry) as Lindane	11.4
9	µg/g (dry) as Lindane	1170
11	µg/g (dry) as Lindane	1060

COMMENTS:

Sample identification numbers were assigned by Niagara County Health Department personnel.

FOR RECRA RESEARCH, INC. *Robert K. Wyzeth*

DATE 10-12-78



RECRA RESEARCH, INC. 111 Wales Avenue / Tonawanda, New York 14150 / (716) 692-7620
TOTAL CHEMICAL WASTE MANAGEMENT THROUGH APPLIED RESEARCH

October 12, 1978

Mr. John Malinchock
Niagara County Health Department
10th-East Falls Street
Niagara Falls, New York 14303

Re: Results of Soil Analyses

Dear Mr. Malinchock,

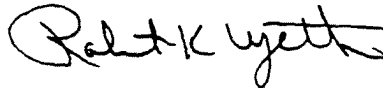
Please find enclosed Recra Research, Inc.'s analyses of soil samples received at our laboratories on 10/3/78.

Samples were analyzed for Total Chlorinated Hydrocarbons. This particular analysis is a screening test where individual constituents are not identified nor quantified. The results include those materials (basically chlorinated and other halogenated organics) which respond to electron capture detection. The compound C-56 is believed to be present in very high quantities in Sample #9 and #11. Recra will quantify this constituent and will report our findings.

If you have any questions concerning these data do not hesitate to contact the undersigned.

Sincerely,

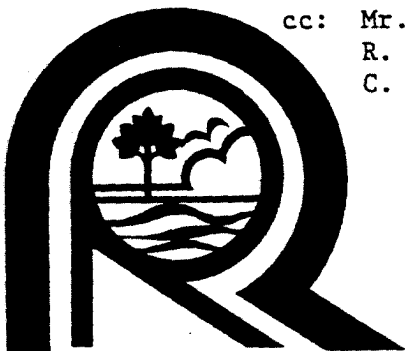
RECRA RESEARCH, INC.



Robert K. Wyeth
Laboratory Director

RKW:df

cc: Mr. Ernie Gedeon
R. A. Stadelmaier
C. J. Stellrecht



RECRA RESEARCH, INC. 111 Wales Avenue / Tonawanda, New York 14150 / (716) 692-7620
TOTAL CHEMICAL WASTE MANAGEMENT THROUGH APPLIED RESEARCH

NIAGARA COUNTY HEALTH DEPARTMENT

MEMORANDUM

October 24, 1978

TO: Mr. Ernest Gedeon
FROM: Mr. John Malinchock *JM*
RE: Sabre Park Incident of 9/27/78 (update)

On October 10, 1978, Mr. A. Zaccarella resampled the Sabre Park area. Sample numbers 3A, 8A and 7A (see attached map) were sent to Recra Research for analysis.

On Friday, October 20, 1978, Mr. Robert K. Wyeth of Recra phoned me with the following results:

<u>Sample Number</u>	<u>TCH in micrograms/gram</u>
3A	11.8
7A	0.864
8A	0.280

In addition, a sample numbered 148 was also forwarded for analysis. This sample was obtained at the residence of Mrs. Ruby Sawyer, 148 Sabre Park, Town of Niagara, New York. On 10/3/78, Mrs. Sawyer had complained that she had suffered redness of the skin while working in her garden during the spring of 1978. Analysis reported by Recra on 10/20/78 revealed 0.154 micrograms/gram TCH.

Also at this time, a 5th sample, identified as sample number 150, was forwarded for analysis. This sample was taken on 10/10/78 from a vacant lot on 13th Street off Buffalo Avenue. Analysis reported by phone indicated 40.8 micrograms/gram TCH.

Recra is in the process of forwarding a written report on these samples.

Please advise as to the next course of action you would like regarding this matter.

JM/kb

cc: Mr. George Amery

October 24, 1978

Mr. John Malinchock
Niagara County Health Department
10th and East Falls Street
Niagara Falls, New York 14303

Re: Results of Soil Analyses

Dear Mr. Malinchock,

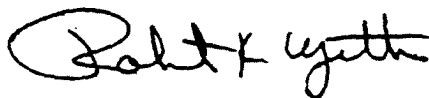
Please find enclosed Recra Research, Inc.'s analyses of soil samples received at our laboratories on 10/3/78 and 10/12/78.

Samples were analyzed for Total Chlorinated Hydrocarbons. This particular analysis is a screening test where individual constituents are not identified nor quantified. The results include those materials (basically chlorinated and other halogenated organics) which respond to electron capture detection. Per our telephone conversation of this afternoon the results of all eleven analyses are presented and are reported in $\mu\text{g/g}$ (dry) as Lindane and as Chlorine; Lindane Standard.

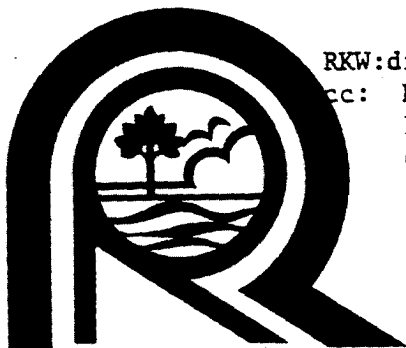
If you have any questions concerning these data do not hesitate to contact the undersigned.

Sincerely,

RECRA RESEARCH, INC.



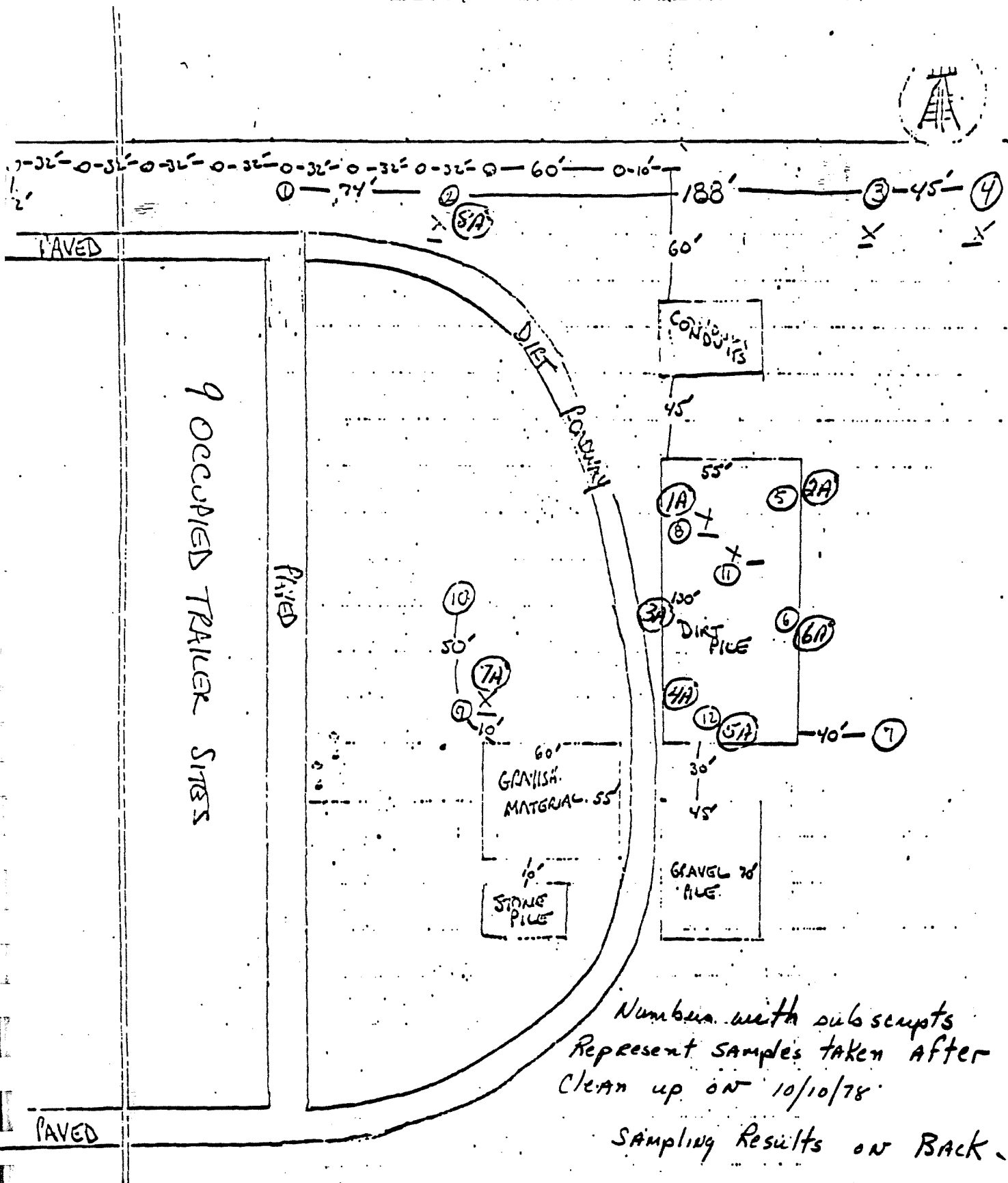
Robert K. Wyeth
Laboratory Director



RKW:df

cc: Mr. Ernie Gedeon
R. A. Stadelmaier
C. J. Stellrecht

RECRA RESEARCH, INC. 111 Wales Avenue/Tonawanda, New York 14150/(716) 692-7620
TOTAL CHEMICAL WASTE MANAGEMENT THROUGH APPLIED RESEARCH



**NIAGARA COUNTY
DEPARTMENT OF HEALTH**

Code Location

Service Request No.

Date Received Complaint 9/27

Request Order from Soil being dumped
 or of Complaint Mrs Conmy Address 154 - Sable Park Tr. of N.Y.
Sable Park Address Third Ave Tr. of N.Y.
 at Address

Hours

REPORT OF INVESTIGATION

Mrs Conmy has complained of soil having an odor. She has taken a soil sample to the N.Y. State Health Dept at 99th St School. They have referred her to our department for further investigation.

9/27/38 2:30 PM I was shown the area in question by Mrs Conmy. She told me that the soil was dumped here recently by red a blue truck. There was a definite chemical odor coming from the pile of soil.

While investigating the area a blue truck with the name Williams on the door pulled up to the site and dumped a fresh load of soil.

I identified myself to the driver and questioned him and found that the soil is from construction of new roads within Hooker. They had been sub-contracted to haul the soil by Linhart Bros who is doing the roadwork for Hooker. I asked the driver who gave him permission to dump the soil on Sable Park property and I was told that Mr Gross (new owner of Sable Park) gave permission for need of job.

G. J. Escarell

Date Abated

By

**NIAGARA COUNTY
DEPARTMENT OF HEALTH**

Code Activity

Code Location

Service Request No.

Date Received Complaint 9/27/78

Service Request Contaminated Soil from Hooker Chemical Co.
 Originator of Complaint Mrs. Conny Address 154 - Sabar Park Tr. Hwy. N.Y.
 Owner Mr. John Gross Address Main office Sabar Park Tr. Hwy. N.Y.
 Occupant None Address None

REPORT OF INVESTIGATION

e	Hours	
128	3:00 PM	Having been informed of Mrs. Conny's complaint by Mr. A. Zaccarella of this Department and the possibility that soil contaminated with organic hydrocarbons was being used to fill in low areas prior to the construction of trailer park roads I contacted Mr. B. Cammer of Hooker Chemical Co. He advised me that he was unaware of material being trucked from Hooker Chemical but would investigate immediately. Mr. Cammer was notified that if indeed they were hauling material to Sabar Park they would to <u>cease immediately</u>. Mr. J. Amery of this Department was advised and agreed to contact Mr. F. Olarka of Hooker and also notified Mr. J. Mc Mahon of the Region 9 Office of the NY State Dept of Environmental Conservation.
9/27/78	3:45 PM	Mr. Cammer returned the call and stated that Robert Pansy was reconstructing roads within the plant and had trucked material from the app area of the Central Maintenance Shop to the Park. This as advised has been stopped. Mr. Cammer was informed that the contaminated material must be removed and it was agreed that tomorrow morning at app 9:00 Sept 28, 1978 a meeting would be held at.

Date Abated 9/27/78 By John Chelimbong

**NIAGARA COUNTY
DEPARTMENT OF HEALTH**

Page 3
Code Activity
Code Location
Service Request No.
Date Received Complaint 9/27/78

Service Request Contaminated Soil from Hooker Chemical Co.
Originator of Complaint Mrs. Conny Address 154- Saben Park Tr Way N.Y.
Owner Mrs. V. Gross Address Same Office Saben Park Tr Way N.Y.
Occupant none Address None

Date	Hours	REPORT OF INVESTIGATION
9/27/78		Saben Park to determine the first step of the remedial action. Mrs. V. Gross & family of Hooker should be present at this meeting and participate in the remedial action.
9/27/78	4:10 PM	Mrs. J. Conny has contacted Mrs. V. Mc Mahon advised her of Mrs. Zaccarella's furnishing my information from Hooker and the meeting to take place Thursday morning. Mrs. Conny has advised me that the Regional Office will not be present at the meeting Thursday and that we have to proceed forward with necessary action. 9/27/78 John C. Hylbush
9/28/78	9:30 AM	Myself and Mr. R. Carter of this department examined the area in question and found that extensive filling and grading has taken place along the southern portion of the Saben Park area. Water lines sewer lines have been installed along the eastern end of the property and along the southern section of the Park. The material deposited by Hooker is approx 400 ft south of this area (See map in back) however because of extensive grading in areas the possibility exists that some trash pads under construction may have been filled with contaminated material. Examination of bulk dug soil along the southern end by physical means (sight, smell) indicates this is a possibility. Date Abated <u>9/28/78</u> By <u>John C. Hylbush</u>

Code Activity

Code Location

Service Request No.

Date Received Complaint ...3/1

Occupant

Address

..... Address

9/29/78 Mrs. Sarge showed the area in front of her
house where she built ~~the~~ and received the
redness of skin. Mrs. Sarge is an RA and
said that it was neither a rash nor a burn.
She has never treated her land with any
chemicals of any sort nor fertilizers.
She also recently found when digging in the
yard a rock covered with a black gummy
substance. She would like us to take samples
of both areas.

A. J. Green

Date Abared..... By.....

**NIAGARA COUNTY
DEPARTMENT OF HEALTH**

Code Activity

Code Location

Service Request No.

Date Received Complaint 9/27/78

Contaminated Soil from Hooker Chemical Co.
 Complaint Mr. Conway Address 154- Sahar Park Tr. Way N.Y.
John Lian Address 7400 Office Sahar Park Tr. Way N.Y.
None Address None

REPORT OF INVESTIGATION

75

1130 AM Contacted by Mr. J. Glably of Hooker Chemical who explained that the material was from Hooker Chemical Co and that approx 40 truck load had been piled in this area. The material is being handled through subcontract by Ambust Conway and had been brought here to be used as fill. This was not where it should have been brought and that Hooker system for examining material prior to removal from the plant had apparently not worked. The material should have gone to New Co.

Mr. Glably explained if there were not some way to determine what material was to be removed. He was advised that he would remove all the material that had been deposited in the area. It was further explained that it had rained heavily the night before and consequently he would have to excavate at least 6" beyond the bottom area of the pile. Additionally this Department would have a soil sampling crew in the area this afternoon to take samples not only of the piled material but also of the remaining unoccupied area to determine if some of the material which had been piled had already been spread.

At this time two soil samples were taken from piled material labeled and identifiable.

Date Abated 9/28/78

By [Signature]

**NIAGARA COUNTY
DEPARTMENT OF HEALTH**

Code Activity

Code Location

Service Request No.

Date Received Complaint

Complaint Contaminated Soil from Hooker Chemical Co.
 of Complaint Mrs. Conway Address 154 Saker Park Tr. Hwy. 21, N.Y.
Ma. Silva Dias Address Main Office Saker Park Tr. Hwy. 21, N.Y.
name Address name

ours

REPORT OF INVESTIGATION

9/28/78 Mr. J. Blatky has explained that equipment is being brought to the scene and that removal will commence immediately.

12:00 PM Mr. Conway has been advised of our findings by Mr. Curtiss and myself. The soil sampling crew will draw samples from the undeveloped area currently being developed areas. In light of turn around time of the samples will be sent to a private lab for analysis.

9/28 3:00 PM App 4-5 truck loads of material have been removed to Hooker Chemical Waste for interment in the Secure Landfill. Mr. Conway has advised this department that Robert Parley has also placed some possibly contaminated material ^{on property} removed by J. Grass and Buffalo Ave across the street from the New Sewage Treatment Plant. Mr. A. Zaccaria is to examine property with Mr. Blatky on 9/30/78.

Respected Saker Park Property equipment actively engaged in removing contaminated site.

Local laboratories have been contacted and arrangements are being made to have samples shipped and analyzed.

Date Abated 9/29/78

By J. C. [Signature]

**NIAGARA COUNTY
DEPARTMENT OF HEALTH**

Code Activity
Code Location
Service Request No.
Date Received Complaint

Request Dogs died after digging in soil
Reporter of Complaint Bruno Campigano Address 204 Sabine Park (297-4849)
Ant Campigano Address

Hours

REPORT OF INVESTIGATION

Received call from Love Canal office to refer complaint from Mr Campigano

I called Mrs Campigano, she told me that:

- 1) Two dogs have died after digging in soil near home.
- 2) Mr Campigano had four samples "tested" The highest concentration was "3900 ppb" organisms.

I told her that I would be out to their home tomorrow to examine the soil and the laboratory results.

12/20/85

I met Mrs Campigano at her home. She provided me with the following information:

- 1) The results of analysis of samples collected by Mr Campigano are

TOC	#	mg/kg	pH
	*1	3900	8.6
	*2	930	7.9
	*3	610	7.9
	*4	640	7.8

- 2) The two dogs which died were both huskies age 4 and 6 months. Both died within 10 days of each other and both after digging holes in the ground near the house.

Date Abated

By

NIAGARA COUNTY DEPARTMENT OF HEALTH

Code Activity.....
Code Location.....
Service Request No.
Date Received Complaint.....

Request Dead Dog
for of Complaint..... Address.....
..... Address.....
nt..... Address.....

Hours

REPORT OF INVESTIGATION

3) A third dog, which reportedly did not dig hole, did not lie

4) The veterinarian who examined the first dead dog thought that it died of Parvo, however the second had been ~~injected~~ immunized against Parvo

I examined the soil in the yard. Traces of stone and gravel indicate man made fill, however no odors or obvious visual evidence of toxic substances was found

I intend to call back at $\approx$ 5:30 after Mr. Campagna returns from work.

M. H. H. H.

6/13

I spoke with Mr. Campagna. I told him that:

1) The results of TOC analysis say very little about the presence or absence of contaminants in the soil.

2) The TOC results appear to be within conceivable background ranges except for 3.50 mg/kg in sample #9 although this number is not considered to be highly elevated

Date Abated..... By.....



NIAGARA COUNTY

HEALTH DEPARTMENT
HUMAN RESOURCES BUILDING
MAIN POST OFFICE BOX 428
10th AND EAST FALLS STREET
NIAGARA FALLS, NEW YORK 14302

September 24, 1985

Mr. and Mrs. Campigano
204 Sabre Park
Niagara Falls, NY 14304

Dear Mr. and Mrs. Campigano:

Attached are the results of the analyses of a soil sample composited from your property. The results show no detectable level of halogenated organic compounds.

Our investigation has resulted in the following conclusions:

1. An area near your lot was filled with demolition debris from an industrial source in the 1970's. Our files indicate that this material was excavated and removed in 1978.
2. The results of the Total Organic Carbon and pH analysis of soil samples which you obtained indicates that the TOC concentrations are higher than expected in one sample but are not necessarily elevated above natural background. These results do not necessarily indicate that contaminants are present in the soil.
3. The results of the Total Halogenated Organics analyses of a soil sample composited from surface soils by this department found no detectable concentration of halogenated organics. This result indicates that it is unlikely that significant concentrations of halogenated compounds are present in the soil.
4. Based on 1, 2 and 3 above, it appears unlikely that significant concentrations of toxic contaminants are present on your lot resulting from former disposal activities in the area. However, the results are not completely adequate to state absolutely that no significant contamination is present. Therefore, we feel that additional investigation to verify this assumption would be appropriate.

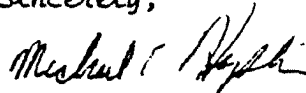
Mr. and Mrs. Campigano
Sabre Park
Niagara Falls, NY 14304

We wish to strongly emphasize that although we have recommended that additional investigation be conducted, we do not anticipate that significant contamination is present; however, additional work would be needed to confirm this.

Unfortunately, this department does not possess the resources to further pursue this matter. Therefore, we have requested that the United States Environmental Protection Agency perform a site investigation in this area similar to those which they have recently performed in several nearby areas. We have not yet received a response from EPA.

Please feel free to contact me with any questions regarding the analytical results on this letter at 284-3128.

Sincerely,



Michael E. Hopkins
Ass't. Public Health Engineer

MEH:cs
Attach.

cc: Messrs. J. A. Kehoe & M. N. Vaughan
Mr. Steve Luftig/EPA
Mr. Peter Buechi/DEC-9
Dr. G. Anders Carlson/DOH-Albany

ANALYSIS OF ONE (1) SOIL SAMPLE
TOTAL HALOGENATED ORGANICS

Report Prepared For
NIAGARA COUNTY HEALTH DEPARTMENT
By
ADVANCED ENVIRONMENTAL SYSTEMS, INC.

Leonard Borzynski
Leonard Borzynski
Technical Evaluation

September 11, 1985
AES Report BIP

ANALYTICAL METHODOLOGIES REFERENCE LIST

Routine Analyses are Performed in Accordance with Protocols Found in the Following Numbered Sources. These Numbers Correspond to those Listed in the Laboratory Report Under the Reference ("REF") Column.

- 1 - EPA 600/D-80-021, "Guidelines Establishing Test Procedures for the Analysis of Pollutants; Proposed Regulations", Federal Register 44(233), December 3, 1979.
- 2 - EPA 600/D-80-022, "Guidelines Establishing Test Procedures for the Analysis of Pollutants; Proposed Regulations, Correction", Federal Register 44(244), December 18, 1979.
- 3 - EPA 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", (1983)
- 4 - EPA 600/4-79-057, "Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater", (1982)
- 5 - EPA-SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", second edition (1982)
- 6 - "Standard Methods for the Examination of Water and Wastewater", 15th Edition, (1980)
- 7 - New York State Institute of Toxicology Analytical Handbook, October 1982
- 8 - NIOSH Manual of Analytical Methods, second edition 1977
- 9 - "The Analysis of Polychlorinated Biphenyls in Transformer Fluid and Waste Oil", EPA Environmental Monitoring and Support Laboratory, draft, June 24, 1980
- 10 - "Approved Analytical Procedures for Determining the Content of Constituents Banned from Landburial" (New York State D. E. C., Division of Solid and Hazardous Waste), Jan. 1985.
- 11 - EPA 600/4-81-055, "Interim Methods for the Sampling and Analysis of Priority Pollutants in Sediments and Fish Tissue", Revised Jan. 7, 1983

ADVANCED ENVIRONMENTAL SYSTEMS, INC.
LABORATORY REPORT

=====

TYPE OF ANALYSIS: THO SCAN
UNITS OF MEASURE: MILLIGRAMS/KILOGRAM, OR PPM (DRY WEIGHT)
CLIENT: NIAGARA COUNTY A.E.S. JOB CODE 01BIP

ANALYSIS	METHOD	REF	DETERMINABLE LIMITS	SAMPLE IDENTIFICATION
				2330
				8-22-A
				10:00 am
				8-22-85
TOTAL HALOGENATED ORGANICS	310-7	7	2.5	BDL*

*Below determinable limits:



-SUSAN C. SCROCCHI
G. C. SUPERVISOR

ADVANCED ENVIRONMENTAL SYSTEMS, INC.
LABORATORY REPORT

=====

TYPE OF ANALYSIS: THO SCAN - DUPLICATE
UNITS OF MEASURE: MILLIGRAM/KILOGRAM, OR PPM (DRY WEIGHT)
CLIENT: NIAGARA COUNTY A.E.S. JOB CODE 01BIP

ANALYSIS	SAMPLE	ORIGINAL CONC.	DUPL. CONC.	AVERAGE CONC.	RANGE	REL. % DIFF.
TOTAL HALOGENATED ORGANICS	2330	<2.5	<2.5	NA*	NA	NA

Relative Percent Difference =
Range/Average X 100
*Not applicable.

ADVANCED ENVIRONMENTAL SYSTEMS, INC.
LABORATORY REPORT

=====

TYPE OF ANALYSIS: THO SCAN - TEST CONTROL
UNITS OF MEASURE: MILLIGRAM/KILOGRAM, OR PPM (DRY WEIGHT)
CLIENT: NIAGARA COUNTY A.E.S. JOB CODE 01BIP

ANALYSIS	TYPE	ORIGINAL CONC.	ADDED CONC.	EXPECTED CONC.	REPORTED CONC.	PERCENT RECOVERY	95% CONFIDENCE INTERVAL
LINDANE	SPK	<2.5	210	210	199	94.8	NA*

*Not available.

**NIAGARA COUNTY
DEPARTMENT OF HEALTH**

Code Location

Service Request No.

Date Received Complaint 9/27

Service Request

Originator of Complaint

Address

Owner

Address

Occupant

Address

Order from Soil being dumped

Mrs Conmy

154 - Lake Park Tr. & Hwy

Lake Park

Third ave Tr. & Hwy

REPORT OF INVESTIGATION

Hours

Mrs Conmy has complained of soil having an odor. She has taken a soil sample to the N.Y. State Health Dept at 99th St School. They have referred her to our department for further investigation.

9/27/78

I was shown the area in question by Mrs Conmy. She told me that the soil was dumped here recently by red a blue truck. There was a distinct chemical odor coming from the pile of soil.

While investigating the area a blue truck with the name Williams on the door pulled up to the site and dumped a fresh load of soil.

I identified myself to the driver and questioned him and found that the soil is from construction of new roads within Hooker. They had been sub-contracted to haul the soil by Linhart Bros who is doing the roadwork for Hooker. I asked the driver who gave him permission to dump the soil on Lake Park property and I was told that Mr Gross (owner of Lake Park) gave permission for need of pit.

A. J. Escanell

Date Abated

By



NIAGARA COUNTY

HEALTH DEPARTMENT
HUMAN RESOURCES BUILDING
MAIN POST OFFICE BOX 428
10th AND EAST FALLS STREET
NIAGARA FALLS, NEW YORK 14302

September 20, 1985

Mr. Stephen Luftig, P.E.
Deputy Director
Emergency and Remedial Response Division
United States Environmental Protection Agency
26 Federal Plaza
New York, New York 10278

RE: Request for Site Investigation
Sabre Park
Town of Niagara - New York

Dear Mr. Luftig:

This department has recently become involved with investigation of a complaint from a resident of the Sabre Park Trailer Park in the Town of Niagara regarding reports of past dumping of contaminated demolition debris in this area in the 1970's. Our investigation indicates that such material was disposed of in this area although much or all of the material may have been subsequently removed. We are unable to verify whether or not all of the contaminated material has been removed.

Since this area is located in the vicinity of the CECOS and Necco Park landfills and is less than 300 feet from the 64th Street north disposal area, we feel that it would be appropriate to conduct a site investigation in this area similar to the site investigations performed at other potential disposal sites in this area. We are requesting that EPA have such an investigation conducted.

We have already discussed this matter with Mr. Charles Dolan of EPA and Mr. Dolan was given an opportunity to examine our file on this matter. We will be happy to provide additional information upon request.

Please feel free to contact me with any questions (716-284-3126).

Sincerely,

Michael E. Hopkins
Ass't. Public Health Engineer

MEH:cs

cc: Dr. Carlson/DOH-Albany
Mr. P. Buechi/DEC-9
Mr. J. A. Kehoe

REFERENCE # 10

DRAFT
GRAPHICAL EXPOSURE MODELING SYSTEM
(GEMS)
USER'S GUIDE

Prepared for:

**U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF PESTICIDES AND TOXIC SUBSTANCES
EXPOSURE EVALUATION DIVISION
Task No. 4**

**Contract No. 68016618
William Wood - Project Officer
Loren Hall - Task Manager**

Prepared by:

**GENERAL SOFTWARE CORPORATION
8401 Corporate Drive
Landover, Maryland 20785**

Submitted: June 25, 1984

parameters: agriculture, climate, vegetation, forestry, air quality, land, natural areas, population, water quality, terrain (soils) and wildlife.

GAGE

The GAGE dataset contains primarily stream flow rates monitored consistently by approximately 99,500 stream gaging stations throughout the country, and some estimated flows.

IFDDIR

IFDDIR contains industrial facility data for approximately 28,000 direct dischargers excluding publicly owned treatment works (POTWs).

IFDIND

IFDIND contains limited industrial facility data for approximately 12,000 indirect dischargers which discharge through other facilities, usually POTWs.

**Master Area Reference File
(MARF) 1980 census**

This dataset contains a variety of location identification information, population count by race, the number of occupied and owner-occupied

TABLE 2-2. GEMS Datasets (Continued)

<u>DATASET NAME</u>	<u>DESCRIPTION</u>
	number of families for all the enumeration district/block groups for continental USA, Hawaii, and Alaska.
Meteorological Data	Several meteorological data files are contained in this category: (1) the Stability Tabular Array (STAR) data file has meteorological data for 394 first order weather stations in the continental USA, (2) A master index file (STARSEL), and (3) An auxiliary file (AUX).
Publicly Owned Treatment Works (POTWs)	This dataset contains 1982 survey data on the unit treatment process, the influent and effluent and hour rates, and the population served by 33,000 publicly owned treatment works around the country.

MASTER AREA REFERENCE FILE (MARF) OF THE 1980 CENSUS

Source

The Master Area Reference File (MARF) is a proprietary product of Donnelly Marketing, Inc., a subsidiary of Dunn and Bradstreet, and is available only to EPA users and to contractors engaged in EPA projects.

Description

The complete corrected MARF of the 1980 Census, with geographic coordinates for small geographic areas, is installed for GEMS on a separate disk pack. It consists of four subfiles, one for each major census geographic region, and is available to users when that disk pack is mounted. The file has a variety of location identification information, including region, state, county, place, census tracts and enumeration districts or block groups (See Figure C-1 for illustrations). It also contains population count by race, the number of occupied and owner-occupied housing units, group quarters, and number of families for all the enumeration districts/block groups for the continental United States, Hawaii, and Alaska.

CEDPOP, a subset of the MARF of the 1980 Census, is accessible through GEMS. In addition to total population and household counts, the file includes geographic coordinates for the population-weighted centroid of each census block group or enumeration district (BG/ED) in the file.

Use

The complete MARF 80 Census file, installed in GEMS on a separate disk, is expected to be used heavily by GEMS users to identify household and population by racial groups at any required geographic level. County aggregate populations have already been created from this file.

CEDPOP was interfaced with ATM80 in GEMS to provide estimates of population sizes exposed to concentrations of airborne chemicals around a release site and with BOXMOD80 to provide population estimates within area source regions. The population centroids are identified, and populations are accumulated in sectors (typically the sixteen wind direction sectors) surrounding the center point within a user-specified number of radial distances out from the center.

The CEDPOP file also is accessed by CENSUS DATA and RADII-5 procedures under the GEODATA HANDLING operation in GEMS. CENSUS DATA accumulates population and housing counts by up to ten user-specified radial distances and from one-to-sixteen sectors. The RADII-5 program tabulates the same information (except housing counts) and displays the centroid locations for user-specified circular distances around a center point.

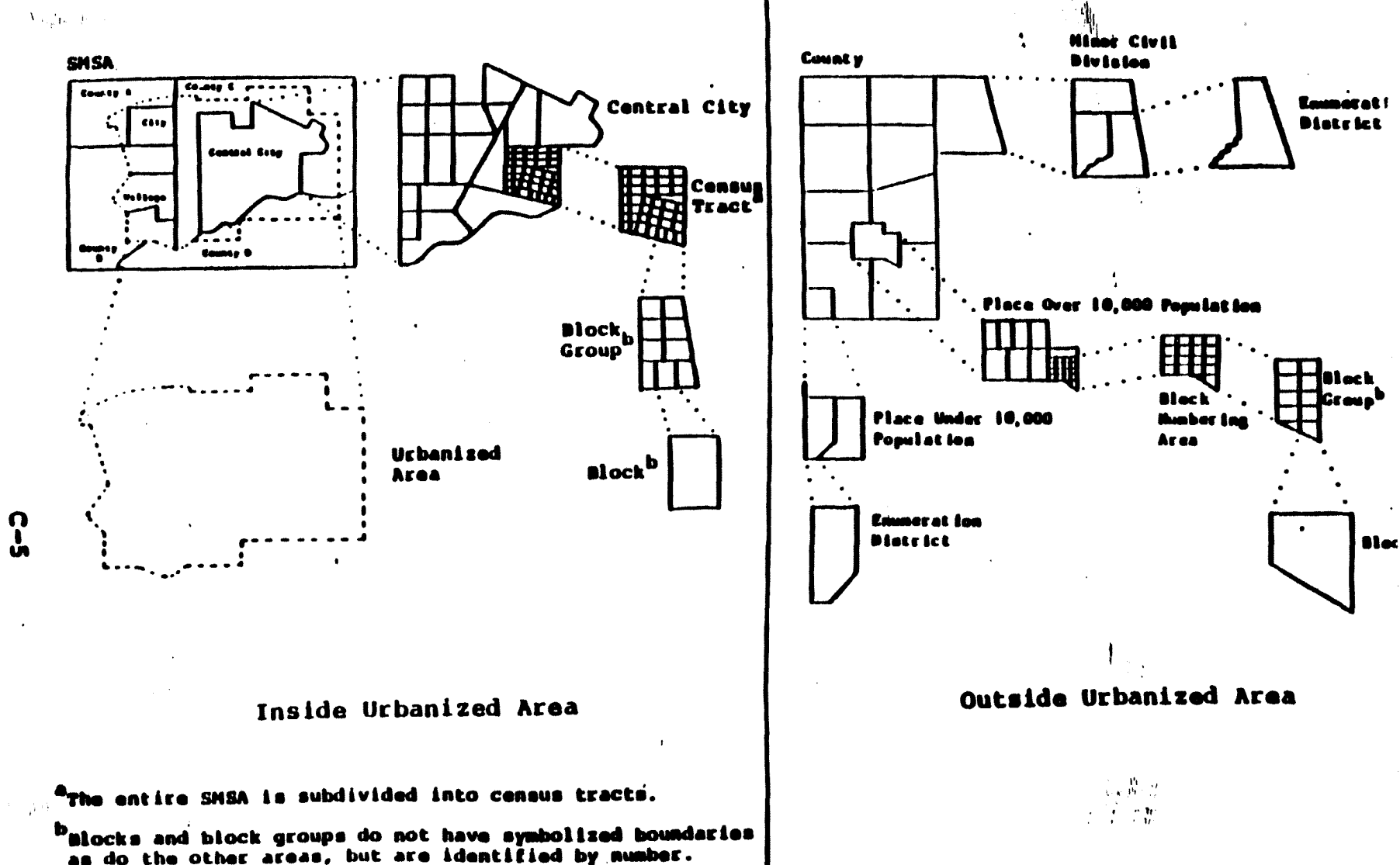


Figure C-1. Geographic Hierarchy Inside and Outside Urbanized Areas (UA's)

3

3

3

3? NEXT

3

37 INI

[illegible]

12-Feb-86 02:08 AM OnLine Cap

GO

Data List of Dataset: SABRE Number of Records = 6

REC #	POP	HOUSE	DISTANCE	SECTOR
1	0	0	0.400000	1
2	0	0	0.810000	1
3	5891	2168	1.60000	1
4	27159	10308	3.20000	1
5	22728	9115	4.80000	1
6	35570	15015	6.40000	1

Press RETURN to page forward, enter Pnnn to position the starting record of the next page, enter BACK to reselect variables, or enter END to stop.

REFERENCE #11

2250 POLYCHLORINATED BIPHENYL (AROCLOR 1232)

POLYCHLORINATED BIPHENYL (AROCLOR 1232)

CAS RN: 11141165

NIOSH #: TQ 1354000

SYNS:

AROCLOR 1232

CHLORODIPHENYL (32% Cl)

TOXICITY DATA: 2-1

CODEN:

ori-rat LD50: 4470 mg/kg

ARVPAX 14,139,74

skn-rbt LDLo: 2000 mg/kg

ARVPAX 14,139,74

Carcinogenic Determination: Human Suspected IARC** 18,43,78. *Toxicology Review:* ARVPAX 14,139,74; STEVA8 2(4),305,74. Occupational Exposure to Polychlorinated Biphenyls recm Std: Air: TWA 1.0 ug/m³ NTIS**.

THR: Susp hmn CARC. MOD skn; LOW ori. See also PCB's.

Disaster Hazard: When heated to decomp it emits tox fumes of Cl⁻.

POLYCHLORINATED BIPHENYL (AROCLOR 1242)

CAS RN: 53469219

NIOSH #: TQ 1356000

SYNS:

AROCHLOR 1242

AROCLOR 1242

CHLORIERTE BIPHENYLE, CHLOR-GEHALT 42% (GERMAN)

CHLORODIPHENYL (42% Cl)

CLORODIFENILI, CLORO 42% (ITALIAN)

DIPHENYLE CHLORE, 42% DE CHLORE (FRENCH)

GECHLOREERDEDEIFENYL (DUTCH)

TOXICITY DATA: 3-2

CODEN:

ihl-hmn TCLo: 10 mg/m³: IRR

85CYAB 2,153,59

ori-rat LD50: 4250 mg/kg

TXAPA9 24,434,73

scu-gpg LDLo: 345 mg/kg

PHRPA6 59,1085,44

Carcinogenic Determination: Human Suspected IARC** 18,43,78. *TLV:* Air: 1 mg/m³ (skin) DTLVS* 4,88,80. *Toxicology Review:* EVHPAZ 1,105,72; ARVPAX 14,139,74; RREVAH 44,1,73; STEVA8 2(4),305,74; BISNAS 20,958,70. OSHA Standard: Air: TWA 1 mg/m³ (skin) (SCP-I) FEREAC 39,23540,74. Occupational Exposure to Polychlorinated Biphenyls recm Std: Air: TWA 1.0 ug/m³ NTIS**. "NIOSH Manual of Analytical Methods" VOL 4 S120*.

THR: Susp hmn CARC; A hmn ihl IRR. HIGH scu; MOD ori; see also PCB's.

Disaster Hazard: When heated to decomp it emits tox fumes of Cl⁻.

For further information see Chlorinated Diphenyls, Vol. 1, No. 3 of *DPIM Report*.

POLYCHLORINATED BIPHENYL (AROCLOR 1248)

CAS RN: 12672296

NIOSH #: TQ 1358000

SYNS:

AROCLOR 1248

CHLORODIPHENYL (48% Cl)

TOXICITY DATA: 3

CODEN:

ori-mky TDLo: 455 mg/kg

FEPRAT 34,338,75

ori-mky TDLo: 33 mg/kg/(1-166D

TXCYAC 6,331,76

preg): TER

ori-rat LD50: 11 gm/kg
skn-rbt LDLo: 1269 mg/kg

ARVPAX 14,139,74
ARVPAX 14,139,74

Carcinogenic Determination: Human Suspected IARC** 18,43,78. *Toxicology Review:* ARVPAX 14,139,74; STEVA8 2(4),305,74. Occupational Exposure to Polychlorinated Biphenyls recm Std: Air: TWA 1.0 ug/m³ NTIS**.

THR: An exper TER. A susp hmn CARC. MOD skn; LOW ori. See also PCB's.

Disaster Hazard: When heated to decomp it emits tox fumes of Cl⁻.

For further information see Chlorinated Diphenyls, Vol. 1, No. 3 of *DPIM Report*.

POLYCHLORINATED BIPHENYL (AROCLOR 1254)

CAS RN: 11097691

NIOSH #: TQ 1360000

Composed of 11% tetra-, 49% penta-, 34% hexa- and 6% heptachlorobiphenyls (FCTXAV 12,63,74)

SYNS:

AROCHLOR 1254

AROCLOR 1254

CHLORIERTE BIPHENYLE, CHLOR-GEHALT 54% (GERMAN)

CHLORODIPHENYL (54% Cl)

CLORODIFENILI, CLORO 54% (ITALIAN)

DIPHENYLE CHLORE, 54% DE CHLORE (FRENCH)

NCI-C02664

TOXICITY DATA: 3

CODEN:

ori-rat TDLo: 188 mg/kg (MGN)

FCTXAV 12,63,74

ori-rat TDLo: 645 mg/kg (MGN)

FCTXAV 12,63,74

ori-rat TDLo: 90 mg/kg (7-15D preg)

FCTXAV 11,471,73

ori-rbt TDLo: 350 mg/kg (1-28D preg)

EVPHBI 1,67,71

ori-rat TDLo: 4 gm/kg/2Y-1:ETA

NCITR* NCI-CG-TR-

38,78

ori-mus TDLo: 17 gm/kg/
48W-C: NEO

JNCIAM 53,547,74

skn-mus TDLo: 4 mg/kg: ETA

BECTA6 18,552,77

ori-rat LD50: 1295 mg/kg

FCTXAV 12,63,74

ivn-rat LD50: 358 mg/kg

FCTXAV 12,63,74

ipr-mus LD50: 2840 mg/kg

BECTA6 8,245,72

Carcinogenic Determination: Human Suspected IARC** 18,43,78.

TLV: Air: 0.5 mg/m³ DTLVS* 4,89,80. *Toxicology Review:* EVHPAZ 1,105,72; ARVPAX 14,139,74; RREVAH 44,1,73; STEVA8 2(4),305,74; BISNAS 20,958,70. OSHA Standard: Air: TWA 500 ug/m³ (skin) (SCP-I) FEREAC 39,23540,74. Occupational Exposure to Polychlorinated Biphenyls recm std: Air: TWA 1.0 ug/m³ NTIS**. NCI Carcinogenesis Bioassay Completed; Results Indefinite: Rat (NCITR* NCI-CG-TR-38,78). "NIOSH Manual of Analytical Methods" Vol. 2 S121.

THR: An exper ETA, NEO. A susp hmn CARC. HIGH ivn; MOD ori, ipr. See also PCB's.

Disaster Hazard: When heated to decomp it emits tox fumes of Cl⁻.

For further information see Chlorinated Diphenyls, Vol. 1, No. 3 of *DPIM Report*.

POLYCHLORINATED BIPHENYL (AROCLOR 1260)

CAS RN: 11096825

NIOSH #: TQ 1362000

N: MERCURY NUCLEATE, SOLID (DOT)

TOXICITY DATA: 3

DOT: Poison B, Label: FEREAC 41,57018,76.

Occupational Exposure to Inorganic Mercury recm std:

Air: TWA 0.05 mg(Hg)/m3 NTIS**.

R: A poison. See also mercury compounds.

Disaster Hazard: When heated to decomp it emits tox fumes of Hg.

MERCUROPHEN

CAS RN: 17140737

NIOSH #: OW 4550000

C₆H₄HgNO₄·Na; mw: 377.70Pink-red odorless powder. Sol in hot H₂O.

TOXICITY DATA: 3

CODEN:

rat LDLo: 8 mg/kg 12VXA5 8,661,68

rat LDLo: 12 mg/kg 12VXA5 8,661,68

rat LDLo: 4 mg/kg 12VXA5 8,661,68

Occupational Exposure to Inorganic Mercury recm std:

Air: TWA 0.05 mg(Hg)/m3 NTIS**.

R: HIGH ivn, ims. See also mercury compounds. Poison.

Disaster Hazard: When heated to decomp it emits very tox fumes of NO_x and Hg vapors.

MERCUROPHYLLINE

CAS RN: 8012348

NIOSH #: OV 8650000

NS:

CUPURIN

MERCUZANTHIN

TOXICITY DATA: 3-2

CODEN:

human TDLo: 28 mg/kg: CNS JAMAAP 117,1806,41

mouse LD50: 163 mg(Hg)/kg JPETAB 105,336,52

mouse LD50: 1410 mg/kg JPETAB 99,149,50

rat LDLo: 250 mg/kg JPETAB 99,149,50

rat LDLo: 177 mg/kg JPETAB 99,149,50

Occupational Exposure to Inorganic Mercury recm std:

Air: TWA 0.05 mg(Hg)/m3 NTIS**.

R: A human CNS. HIGH scu, ivn. MOD ivn. See also mercury compounds.

Disaster Hazard: When heated to decomp it emits tox fumes of Hg.

MERCUROUS CHLORIDE

CAS RN: 7546307

NIOSH #: OV 8750000

Cl₂Hg₂; mw: 472.09

White, odorless, tasteless, heavy powder or crystals. Sunlight causes it to decomp into mercuric chloride and metallic Hg. Insol in H₂O, alc and ether. Protect from light. mp @ 400°; d: 7.150.

NS:

MERCURY(II) CHLORIDE
7764

CHLORIDE

CHLORIDE (ITALIAN)

CHLORURE MERCUREUX
(FRENCH)

CHLORO MERCUROSO (ITALIAN)

CHLORID (GERMAN)

MERCUROCHLORIDE (DUTCH)

MERCURY MONOCHLORIDE

MERCURY PROTOCHLORIDE

MILD MERCURY CHLORIDE

QUECKSILBER(I)-CHLORID (GERMAN)

SUBCHLORIDE OF MERCURY

TOXICITY DATA: 3

mrc-bcs 50 mmol/L

ori-rat LD50: 210 mg/kg

CODEN:

MUREAV 77,109,80

WRPCA2 9,119,70

Toxicology Review: SDGTB3 1(2),177,71; RREVAH 42,103,72; 27ZTAP 3,91,69. Occupational Exposure to Inorganic Mercury recm std: Air: TWA 0.05 mg(Hg)/m3 NTIS**. Reported in EPA TSCA Inventory, 1980.

THR: MUT data. HIGH ori. See also mercury compounds.

Disaster Hazard: When heated to decomp it emits very tox fumes of Cl⁻ and Hg.

Human Tox: Excessive doses may cause Hg poisoning.

Antidote: BAL (Dimercaprol). If laxation from oral mercurous chloride should not occur, saline laxative must be administered to prevent possibility of Hg poisoning.

Med Incomp: Bromides, iodides, alkali chlorides, sulfates, sulfites, carbonates, hydroxides, lime water, acacia, ammonia, golden antimony sulfide, cocaine, cyanides, copper salts, hydrogen peroxide, iodine, iodoform, Pb salts, silver salts, soap, sulfides.

MERCURY

CAS RN: 7439976

NIOSH #: OV 4550000

af: Hg; aw: 200.59

Silvery liquid, metallic element. mp: -38.89°, bp: 356.9°, d: 13.546, vap. press: 1 mm @ 126.2°. vap press: @ 25° = 2 × 10⁻³ mm.

SYNS:

COLLOIDAL MERCURY

KWIK (DUTCH)

MERCURE (FRENCH)

MERCURIO (ITALIAN)

MERCURY, METALLIC (DOT)

NCI-C60399

QUECKSILBER (GERMAN)

QUICK SILVER

RTEC (POLISH)

TOXICITY DATA: 3

CODEN:

ihl-rat TCLo: 890 ng/m3/24H (16W

GISAAA 45(3),72,80

(male)

ihl-rat TCLo: 7440 ng/m3/24H (16W

GISAAA 45(3),72,80

(male)

ipr-rat TDLo: 400 mg/kg/14D-I:ETA

ZEKBAI 61,511,57

ihl-wmn TCLo: 150 ug/m3/46D:GIT

AEHLAU 33,186,78

ihl-wmn TCLo: 150 ug/m3/46D:CNS

AEHLAU 33,186,78

ihl-rbt LCLo: 29 mg/m3/30H

AMTHBC 7,19,53

TLV: Air: 0.05 mg(Hg)/m3 (skin) DTLVS* 4,254,80.

Toxicology Review: AJOGAH 126(3),390,76; JTEHD6 2(3),491,77; TRBMAV 33(1),85,75; PHJOAV 213(5781),159,74; JDSCE 58(12),1767,75; CPEDAM 13,783,74; QURBAW 7(1),75,74; AEMBAP 48,463,74; JAVMA4 164(3),277,74; 31ZNAA 2,365,73; AEMBAP 40,239,73; CTXAO 5(2),151,72; BIOGAL 41(7),208,75; ADTEAS 5,51,72; RREVAH 42,103,72; FOREAE 7,313,42; NISIA9 27(9),942,74; MIBUBI 9(4),321,75; STEVA8 2(4),341,74; ENVRAL 13,36,77; 85CVA2 5,63,70; JOCMA7 2,337,60; PEXTAR 12,102,69; PDTNBH 6,204,77.

OSHA Standard: Air: CL 1 mg/10m3 (SCP-N) FEREAC 39,23540,74. DOT: ORM-B, Label: None FEREAC 41,57018,76. Occupational Exposure to Inorganic Mercury recm std: Air: TWA 0.05 mg(Hg)/m3 NTIS**. "NIOSH Manual of Analytical Methods" VOL 1

2154 PHENANTHRA-ACENAPHTHENE

SYNS:

ISOAMYL PHENYLAMINOACETATE HYDROCHLORIDE
ISOPENTYL-2-PHENYLGLYCINATE HYDROCHLORIDE
3-METHYLBUTYL ALPHA-AMINO-BENZENEACETATE HYDROCHLORIDE ($\pm$)

PHENYLAMINOACETIC ACID ISO-AMYL ESTER HYDROCHLORIDE
d,l-2-PHENYLGLYCINISOAMYL-ESTERHYDROCHLORIDE (GERMAN)

TOXICITY DATA: 3-2

ori-mus LD50: 2600 mg/kg
ipr-mus LD50: 415 mg/kg
ivn-mus LD50: 77 mg/kg

CODEN:

PHARAT 33,749,78
PHARAT 30,765,75
PHARAT 33,749,78

THR: HIGH ipr, ivn; MOD ori.

Disaster Hazard: When heated to decomp it emits very tox fumes of Cl^- and NO_2 .

PHENANTHRA-ACENAPHTHENE

CAS RN: 7258915

NIOSH #: QI 9400000

mf: $\text{C}_{24}\text{H}_{16}$; mw: 304.40

SYN: 4,5-DIHYDRO-NAPHTHA(1,2-K)ACEPHENANTHREYLENE

TOXICITY DATA: 3

skn-mus TDLo: 1250 mg/kg/
52W-I: ETA

CODEN:

PRLBA4 117,318,35

THR: An exper ETA via skn in mus.

Disaster Hazard: When heated to decomp it emits acrid smoke and fumes.

PHENANTHRENE

CAS RN: 85018

NIOSH #: SF 7175000

mf: $\text{C}_{14}\text{H}_{10}$; mw: 178.24

Solid or monoclinic crystals. mp: 100°, bp: 339°, d: 1.179 @ 25°, vap. press: 1 mm @ 118.3°, vap. d: 6.14. Insol in water; sol in CS_2 benzene, hot alcohol; very sol in ether.

SYN: PHENANTHREN (GERMAN)

TOXICITY DATA: 3

dnd-sal: spr 3 gm/L
dnd-sal: tes 5 ug/IH-C
dnd-ham: kdy 5 mg/L
mma-sat 100 ug/plate
dnd-ham: fbr 5 mg/L/24H
cyt-ham: lng 40 mg/L/27H
sce-ham: ipr 900 mg/kg/24H
sce-ham: fbr 10 umol/L
skn-mus TDLo: 71 mg/kg: NEO
skn-mus TD: 22 gm/kg/10W-I: ETA
ori-mus LD50: 700 mg/kg
ivn-mus LD50: 56 mg/kg

CODEN:

BIPMAA 5,477,67
BLJOAK 110,159,68
BCPCA6 20,1297,71
APSXAS 17,189,80
BCPCA6 20,1297,71
MUREAV 66,277,79
MUREAV 66,65,79
JNCIAM 58,1635,77
JNCIAM 50,1717,73
BJCAAJ 10,363,56
HYSAAV 29,19,64
CSLNX* NX#00190

"NIOSH Manual of Analytical Methods" VOL 1 206.
Reported in EPA TSCA Inventory, 1980. EPA TSCA 8(a) Preliminary Assessment Information Proposed Rule FERREAC 45,13646,80.

THR: MUT data. An exper NEO, ETA. HIGH ivn. MOD ori. A hmn skn photosensitizer. A slight fire hazard.

To Fight Fire: water, foam, CO_2 , dry chemical.

Disaster Hazard: When heated to decomp it emits acrid smoke and fumes.

PHENANTHRENE-3,4-DIHYDRODIOL

NIOSH #: SF 7353100

mf: $\text{C}_{14}\text{H}_{12}\text{O}_2$; mw: 212.26

SYNS:

3,4-DIHYDROMORPHOL

3,4-DIHYDRO-3,4-PHENANTHRENE-3,4-DIHYDRODIOL

TOXICITY DATA: 3

skn-mus TDLo: 85 mg/kg: ETA

CODEN:

CNREAS 39,4069,79

THR: An exper ETA.

Disaster Hazard: When heated to decomp it emits acrid smoke and fumes.

PHENANTHRENE EPOXIDE

NIOSH #: SF 7704500

mf: $\text{C}_{14}\text{H}_{10}\text{O}$; mw: 192.22

TOXICITY DATA:

otr-ham: emb 5 mg/L

CODEN:

CNREAS 32,1391,72

THR: MUT data.

9,10-PHENANTHRENE OXIDE

CAS RN: 585080

NIOSH #: SF 7352000

mf: $\text{C}_{14}\text{H}_{10}\text{O}$; mw: 194.24

Colorless needles; mp: 152°-153°; very slightly sol in water; very sol in alc, ether.

SYNS:

9,10-EPOXY-9,10-DIHYDROPHENANTHRENE
PHENANTHRENE-9,10-EPOXIDE

1A,9B-DIHYDROPHENANTHRO-
(9,10-B)OXIRENE,(9CI)

TOXICITY DATA: 3

mma-sat 100 ug/plate
skn-mus TDLo: 40 mg/kg: ETA

CODEN:

MUREAV 66,337,79
JNCIAM 39,1217,67

THR: MUT data. An exper ETA.

Disaster Hazard: When heated to decomp it emits acrid smoke and fumes.

PHENANTHRENEQUINONE

CAS RN: 84117

NIOSH #: SF 7875000

mf: $\text{C}_{14}\text{H}_8\text{O}_2$; mw: 208.22

Orange needles; d: 1.405 @ 4°; mp: 206.5°-207.5°; bp: > 300° subl; very slightly sol in water; sol in hot alc, benzene; slightly sol in ether.

SYNS:

9,10-PHENANTHRAQUINONE
9,10-PHENANTHRENE-9,10-DIONE

9,10-PHENANTHRENEQUINONE

TOXICITY DATA: 3

skn-mus TDLo: 800 mg/kg/
29W-C: ETA
ipr-mus LDLo: 165 mg/kg

CODEN:

PIATA8 16,309,40
HBTXAC 5,110,59

Reported in EPA TSCA Inventory, 1980.

THR: An exper ETA. HIGH acute ipr.

Disaster Hazard: When heated to decomp it emits acrid smoke and fumes.

PYRENE

CAS RN: 129000
 mf: $C_{16}H_{10}$; mw: 202.26

NIOSH #: UR 2450000

Colorless solid, solutions have a slight blue color, insol in water, fairly sol in organic solvents. (a condensed ring hydrocarbon), mp: 156°, d: 1.271 @ 23°, bp: 404°.

SYNS:

BENZO(DEF)PHENANTHRENE

PYREN (GERMAN)

TOXICITY DATA: 3

dnd-esc 10 umol/L
 dnd-sat: spr 3 gm/L
 dnd-sat: tes 5 ug/1H-C
 skn-rtx 500 mg/24H MOD
 mmo-sat 140 umol/L/2H
 msc-rat: emb 10 mg/L
 otr-ham: emb 10 mg/L
 cyt-ham: emb 10 mg/L
 dnd-mam: iym 100 umol
 skn-mam TDLo: 10 gm/kg/3W-I: ETA

CODEN:

PNCAA2 39,65
 BIPMAA 5,477,67
 BUOAK 110,159,68
 28ZPAK 26,72
 CNREA8 39,4152,79
 JTEHD6 4,79,78
 CNREA8 31,1118,71
 CNREA8 31,1118,71
 BIPMAA 9,689,70
 BJCAAI 10,363,56

"NIOSH Manual of Analytical Methods" VOL. 1
 181184. Reported in EPA TSCA Inventory, 1980.

THR: MUT data. A skn irr. An exper ETA.

Disaster Hazard: When heated to decomp it emits acrid smoke and fumes.

N-PYREN-2-YLACETAMIDE

CAS RN: 1732145
 mf: $C_{22}H_{13}NO$; mw: 259.32

NIOSH #: AC 7840000

SYN: 2-ACETYLAMINOPYRENE**TOXICITY DATA:** 3

ori-rat TDLo: 5508 mg/kg/32W-
 C: NEO

CODEN:

CNREA8 15,188,55

THR: An exper NEO.

Disaster Hazard: When heated to decomp it emits tox fumes of NO_2 .

4-PYRENYLOXIRANE

mf: $C_{18}H_{12}O$; mw: 244.2

NIOSH #: RR 0578000

TOXICITY DATA:

mmo-sat 100 pmol/plate
 msc-ham: lng 1 umol/L

CODEN:

CNREA8 40,642,80
 CNREA8 40,642,80

THR: MUT data.

Disaster Hazard: When heated to decomp it emits acrid smoke and fumes.

PYRETHRIN

CAS RN: 97110
 mf: $C_{21}H_{28}O_3$; mw: 328.49

NIOSH #: GZ 1575000

SYNS:

2-CYCLOPENTENYL-4-HYDROXY-
 3-METHYL-2-CYCLOPENTEN-
 1-ONE CHRYSANTHEMATE
 3-(2-CYCLOPENTEN-1-YL)-2-
 METHYL-4-OXO-2-
 CYCLOPENTEN-1-YL
 CHRYSANTHEMUMATE

3-(2-CYCLOPENTENYL)-2-
 METHYL-4-OXO-2-
 CYCLOPENTENYL
 CHRYSANTHEMUMMONOCARBOXYLATE
 CYCLOPENTENYLRETHONYL
 CHRYSANTHEMATE
 ENT 22,952

TOXICITY DATA: 2

ori-rat LD50: 1410 mg/kg
 unk-rat LD50: 900 mg/kg

CODEN:

ARSIM* 20,7,66
 30ZDA9 -131,71

Toxicology Review: 27ZTAP 3,43,69.

THR: MOD orl, unk. See also esters. An insecticide.

Disaster Hazard: When heated to decomp it emits acrid smoke and fumes.

PYRETHRIN I

CAS RN: 8003347
 mf: $C_{21}H_{28}O_3$; mw: 328.4

NIOSH #: UR 4200000

Viscous liquid; bp: 170° @ 0.1 mm (decomp).

SYNS:

CINERIN I OR II
 JASPOLIN I OR II
 PYRETHRIN I OR II
 CHRYSANTHEMUM CINERAREAE-
 FOLIUM

DALMATION INSECT FLOWERS
 INSECT POWDER
 PYRETHRUM (INSECTICIDE)
 TRIESTE FLOWERS

TOXICITY DATA: 3

ori-rat LD50: 200 mg/kg
 ori-mus LD50: 370 mg/kg
 ori-mam LD50: 250 mg/kg

CODEN:

GUHAZ 6,442,73
 EVHPAZ 14,15,76
 AMIHAB 14,178,56

TLV: Air: 5 mg/m³ DTLVS* 4,352,80. OSHA Standard:

Air: TWA 5 mg/m³ (SCP-U) FEREAC 39,23540,74

THR: MOD orl, unk. See also esters. An allergen. Has produced diarrhea, convulsions, collapse and respiratory failure, nausea, tinnitus, headache and CNS upset. A highly insecticidal extract of weak mammalian tox. Rapid detoxified in GI tract. For the long term, slight but definite liver damage occurs at 1000 ppm and 5000 ppm diet levels. Usual early symptoms are a contact dermatitis, asthma, sneezing. A dose of 15g was fatal to a child.

Fire Hazard: Slight.

Disaster Hazard: When heated to decomp it emits acrid smoke and fumes.

PYRETHRIN II

CAS RN: 124299
 mf: $C_{22}H_{28}O_3$; mw: 372.50

NIOSH #: GZ 0700000

Viscous liquid; bp: 200° @ 0.1 mm (decomp).

SYNS:

ENT 7,543
 PYRETHROLONE CHRYSANTHE-
 MUM DICARBOXYLIC ACID
 METHYL ESTER ESTER

PYRETHROLONE ESTER OF
 CHRYSANTHEMUMDICARBOX-
 YLIC ACID MONOMETHYL ES-
 TER
 PYRETHRIN II

TOXICITY DATA: 2

unk-mam LDLo: 1029 mg/kg
 ori-rat LD50: 1200 mg/kg

CODEN:

85DCAI 2,73,70
 12VXA5 8,889,68

Toxicology Review: 27ZTAP 3,121,69. Reported in EPA TSCA Inventory, 1980.

THR: MOD orl, unk. See also pyrethrin I; An allergen, insecticide.

Disaster Hazard: When heated to decomp it emits acrid smoke and fumes.

TOXICITY DATA: 3 **CODEN:**
 skn-mus TDLo: 940 mg/kg/39W- PRLBA4 117,318,35
 I:ETA
 skn-mus TD: 1220 mg/kg/51W- PRLBA4 129,439,40
 I:ETA
 skn-mus TD: 1270 mg/kg/53W- PRLBA4 123,343,37
 I:ETA

Toxicology Review: 85DHAX Pc,4,72.

THR: An exper ETA.

Disaster Hazard: When heated to decomp it emits acrid smoke and irr fumes.

BENZO(c)PHENANTHRENE-8-CARBOXALDEHYDE

CAS RN: 4466766 NIOSH #: DI 8500000
 mf: C₁₉H₁₂O; mw: 256.31

SYN: 2-FORMYL-3:4-BENZPHENANTHRENE

TOXICITY DATA: 3 **CODEN:**
 scu-mus TDLo: 5200 mg/kg/52W- PRLBA4 131,170,42
 I:ETA

THR: Exper ETA.

Disaster Hazard: When heated to decomp it emits acrid smoke and irr fumes.

BENZOPHENONE

CAS RN: 119619 NIOSH #: DI 9950000
 mf: C₁₃H₁₀O; mw: 182.23

Rhombic, white crystals, persistent rose-like odor. mp (α): 49°, mp (β): 26°, mp (γ): 47°, bp: 305.4°, d (α): 1.0976 @ 50°/50°, d (β): 1.108 @ 23°/40°, vap. press: 1 mm @ 108.2.

SYNS:

BENZOYL BENZENE
 DIPHENYL KETONE
 DIPHENYLMETHANONE

ALPHA-OXODIPHENYLMETHANE
 PHENYL KETONE

TOXICITY DATA: 2 **CODEN:**
 skn-mus TDLo: 8 g/kg/2Y-I:ETA TXAPA9 30,7,74
 ori-mus LD50: 2895 mg/kg JETOAS 9,99,76
 ipr-mus LD50: 727 mg/kg JETOAS 9,99,76

Reported in EPA TSCA Inventory, 1980.

THR: MOD ori, ipr in mus. See also ketones.

Fire Hazard: Slight, when heated.

Disaster Hazard: When heated to decomp it emits acrid and irr fumes.

Incomp: Oxidizers.

For further information see Vol. 2, No. 1 of DPIM Report.

6H-(1)BENZOPYRANO(4,3-b)QUINOLINE

mf: C₁₆H₁₁NO; mw: 233.28 NIOSH #: DJ 3300000

TOXICITY DATA: **CODEN:**
 mma-sat 100 ug/plate MUREAV 66,307,79

THR: MUT data.

Disaster Hazard: When heated to decomp it emits tox fumes of NO₂.

BENZO(a)PYRENE

CAS RN: 50328 NIOSH #: DJ 3675000
 mf: C₂₀H₁₂; mw: 252.32

Yellow crystals insol in water, sol in benzene, toluene, xylene. mp: 179°, bp: 312° @ 10 mm.

SYNS:

BENZO(D,E,F)CHRYSENE
 3,4-BENZOPYRENE (ITALIAN)
 3,4-BENZOPYRENE
 6,7-BENZOPYRENE

3,4-BENZPYREN (GERMAN)
 BENZ(A)PYRENE
 3,4-BENZ(A)PYRENE
 3,4-BENZPYRENE

TOXICITY DATA: 3

dnd-omi 3 umol/L
 dnd-sal: spr 3 gm/L
 dnd-sal: tes 5 ug/1H-C
 dnd-hmn: oth 1500 nmol/L
 dni-hmn: hia 7 umol/L/1H-C
 mac-hmn: oth 100 nmol/L
 dnd-rat: oth 1500 nmol/L
 bfa-rat: sat 10 mg/kg
 sce-rat: lvr 1 umol/L
 msc-rat: unk 300 ug/kg
 mnt-mus: scu 100 mg/kg
 slit-mus: ori 80 mg/kg
 otr-mus: fbr 10 mg/L
 bfa-mus: sat 100 mg/kg
 cyt-mus: ori 100 mg/kg
 sce-mus: emb 1 umol/L
 hma-mus: lng 25 mg/kg
 otr-ham: lng 10 ug/L

otr-ham: kdy 80 ug/L
 otr-ham: fbr 1 mg/L
 otr-ham: par 1 mg/L
 cyt-ham: ipr 200 mg/kg
 sce-ham: lng 1 ug/L
 mac-ham: ipr 200 mg/kg
 mac-ham: ovr 500 ug/L
 mac-ham: fbr 1 mg/L
 mac-ham: emb 780 ug/L
 dnd-mam: kdy 1 mmol/L
 dns-rbt: skn 100 ug/L
 sce-rbt: skn 30 ug/L
 ori-rat TDLo: 1000 mg/kg/(preg)

TFX:TER
 ori-rat TDLo: 40 mg/kg (14D preg)
 ori-rat TDLo: 1000 mg/kg/
 (preg):TER

ipr-mus TDLo: 240 mg/kg/(11-15D preg):TER
 scu-mus TDLo: 240 mg/kg/(11-15D preg):TER

ihl-hmn TCLo: 70 ng/m3/Y-C:ETA
 ori-rat TDLo: 160 mg/kg/6D-C:CAR
 ipr-rat TDLo: 16 mg/kg:ETA
 scu-rat TDLo: 455 ug/kg/60D-I:NEO
 ivn-rat TDLo: 39 mg/kg/6D-I:ETA
 ims-rat TDLo: 5 mg/kg:ETA
 ice-rat TDLo: 22 mg/kg:ETA
 itr-rat TDLo: 68 mg/kg/15W-I:CAR
 ori-mus TDLo: 2310 mg/kg/11W-C:ETA

skn-mus TDLo: 240 mg/kg/30W-I:CAR

scu-mus TDLo: 1000 ug/kg:ETA
 ipr-rat TDLo: 60 mg/kg/(16-18D preg)
 ori-mus TDLo: 100 mg/kg (7-16D preg)

ori-mus TDLo: 100 mg/kg (MGN)
 ori-mus TDLo: 1600 mg/kg (7-16D preg)

NSAPCC 272,89,72
 EXPEAM 20,224,64

AMTUA3 7,3,70

PSEBAA 135,84,70

BJCAAI 14(3),397,60
 TOLED5 6,167,80
 BJCAAI 12,65,58
 CBINAS 29,159,80
 CNREAS 29,506,69
 VPITAR 30,31,71
 CNREAS 29,192,69
 85AGAF -480,76
 PSEBAA 130,146,69

ZKKOBW 89,113,77

TRBMAV 29,109,71
 BNEOBV 38,291,80
 TJADAB 19,374,79

BIREBV 24,183,81
 BIREBV 24,183,81

A mixture of 2 isomers, brown crystals, nearly insol in water, sol in most organic solvents. mp(α): 106°, mp(β): 212°, d: 1.745 @ 20°/20°.

SYNS:

ENT 23,979
ALPHA,BETA-1,2,3,4,7,7-
HEXACHLOROBI-CYCLO(2,2,1)-
2-HEPTENE-5,6-BIS(OXY-
METHYLENE SULFITE
1,2,3,4,7,7-HEXACHLORO-
BI-CYCLO(2,2,1)HEPTEN-
5,6-BIS(OXYMETHYLENE)SUL-
FITE
HEXACHLOROHEXAHYDRO-
METHANO

2,4,3-BENZODIOXATHIEPIN-3-
OXIDE
6,7,8,9,10,10-HEXACHLORO-1,5,
5a,6,9,9a-HEXAHYDRO-6,9-
METHANO-2,4,3-BENZODIOXA-
THIEPIN-3-OXIDE
1,4,5,6,7,7-HEXACHLORO-5-NOR-
BORNENE-2,3-DIMETHANOL
CYCLIC SULFITE
NCI-C00566

TOXICITY DATA: 3

ori-rat TDLo: 45 mg/kg/(6-14D
preg): TER

ori-mus TDLo: 330 mg/kg/78W-
I: NEO

scu-mus TDLo: 2 mg/kg: ETA

ori-rat LD50: 18 mg/kg

skn-rat LD50: 74 mg/kg

ipr-rat LD50: 22 mg/kg

unk-rat LD50: 40 mg/kg

ori-mus LD50: 75 mg/kg

ipr-mus LD50: 7 mg/kg

ori-cat LD50: 2 mg/kg

skn-rbt LD50: 167 mg/kg

ori-ham LD50: 118 mg/kg

ori-dck LD50: 34 mg/kg

ori-bwd LD50: 35 mg/kg

CODEN:

RPTOAN 42,150,78

NTIS** PB223-159

NTIS** PB223-159

ARSIM* 20,9,66

WRPCA2 9,119,70

BECTA6 15,708,76

30ZDA9 -,267,71

GTPZAB 8(4),30,64

BECTA6 15,708,76

85DPAN -,71,76

BECTA6 14,513,75

JETOAS 7,159,74

TXAPA9 22,556,72

TXAPA9 21,315,72

Aquatic Toxicity Rating: TLM96: under 1 ppm
WQCHM* 3,-,74. TLV: Air: 0.1 mg/m3 (skin)
DTLVS* 4,165,80. Toxicology Review: DTTIAF
80(20),485,73; RREVAH 56,107,75; 27ZTAP 3,142,69.
NCI Carcinogenesis Bioassay Completed; Results Neg-
ative (NCITR* NCI-CG-TR-62,77).

THR: An exper TER, NEO, ETA. VERY, VERY HIGH
ori. VERY HIGH via dermal routes. A CNS stimulant
producing convulsions. A highly toxic organochlorine
pesticide which does not accumulate significantly in
human tissue. Absorption is normally slow but is in-
creased by alcohols, oil, emulsifiers.

Disaster Hazard: Dangerous; see chlorides and S com-
pounds.

BENZO(j)FLUORANTHENE

CAS RN: 205823

NIOSH #: DF 6300000

mf: C₂₀H₁₂; mw: 252.32

SYNS:

10,11-BENZFLUORANTHENE
7,8-BENZOFUORANTHENE

DIBENZO(A,J,K)FLUORENE

TOXICITY DATA: 3

skn-mus TDLo: 312 mg/kg/26W-
I: ETA

CODEN:

CANCAR 12,1194,59

Carcinogenic Determination: Animal positive IARC**
3,92,73.

Toxicology Review: 85DHAX Pc,4,72. "NIOSH Manual
of Analytical Methods" VOL 1 183.

THR: An exper ETA. An exper CARC.

Disaster Hazard: When heated to decomp it emits acrid
smoke and irr fumes.

BENZO(k)FLUORANTHENE

CAS RN: 207089

NIOSH #: DF 6350000

mf: C₂₀H₁₂; mw: 252.32

SYN: 11,12-BENZO(K)FLUORANTHENE

TOXICITY DATA: 3

skn-mus TDLo: 2820 mg/kg/47W-

I: ETA

scu-mus TDLo: 72 mg/kg/9W-I: ETA AICCA6 19,490,63

CODEN:

CANCAR 12,1194,59

"NIOSH Manual of Analytical Methods" VOL 1
183,184.

THR: An exper ETA.

Disaster Hazard: When heated to decomp it emits acrid
smoke and irr fumes.

BENZO(b)FLUORENE

CAS RN: 30777196

NIOSH #: DF 6383000

mf: C₁₇H₁₂; mw: 216.29

TOXICITY DATA:

mma-sat 25 umol/L/2H

CODEN:

CNREA8 39,4152,79

THR: MUT data.

Disaster Hazard: When heated to decomp it emits acrid
smoke and irr fumes.

BENZOFURAN

CAS RN: 271896

NIOSH #: DF 6423800

mf: C₈H₆O; mw: 118.14

SYNS:

BENZO(B)FURAN
2,3-BENZOFURAN
BENZOFURFURAN

NCI-C56166
1-OXINDENE

Currently Tested by NTP for Carcinogenesis by Standard
Bioassay Protocol as of December 1980. Reported in
EPA TSCA Inventory, 1980.

THR: No data.

Disaster Hazard: When heated to decomp it emits acrid
and irr smoke and fumes.

2-BENZOFURANCARBOXYLIC ACID

CAS RN: 496413

NIOSH #: DF 6490000

mf: C₉H₆O₃; mw: 162.15

SYN: COUMARILIC ACID

TOXICITY DATA: 3

ivn-mus LD50: 320 mg/kg

CODEN:

CSLNX* NX#02495

Reported in EPA TSCA Inventory, 1980.

THR: HIGH ivn.

Disaster Hazard: When heated to decomp it emits acrid
smoke and irr fumes.

2-BENZO-FURANCETONITRILE

CAS RN: 6149699

NIOSH #: DF 6550000

290 ANTHRACENE

Yellow needles from alc. mp: 130°. Insol HCl, sol in alc.

SYNS:

ALPHA-AMINOANTHRACENE
1-AMINOANTHRACENE

1-ANTHRACYLAMINE
1-ANTHRAMINE

TOXICITY DATA: 3

mma-sat 20 ug/plate
dnr-esc 100 mg/L
mrc-smc 5 ppb
ori-rat TDLo: 7200 mg/kg/27D-
I:ETA

CODEN:

PNASA6 72,5135,75
JNCIAM 62,873,79
JNCIAM 62,901,79
CNREA8 28,924,68

THR: MUT data. An exper ETA.

Disaster Hazard: When heated to decomp it emits tox fumes of NO₂.

ANTHRACENE

CAS RN: 120127

NIOSH #: CA 9350000

mf: C₁₄H₁₀; mw: 178.24

Colorless crystals, violet fluorescence. mp: 217°, lel = 0.6%, flash p: 250°F (CC), d: 1.24 @ 27°/4°, autoign. temp.: 1004°F, vap. press: 1 mm @ 145.0°, (sublimes), vap. d: 6.15, bp: 339.9°. Insol in water. Sol in alc @ 1.9/100 @ 20°; in ether = 12.2/100 @ 20°.

SYNS:

ANTHRACEN (GERMAN)
ANTHRACIN
GREEN OIL

PARANAPHTHALENE
TETRA OLIVE N2G

TOXICITY DATA: 3

mma-sat 100 ug/plate
skn-mus 118 ug MLD
dns-hmn: fbr 10 mg/L
hma-mus/sat 125 mg/kg
dnd-mam: lym 100 umol
ori-rat TDLo: 20 gm/kg/79W-I:ETA
scu-rat TDLo: 3300 mg/kg/33W-
I:NEO
scu-rat TD: 660 mg/kg/33W-I:ETA

CODEN:

ABCHA6 43,1433,79
CALEDQ 4,333,78
CNREA8 38,2091,78
JNCIAM 62,911,79
BIPMAA 9,689,70
ZEKBAI 60,697,55
NATWAY 42,159,55
ZEKBAI 60,697,55

"NIOSH Manual of Analytical Methods" VOL 1 206.
Reported in EPA TSCA Inventory, 1980. EPA TSCA
8(a) Preliminary Assessment Information Proposed
Ruie FERREAC 45,13646,80.

THR: MUT data. A skn irr. An allergen. An exper ETA, NEO.

Fire Hazard: Low, when exposed to heat or flame; reacts with oxidizing materials.

Spontaneous Heating: No.

Explosion Hazard: MOD, when exposed to flame, Ca(OCl)₂, chromic acid.

To Fight Fire: Water, foam, CO₂, water spray or mist, dry chemical.

Incomp: Fluorine.

1,9-ANTHRACENEDIOL

CAS RN: 30086954

NIOSH #: CA 9698000

mf: C₁₄H₁₀O₂; mw: 210.24

SYN: 1,9-DIHYDROXYANTHRACENE

TOXICITY DATA:
mmo-smc 1000 ppm/16H

CODEN:

ADVEA4 51,45,71

THR: MUT data.

Disaster Hazard: When heated to decomp it emits acrid smoke and irr fumes.

1,2,10-ANTHRACENETRIOL

CAS RN: 577333

NIOSH #: CB 1220000

mf: C₁₄H₁₀O₃; mw: 226.24

Yellow, brown powder; mp: 208°.

SYN: ANTHRACOBIN

TOXICITY DATA:

mmo-sat 100 ug/plate
mma-sat 100 ug/plate

CODEN:

BCSTB5 5,1489,77
BCSTB5 5,1489,77

THR: MUT data. MLD allergen. Local contact may cause contact dermatitis.

Disaster Hazard: When heated to decomp it emits acrid smoke and irr fumes.

1,8,9-ANTHRACENETRIOL

CAS RN: 480228

NIOSH #: CB 1225000

mf: C₁₄H₁₀O₃; mw: 226.24

Yellow powder. mp: 178°-180°. Insol in water, sol in fat, hot alc, benzene and dilute alkalis.

SYNS:

ANTHRALIN
1,8,9-ANTHRATRIOL
DIHYDROXY-ANTHRANOL
1,8-DIHYDROXYANTHRANOL

1,8-DIHYDROXY-9-ANTHRANOL
1,8-DIHYDROXY-9-ANTHRONE
DIOXYANTHRANOL
1,8,9-TRIHYDROXYANTHRACENE

TOXICITY DATA: 3

mmo-sat 100 ug/plate
mma-sat 100 ug/plate
dnr-esc 250 ug/plate
mmo-smc 165 nmol/L
skn-mus TDLo: 509 mg/kg/53W-
I:NEO
skn-mus TD: 73 mg/kg/11W-I:ETA

CODEN:

BCSTB5 5,1489,77
BCSTB5 5,1489,77
JNCIAM 62,873,79
ADVEA4 51,45,71
JMCMAR 21,26,78

GANNA2 59,187,68

Carcinogenic Determination: Animal Suspected IARC**
13,75,77.

Toxicology Review: ZKKOBW 78,99,72.

THR: MUT data. An exper NEO, ETA, susp CARC.
Locally it can cause folliculitis of skin. Absorption may result in kidney injury and intestinal disturbances.

Fire Hazard: Slight, when heated.

Disaster Hazard: When heated to decomp it emits acrid smoke and irr fumes.

1,8,9-ANTHRACENETRIOL TRIACETATE

CAS RN: 16203977

NIOSH #: CB 1410000

mf: C₂₀H₁₆O₆; mw: 352.36

SYNS:

EXOLAN

1,8,9-TRIACETOXYANTHRACENE

TOXICITY DATA: 2

eye-rbt 330 ug SEV

CODEN:

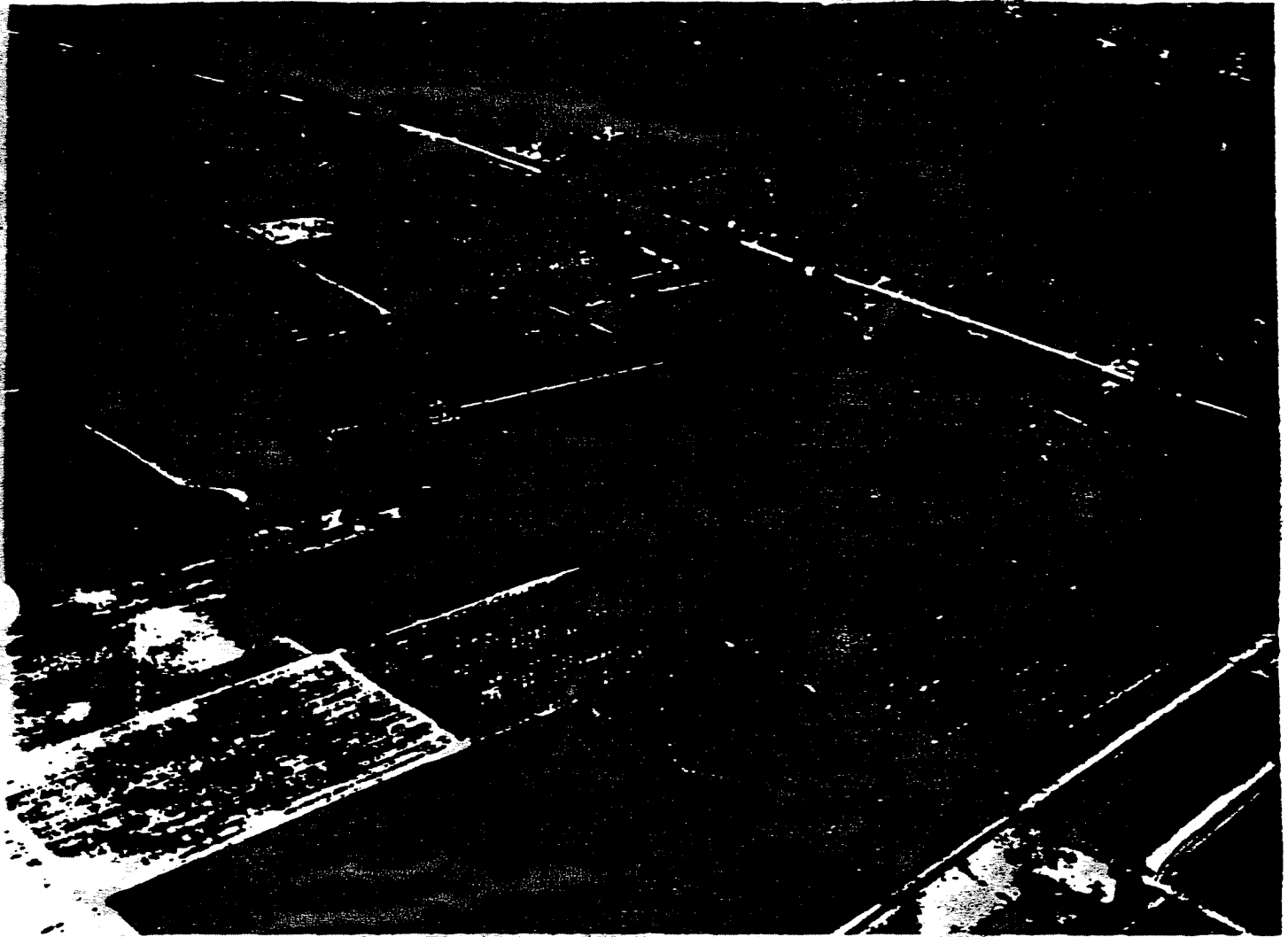
BJOPAL 53,819,69

THR: An eye irr.

Disaster Hazard: When heated to decomp it emits acrid smoke and irr fumes.

REFERENCE #13

SOIL SURVEY OF Niagara County, New York



United States Department of Agriculture
Soil Conservation Service
In cooperation with
Cornell University Agricultural Experiment Station
Issued October 1972

The B21g horizon ranges from 2.5Y to 5YR in hue, is 5 or 6 in value, and is 2 or 1 in chroma. The B21g horizon is mottled in some places. The mottled part that has chromas of more than 2 is less than 40 percent. The B22g horizon ranges from 5YR to 5Y in hue, is 5 or 6 in value, and is 2 or 3 in chroma. If chroma is 2, a horizon at a depth of less than 30 inches has chromas of more than 2. The B horizon contains mottles that have a chroma of 2 or less in some profiles. It ranges from loamy very fine sand to very fine sandy loam and fine sandy loam and contains pockets or thin layers of silt and fine sand.

The C horizon ranges from 5Y to 5YR in hue, is 4 to 6 in value, and is 2 or 3 in chroma. It is mottled in some profiles. The C horizon generally consists of layers of fine sand, very fine sand, and silt. In some areas Lamson soils are underlain by gravel at a depth of 40 inches or more.

Lamson soils form in deposits similar to those of the well drained Arkport soils, the moderately well drained Galen soils, and the somewhat poorly drained Minoa soils. Lamson soils have a coarser textured B horizon than Canandaigua soils. They are wetter and have a coarser textured B horizon than Niagara soils. Lamson soils lack the underlying glacial till that is characteristic of the Sun soils. The organic surface layer that occurs in muck areas is lacking in Lamson soils.

Lamson very fine sandy loam (Ld).---This level soil has the profile described as representative for the series. It is in old glacial lake basins in which the main deposits are sandy. Areas range from about 5 to more than 100 acres in size and average about 50 acres.

Most commonly included with this soil in mapping are spots of poorly drained or very poorly drained Canandaigua soils that have a higher silt and clay content than this Lamson soil, and also the somewhat poorly drained Cosad or poorly drained Cheektowaga soils that are underlain by clay deposits. Also included in some areas are shallow muck soils that have an organic surface layer 12 inches or more thick. In some places where this Lamson soil is near glacial till, the poorly drained Sun soils are included. Other common inclusions are soils that have a mucky surface layer and soils that have layers of gravel or a gravelly substratum.

Undrained areas of this soil are not suited to crops, but these areas can be used for unimproved pasture, native trees, or areas for wetland wildlife. If drainage is adequate, this soil is suited to vegetables and other crops grown in the county. (Capability unit IIIw-3; woodland suitability group 4w1)

Lamson fine sandy loam, gravelly substratum (Lg).---This soil has a profile similar to that described as representative for the series, except that a gravelly substratum occurs between depths of 3 1/2 and 6 feet. Slopes range from 0 to 2 percent. This soil is near glacial beaches, bars, and outwash areas. Areas normally are more than 30 acres in size, but in many places some areas are

more than 100 acres. Areas are roughly rectangular in many places.

Most commonly included with this soil in mapping are areas where gravel is at a depth of less than 40 inches. Less commonly included are spots of poorly drained or very poorly drained Canandaigua soils. A few areas of somewhat poorly drained Cosad soils or poorly drained Cheektowaga soils are included where the sandy deposit is underlain by clay. Where this Lamson soil is near glacial till areas, the poorly drained Sun soils are included in some places. Other inclusions are a few areas where the surface layer is mucky and a few areas of Lamson silty clay loam.

Undrained areas of this soil are often ponded. This soil can be drained more readily than Lamson very fine sandy loam because of the underlying gravel layers, but obtaining suitable outlets is the major problem. The high content of organic matter, the fine sandy loam texture, and nearly level slopes are favorable characteristics for intensive use and management after drainage is installed. Permeability is moderately rapid, and runoff is slow. (Capability unit IIIw-3; woodland suitability group 4w1)

Lockport Series

The Lockport series consists of moderately deep, somewhat poorly drained soils that have a medium-textured surface layer and a moderately fine textured to fine textured subsoil. These soils formed principally in neutral or alkaline, reddish shale of the Queenston shale formation. In some places, rounded sandstone and granite rocks are strewn over the surface. These soils are level or nearly level and occur north of the Lockport limestone formation. They occupy a large continuous area near Hall Road in the southeastern part of Somerset and another large area north of the city of Lockport. Slopes are 0 to 3 percent.

In a representative profile of a Lockport soil that is idle, the surface layer is dark grayish-brown silt loam 6 inches thick. It is slightly acid and contains a few stones. The surface layer is underlain by a mottled brown, friable, heavy silt loam layer 2 inches thick. It is slightly acid. The subsoil is firm and is between depths of 8 inches and 23 inches. It is reddish-brown, faintly mottled heavy silty clay loam or silty clay. The subsoil is slightly acid in the upper part and neutral in the lower part. The substratum is at a depth of 23 inches. It consists of reddish-brown, partially weathered shale that is calcareous. The dusky-red, calcareous Queenston shale is at a depth of 36 inches.

The seasonal high water table rises to a few inches below the surface during spring and excessively wet periods. The water table is perched above the nearly impervious shale and slowly permeable subsoil. These soils may be droughty as the growing season progresses and as the water table drops.

Plant roots commonly are confined to a depth of 10 to 20 inches in the surface layer and subsoil.

REFERENCE #14

CONTROL NO:

DATE:

8/8/85

TIME:

2:35 pm

DISTRIBUTION:

File
C. L. Be
etc.

BETWEEN:

Mike Hopkins

OF:

Niagara County Health

PHONE:

(716) 284-3124

AND:

Lay Crystall

(NUS)

DISCUSSION:

Mike provided me with the following information
pertaining to Niagara Falls DI reports:

- 1) There are to his knowledge no drinking water wells within
3 miles of area of 6th ST. Amp-South.
- 2) There are no endangered species indigenous to the
area however a few species of migratory bird fledge
in the area.
- 3) Drinking water supply intake is even with 53rd ST
in middle of Niagara River.
- 4) There is a "large capacity, deep well" used by
Olin Corporation on Buffalo Ave.
- 5) There are farmlands on Fairport Rd & Wolcott Rd.

ACTION ITEMS:

REFERENCE #15

CORPORATION

TELECON NOTE

TRC D:

DATE:

10/17/85

TIME:

15:50

TRIBUTION:

FILE

NIAGARA FALLS SI PERSONNEL

ETWEEN:

SUPERINTENDENT

OF: CITY OF NIAGARA

PHONE:

R. TRAVIS - OF WATER DEPT.

FALL WATER DEPT.

(716) 253-7666

AND:

JOE MAYO

(NUS)

DISCUSSION:

*TOTAL POPULATION SERVED BY THE CITY OF
NIAGARA FALLS WATER DEPT.*

*APPROX. 70,000 CONSUMERS IN NIAGARA
FALLS*

*WATER INTAKE IS LOCATED AT 53RD
ST.*

ACTION ITEMS:

REFERENCE #16

CONTROL NO:

DATE:

1/10/86

TIME:

1005 Hrs

DISTRIBUTION:

File, Niagara Falls Pm's

BETWEEN:

Sky Smith

OF: Niagara Falls Waste
Water Treatment Plant

PHONE:

(716) 278-8138

AND:

Rick Adkisson

(NUS)

DISCUSSION:

*Note that the town of Niagara borders the city of Niagara Falls and this telecon applies only to sites within the city limits of Niagara Falls.

- The city of Niagara Falls has a dual storm and sanitary system with the zone of demarcation being 56 St.
- East of 56 St. is primarily residential, and there is a separate storm and sanitary system.
- West of 56 St., the storm and sanitary lines are combined into one system which is ultimately directed to the city treatment plant on Buffalo Ave.
- The route of the combined system will vary depending upon site locations. Sites next to Niagara Falls Business Farms would have their storm and sanitary wastes channelled down Packard Rd. to 47th St., to Royal St, to the south side interceptor, and on to the treatment

ACTION ITEMS:

plant.

- Specific routes may be determined by contacting Sky Smith.

REFERENCE #18

WATER-RELATED ENVIRONMENTAL FATE OF 129 PRIORITY POLLUTANTS

EPA-440/4-79-029a DECEMBER 1979

TABLE 4-1

SUMMARY OF CONCLUSIONS FOR THE TRANSPORT AND FATE OF PRIORITY POLLUTANTS:

A. Metals and Inorganics

Chapter No.	Chemical	Is the Process Important for Aquatic Transport? (See Key Below)			Is the Process Important in Determining Aquatic Fate? (See Key Below)			
		Volatilization	Sorption	Transport Downstream	Photolysis	Chemical Speciation	Bioaccumulation	Biotransformation/ Biodegradation
5	Antimony	UNCT(2)	YES(2)	YES(2)	NO(3)	YES(1)	NO(2)	YES(3)
6	Arsenic	YES(1)	YES(1)	YES(1)	NO(3)	YES(1)	YES(2)	YES(1)
7	Asbestos	NO(3)	NO(2)	YES(1)	NO(3)	NO(2)	NO(3)	NO(3)
8	Beryllium	NO(3)	YES(3)	YES(3)	NO(3)	YES(2)	UNCT(2)	NO(3)
9	Cadmium	NO(2)	YES(1)	YES(1)	NO(3)	YES(1)	YES(1)	NO(3)
10	Chromium	NO(3)	YES(1)	YES(2)	NO(3)	YES(2)	YES(1)	NO(3)
11	Copper	NO(3)	YES(1)	YES(1)	NO(2)	YES(1)	YES(1)	NO(3)
12	Cyanide	YES(1)	NO(2)	NO(2)	YES(1)	UNCT(2)	NO(2)	YES(1)
13	Lead	UNCT(1)	YES(1)	YES(1)	UNCT(1)	YES(1)	YES(1)	YES(1)
14	Mercury	YES(1)	YES(1)	YES(1)	YES(2)	YES(1)	YES(1)	YES(1)
15	Nickel	NO(3)	YES(1)	YES(1)	NO(3)	YES(2)	NO(2)	NO(3)
16	Selenium	UNCT(2)	YES(1)	YES(1)	NO(3)	YES(2)	UNCT(1)	YES(1)
17	Silver	NO(3)	YES(1)	YES(1)	NO(2)	YES(1)	UNCT(1)	NO(3)
18	Thallium	NO(3)	YES(1)	YES(1)	NO(2)	YES(1)	UNCT(2)	NO(3)
19	Zinc	NO(3)	YES(1)	YES(1)	NO(3)	YES(1)	YES(1)	NO(3)

Key:

For each chemical and related process, two ratings are presented. The first is a statement of importance and can be one of the following: YES, NO, or UNCT (for uncertain). The second is a numerical rating, dealing with available supporting data, explained below:

- (1). There are environmental data available to support this conclusion.
- (2). There are no direct conclusive environmental data; some laboratory data can be extrapolated to support conclusions.
- (3). There are no supporting data available; evidence is drawn from theoretical calculations, estimates, results for similar chemicals, and inferences.

TABLE 4-1 (Cont.)

SUMMARY OF CONCLUSIONS FOR THE TRANSPORT AND FATE OF PRIORITY POLLUTANTS:

B. Pesticides, PCBs, and Related Compounds

Chapter No.	Chemical	Is the Process Important for Aquatic Transport? (See Key Below)			Is the Process Important in Determining Aquatic Fate? (See Key Below)			
		Volatilization	Absorption	Transport Downstream	Photolysis/Oxidation	Hydrolysis	Bioaccumulation	Biodegradation
20	Acrolein	UNCT(2)	NO(2)	UNCT(2)	UNCT(2)	NO(1)	UNCT(2)	YES(2)
21	Aldrin	UNCT(2)	YES(2)	UNCT(2)	UNCT(2)	NO(1)	YES(1)	YES(2)
22	Chlordane	UNCT(2)	UNCT(2)	UNCT(2)	UNCT(2)	NO(1)	YES(1)	UNCT(2)
23	DDD	YES(2)	YES(1)	UNCT(2)	UNCT(2)	UNCT(1)	YES(1)	UNCT(2)
24	DOE	YES(2)	YES(1)	UNCT(2)	UNCT(2)	NO(1)	YES(1)	UNCT(2)
25	DDT	YES(2)	YES(1)	UNCT(2)	UNCT(2)	UNCT(1)	YES(1)	UNCT(2)
26	Dieldrin	UNCT(2)	YES(2)	UNCT(2)	UNCT(2)	NO(1)	YES(1)	UNCT(2)
27	Endosulfan and Endosulfan Sulfate	UNCT(3)	YES(3)	UNCT(3)	UNCT(2)	YES(1)	UNCT(2)	YES(2)
28	Endrin and Endrin Aldehyde	UNCT(2)	UNCT(2)	UNCT(2)	UNCT(2)	NO(1)	YES(1)	UNCT(2)
29	Heptachlor	UNCT(2)	NO(2)	UNCT(2)	UNCT(2)	YES(1)	UNCT(1)	NO(1)
30	Heptachlor Epoxide	UNCT(2)	YES(1)	UNCT(2)	UNCT(2)	NO(1)	YES(1)	YES(2)
31	Hexachlorocyclohexane (α, β, δ isomers)	UNCT(2)	UNCT(2)	UNCT(2)	NO(1)	NO(1)	UNCT(1)	YES(2)
32	γ-Hexachlorocyclohexane (Lindane)	UNCT(2)	UNCT(2)	UNCT(1)	NO(1)	NO(1)	UNCT(1)	YES(2)
33	Isophorone	UNCT(3)	NO(3)	YES(3)	UNCT(2)	NO(1)	UNCT(2)	UNCT(2)
34	TCDD	UNCT(2)	YES(1)	YES(3)	NO(2)	NO(1)	YES(1)	UNCT(2)
35	Toxaphene	UNCT(2)	YES(1)	YES(2)	NO(2)	NO(1)	YES(1)	UNCT(1)
36	Polychlorinated Biphenyls	YES(2)	YES(1)	UNCT(3)	UNCT(3)	NO(3)	YES(1)	NO(1)
37	2-Chloronaphthalene	UNCT(3)	UNCT(3)	UNCT(3)	UNCT(2)	NO(3)	UNCT(2)	YES(2)

Key:

For each chemical and related process, two ratings are presented. The first is a statement of importance and can be one of the following: YES, NO, or UNCT (for uncertain). The second is a numerical rating, dealing with available supporting data, explained below:

- (1). Quantitative (rate constants, half-lives) data are available to support conclusions.
- (2). Qualitative description only; there are no direct environmental data, however, some laboratory data can be extrapolated to support conclusions.
- (3). There are no supporting data available; evidence is drawn from theoretical calculations, estimates, results for similar chemicals, and inferences.

TABLE 4-1 (Cont.)

SUMMARY OF CONCLUSIONS FOR THE TRANSPORT AND FATE OF PRIORITY POLLUTANTS:

C. Halogenated Aliphatic Hydrocarbons

Chapter No.	Chemical	Is the Process Important for Aquatic Transport? (See Key Below)			Is the Process Important in Determining Aquatic Fate? (See Key Below)			
		Volatilization	Sorption	Transport Downstream	Photolysis/ Oxidation	Hydrolysis	Bioaccumulation	Biotransformation/ Biodegradation
38	Chloromethane	YES(2)	NO(3)	UNCT(3)	NO(3)	NO(1)	NO(3)	NO(3)
39	Dichloromethane	YES(2)	NO(2)	UNCT(3)	NO(2)	NO(1)	NO(3)	NO(3)
40	Trichloromethane	YES(2)	NO(2)	UNCT(3)	NO(2)	NO(1)	NO(3)	NO(3)
41	Tetrachloromethane	YES(2)	NO(2)	UNCT(3)	NO(3)	NO(1)	UNCT(2)	NO(3)
42	Chloroethane	YES(2)	NO(2)	UNCT(3)	NO(3)	NO(1)	NO(3)	NO(3)
43	1,1-Dichloroethane	YES(2)	NO(3)	UNCT(3)	NO(3)	NO(3)	NO(3)	NO(3)
44	1,2-Dichloroethane	YES(2)	NO(3)	UNCT(3)	NO(3)	NO(3)	NO(3)	UNCT(2)
45	1,1,1-Trichloroethane	YES(2)	NO(2)	UNCT(3)	NO(2)	NO(3)	NO(3)	NO(3)
46	1,1,2-Trichloroethane	YES(2)	NO(3)	UNCT(3)	NO(2)	NO(3)	NO(3)	NO(3)
47	1,1,2,2-Tetrachloroethane	UNCT(2)	NO(3)	UNCT(3)	NO(2)	NO(3)	UNCT(3)	NO(3)
48	Hexachloroethane	UNCT(2)	UNCT(3)	NO(3)	NO(3)	UNCT(3)	UNCT(3)	UNCT(3)
49	Chloroethene	YES(2)	NO(2)	NO(3)	NO(2)	UNCT(3)	NO(2)	NO(2)
50	1,1-Dichloroethene	YES(2)	NO(3)	UNCT(3)	NO(3)	NO(3)	NO(3)	NO(3)
51	1,2-trans-Dichloroethene	YES(2)	NO(3)	UNCT(3)	NO(3)	NO(3)	NO(3)	NO(3)
52	Trichloroethene	YES(2)	NO(2)	UNCT(3)	NO(2)	NO(2)	UNCT(2)	UNCT(3)
53	Tetrachloroethene	YES(2)	NO(2)	UNCT(3)	NO(2)	NO(2)	UNCT(2)	UNCT(3)
54	1,2-Dichloropropene	YES(3)	UNCT(3)	UNCT(3)	NO(3)	UNCT(3)	UNCT(3)	UNCT(3)
55	1,3-Dichloropropene	YES(2)	UNCT(3)	UNCT(3)	NO(3)	UNCT(3)	NO(3)	UNCT(3)
56	Hexachlorobutadiene	UNCT(2)	YES(2)	NO(3)	NO(3)	UNCT(3)	YES(2)	UNCT(3)
57	Hexachlorocyclopentadiene	YES(3)	YES(3)	NO(3)	YES(2)	YES(1)	YES(2)	NO(2)
58	Bromomethane	YES(3)	NO(3)	UNCT(3)	NO(3)	YES(1)	NO(3)	NO(3)
59	Bromodichloromethane	UNCT(3)	UNCT(3)	UNCT(3)	UNCT(3)	NO(1)	UNCT(3)	UNCT(3)
60	Dibromochloromethane	UNCT(3)	UNCT(3)	UNCT(3)	UNCT(3)	NO(1)	UNCT(3)	UNCT(3)
61	Tribromomethane	YES(3)	UNCT(3)	UNCT(3)	UNCT(3)	NO(1)	UNCT(3)	UNCT(3)
62	Dichlorodifluoromethane	YES(3)	UNCT(3)	UNCT(3)	NO(3)	NO(2)	UNCT(3)	UNCT(3)
63	Trichlorofluoromethane	YES(3)	UNCT(3)	UNCT(3)	NO(3)	NO(2)	UNCT(3)	UNCT(3)

Key:

For each chemical and related process, two ratings are presented. The first is a statement of importance and can be one of the following: YES, NO, or UNCT (for uncertain). The second is a numerical rating, dealing with available supporting data, explained below:

- (1). Quantitative (rate constants, half-lives) data are available to support conclusions.
- (2). Qualitative description only; there are no direct environmental data, however, some laboratory data can be extrapolated to support conclusions.
- (3). There are no supporting data available; evidence is drawn from theoretical calculations, estimates, results for similar chemicals, and inferences.

TABLE 4-1 (Cont.)
SUMMARY OF CONCLUSIONS FOR THE TRANSPORT AND FATE OF PRIORITY POLLUTANTS:
D. Halogenated Ethers

Chapter No.	Chemical	Is the Process Important for Aquatic Transport? (See Key Below)			Is the Process Important in Determining Aquatic Fate? (See Key Below)			
		Volatilization	Absorption	Transport Downstream	Photolysis/ Oxidation	Hydrolysis	Bioaccumulation	Biodegradation/ Biotransformation
64	Bis(chloromethyl)ether	NO(2)	NO(2)	NO(3)	NO(2)	YES(1)	NO(1)	NO(2)
65	Bis(2-chloroethyl)ether	YES(3)	NO(3)	UNCT(3)	NO(3)	NO(3)	NO(3)	NO(3)
66	Bis(2-chloroisopropyl)ether	YES(3)	NO(3)	UNCT(3)	NO(3)	UNCT(3)	NO(3)	UNCT(3)
67	2-Chloroethyl vinyl ether	YES(3)	NO(3)	UNCT(3)	NO(3)	UNCT(1)	NO(3)	UNCT(3)
68	4-Chlorophenyl phenyl ether	UNCT(2)	UNCT(2)	UNCT(3)	UNCT(3)	NO(3)	UNCT(1)	UNCT(2)
69	4-Bromophenyl phenyl ether	UNCT(3)	UNCT(3)	UNCT(3)	UNCT(3)	NO(3)	UNCT(3)	UNCT(3)
70	Bis(2-chloroethoxy)methane	NO(2)	NO(2)	YES(3)	NO(2)	UNCT(3)	NO(3)	UNCT(3)

Key:

For each chemical and related process, two ratings are presented. The first is a statement of importance and can be one of the following: YES, NO, or UNCT (for uncertain). The second is a numerical rating, dealing with available supporting data, explained below:

- (1). Quantitative (rate constants, half-lives) data are available to support conclusions.
- (2). Qualitative description only; there are no direct environmental data, however, some laboratory data can be extrapolated to support conclusions.
- (3). There are no supporting data available; evidence is drawn from theoretical calculations, estimates, results for similar chemicals, and inferences.

TABLE 4-1 (Cont.)
SUMMARY OF CONCLUSIONS FOR THE TRANSPORT AND FATE OF PRIORITY POLLUTANTS:
E. Monocyclic Aromatics

Chapter No.	Chemical	Is the Process Important for Aquatic Transport? (See Key Below)			Is the Process Important in Determining Aquatic Fate? (See Key Below)			
		Volatilization	Absorption	Transport Downstream	Photolysis/ Oxidation	Hydrolysis	Bioaccumulation	Biodegradation/ Biotransformation
71	Benzene	YES(1)	UNCT(3)	UNCT(3)	NO(2)	NO(3)	NO(3)	UNCT(2)
72	Chlorobenzene	YES(2)	UNCT(3)	UNCT(3)	NO(3)	NO(3)	UNCT(2)	UNCT(2)
73	1,2-Dichlorobenzene	YES(2)	UNCT(3)	UNCT(3)	NO(3)	NO(3)	UNCT(2)	UNCT(2)
74	1,3-Dichlorobenzene	UNCT(3)	UNCT(3)	UNCT(3)	NO(3)	NO(3)	YES(3)	UNCT(3)
75	1,4-Dichlorobenzene	UNCT(3)	UNCT(3)	UNCT(3)	NO(3)	NO(3)	YES(3)	UNCT(3)
76	1,2,4-Trichlorobenzene	UNCT(3)	UNCT(3)	UNCT(3)	NO(3)	NO(3)	YES(3)	UNCT(3)
77	Hexachlorobenzene	UNCT(3)	YES(2)	UNCT(3)	NO(3)	NO(3)	YES(1)	NO(3)
78	Ethylbenzene	YES(2)	UNCT(3)	UNCT(3)	NO(3)	NO(3)	NO(3)	UNCT(3)
79	Nitrobenzene	UNCT(3)	UNCT(3)	UNCT(3)	UNCT(3)	NO(3)	NO(3)	UNCT(3)
80	Toluene	YES(2)	UNCT(3)	UNCT(3)	NO(3)	NO(3)	NO(3)	UNCT(3)
81	2,4-Dinitrotoluene	NO(3)	YES(2)	UNCT(3)	YES(2)	NO(3)	UNCT(3)	UNCT(3)
82	2,6-Dinitrotoluene	NO(3)	YES(2)	UNCT(3)	YES(2)	NO(3)	UNCT(3)	UNCT(3)
83	Phenol	UNCT(2)	NO(2)	UNCT(2)	YES(2)	NO(2)	NO(2)	YES(1)
84	2-Chlorophenol	NO(3)	NO(3)	UNCT(3)	UNCT(3)	NO(3)	UNCT(2)	UNCT(3)
85	2,4-Dichlorophenol	NO(3)	NO(3)	UNCT(3)	NO(3)	NO(3)	UNCT(3)	YES(2)
86	2,4,6-Trichlorophenol	NO(3)	UNCT(3)	UNCT(3)	NO(3)	NO(3)	UNCT(3)	UNCT(3)
87	Pentachlorophenol	NO(3)	YES(1)	YES(1)	YES(1)	NO(3)	YES(1)	YES(1)
88	2-Nitrophenol	NO(2)	YES(2)	UNCT(3)	YES(3)	UNCT(3)	NO(3)	NO(1)
89	4-Nitrophenol	NO(1)	YES(1)	UNCT(3)	YES(3)	UNCT(3)	NO(3)	NO(1)
90	2,4-Dinitrophenol	NO(2)	YES(3)	UNCT(3)	YES(3)	UNCT(3)	NO(3)	UNCT(2)
91	2,4-Dimethyl phenol	NO(3)	UNCT(3)	UNCT(3)	YES(3)	NO(2)	UNCT(3)	UNCT(3)
92	p-Chloro-o-cresol	NO(3)	NO(3)	UNCT(3)	YES(3)	NO(3)	NO(3)	UNCT(3)
93	4,6-Dinitro-o-cresol	NO(3)	YES(3)	UNCT(3)	YES(3)	NO(3)	UNCT(3)	UNCT(3)

Key:

- For each chemical and related process, two ratings are presented. The first is a statement of importance and can be one of the following: YES, NO, or UNCT (for uncertain). The second is a numerical rating, dealing with available supporting data, explained below:
- (1). Quantitative (rate constants, half-lives) data are available to support conclusions.
 - (2). Qualitative description only; there are no direct environmental data, however, some laboratory data can be extrapolated to support conclusions.
 - (3). There are no supporting data available; evidence is drawn from theoretical calculations, estimates, results for similar chemicals, and inferences.

TABLE 4-1 (Cont.)

SUMMARY OF CONCLUSIONS FOR THE TRANSPORT AND FATE OF PRIORITY POLLUTANTS:

F. Phthalate Esters and Polycyclic Aromatic Hydrocarbons

Chapter No.	Chemical	Is the Process Important for Aquatic Transport? (See Key Below)			Is the Process Important in Determining Aquatic Fate? (See Key Below)			
		Volatilization	Sorption	Transport Downstream	Photolysis/ Oxidation	Hydrolysis	Bioaccumulation	Biotransformation/ Biodegradation
94	Phthalate Esters: • Dimethyl • Diethyl • Di-n-butyl • Di-n-octyl • Bis(2-ethylhexyl) • Butyl benzyl	NO(3) NO(3) NO(3) NO(3) NO(3) UNCT(3)	UNCT(2) UNCT(2) YES(1) UNCT(2) YES(1) UNCT(3)	YES(1) YES(1) YES(1) UNCT(2) YES(1) UNCT(3)	NO(3) NO(3) NO(3) NO(3) NO(3) NO(3)	UNCT(2) NO(3) NO(3) NO(3) YES(1) NO(3)	UNCT(2) UNCT(2) UNCT(2) UNCT(2) YES(1) UNCT(2)	UNCT(2) UNCT(2) UNCT(2) UNCT(2) YES(1) YES(3)
	Polycyclic Aromatic Hydrocarbons:							
95	• Acenaphthene • Acenaphthylene • Fluorene • Naphthalene	NO(3) NO(3) NO(3) UNCT(3)	YES(3) YES(3) YES(3) UNCT(3)	UNCT(3) UNCT(3) UNCT(3) UNCT(3)	YES(3) YES(3) YES(3) YES(3)	NO(3) NO(3) NO(3) NO(3)	NO(3) NO(3) NO(3) NO(2)	YES(3) YES(3) YES(3) YES(1)
96	• Anthracene • Fluoranthene • Phenanthrene	UNCT(3) NO(3) NO(3)	YES(2) YES(2) YES(2)	UNCT(3) UNCT(3) UNCT(3)	YES(3) YES(3) YES(3)	NO(3) NO(3) NO(3)	NO(2) NO(2) NO(2)	YES(1) YES(2) YES(2)
97	• Benzo[a]anthracene • Benzo[b]fluoranthene • Benzo[k]fluoranthene • Chrysene • Pyrene	NO(3) UNCT(3) UNCT(3) UNCT(3) UNCT(3)	YES(2) YES(2) YES(2) YES(2) YES(2)	UNCT(3) UNCT(3) UNCT(3) UNCT(3) UNCT(3)	YES(1) YES(3) YES(3) YES(3) YES(3)	NO(3) NO(3) NO(3) NO(3) NO(3)	NO(2) NO(3) NO(3) NO(3) NO(3)	YES(2) YES(2) YES(3) YES(3) YES(3)
98	• Benzo[ghi]perylene • Benzo[a]pyrene • Dibenzo[a]anthracene • Indeno[1,2,3-cd]pyrene	UNCT(3) UNCT(3) UNCT(3) UNCT(3)	YES(2) YES(1) YES(3) YES(3)	UNCT(3) UNCT(3) UNCT(3) UNCT(3)	UNCT(3) YES(1) UNCT(3) UNCT(3)	NO(3) NO(3) NO(3) NO(3)	UNCT(3) UNCT(3) UNCT(3) UNCT(3)	UNCT(3) YES(1) UNCT(3) UNCT(3)

Key:

For each chemical and related process, two ratings are presented. The first is a statement of importance and can be one of the following: YES, NO, or UNCT (for uncertain). The second is a numerical rating, dealing with available supporting data, explained below:

- (1). Quantitative (rate constants, half-lives) data are available to support conclusions.
- (2). Qualitative description only; there are no direct environmental data, however, some laboratory data can be extrapolated to support conclusions.
- (3). There are no supporting data available; evidence is drawn from theoretical calculations, estimates, results for similar chemicals, and inferences.

TABLE 4-1 (Cont.)
 SUMMARY OF CONCLUSIONS FOR THE TRANSPORT AND FATE OF PRIORITY POLLUTANTS:
 G. Nitrosamines and Miscellaneous Compounds

Chapter No.	Chemical	Is the Process Important for Aquatic Transport? (See Key Below)			Is the Process Important in Determining Aquatic Fate? (See Key Below)			
		Volatilization	Absorption	Transport Downstream	Photolysis/ Oxidation	Hydrolysis	Bioaccumulation	Biodegradation/ Biotransformation
99	Dimethyl nitrosamine	NO(3)	NO(3)	UNCT(3)	YES(2)	NO(3)	NO(3)	NO(2)
100	Diphenyl nitrosamine	NO(3)	UNCT(3)	UNCT(3)	UNCT(3)	NO(3)	UNCT(3)	UNCT(3)
101	Di-n-propyl nitrosamine	NO(3)	NO(3)	UNCT(3)	YES(2)	NO(3)	NO(3)	NO(2)
102	Benzidine	NO(1)	YES(1)	UNCT(3)	YES(1)	NO(2)	NO(2)	UNCT(2)
103	3,3'-Dichlorobenzidine	NO(1)	YES(1)	UNCT(3)	YES(1)	NO(3)	YES(1)	NO(1)
104	1,2-Diphenylhydrazine	NO(1)	YES(2)	UNCT(3)	UNCT(2)	NO(2)	YES(3)	UNCT(3)
105	Acrylonitrile	YES(2)	NO(3)	UNCT(3)	NO(3)	NO(3)	NO(3)	UNCT(3)

Key:

For each chemical and related process, two ratings are presented. The first is a statement of importance and can be one of the following: YES, NO, or UNCT (for uncertain). The second is a numerical rating, dealing with available supporting data, explained below:

- (1). Quantitative (rate constants, half-lives) data are available to support conclusions.
- (2). Qualitative description only; there are no direct environmental data, however, some laboratory data can be extrapolated to support conclusions.
- (3). There are no supporting data available; evidence is drawn from theoretical calculations, estimates, results for similar chemicals, and inferences.

REFERENCE # 19

TABLE 1
SAMPLE DESCRIPTIONS

<u>Sample ID Number</u>	<u>Organic Traffic Report #</u>	<u>Inorganic Traffic Report #</u>	<u>Sample Type</u>	<u>Sample Location</u>
NYE5-S1	BD480	MBE469	Soil	Soil in front of trailer #111.
NYE5-S2	BD481	MBE470	Soil	Soil in front of trailer #128.
NYE5-S3	BD774	MBE471	Soil	Soil in front of trailer #147.
NYE5-S4	BD775	MBE472	Soil	Soil in front of trailer #166.
NYE5-S5	BD776	MBE473	Soil	Soil in front of trailer #183.
NYE5-S6	BD777	MBE474	Soil	Soil in front of trailer #207.
NYE5-S7	BD778	MBE475	Soil	Soil behind 1st trailer on southeastern site boundry.
NYE5-S8	BD779	MBE476	Soil	Soil behind 2nd trailer on southeastern site boundry.
NYE5-S9	BD780	MBE477	Soil	Soil behind 4th trailer on southeastern site boundry.
NYE5-S10	BD781	MBE478	Soil	Soil behind 2nd trailer on southwestern site boundry.
NYE5-S11	BD782	MBE479	Soil	Soil behind 6th trailer on southwestern site boundry.
NYE5-S12	BD940	MBE480	Soil	Soil behind 10th trailer on southwestern site boundry.
NYE5-S13	BD941	MBE481	Soil	Soil behind 14th trailer on southwestern site boundry.
NYE5-S14	BD942	MBE482	Soil	Soil behind 18th trailer on southwestern site boundry.
NYE5-B1	BD943	N/A	Aqueous Blank	Obtained from EPA Laboratory, Edison, N.J.

TABLE 2 (cont'd)
ANALYTICAL DATA
NAME: SADDLE PARK
SAMPLING DATE: 11/21/85
CASE: 5263

INORGANICS

SAMPLE NUMBER	NYE5-S8	NYE5-S9	NYE5-S10	NYE5-S11	NYE5-S12	NYE5-S13	NYE5-S14
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
Aluminum	15300	20300	15900	10400	14700	11000	12000
Antimony							
Arsenic		9.8		10		11	
Barium	E	E	E	E	E	E	E
Beryllium		2					
Cadmium		5.3					
Calcium	45200	6750	61000	21000	74500	81400	77300
Chromium	50	45	54	128	94	210	60
Cobalt	J	J	J	J	J	J	J
Copper	J		J		J		95
Iron	21000	33600	23500	17200	23300	17400	17800
Lead	64	25	45	54	54	74	36
Magnesium	18900	6360	21700	9930	36100	37800	35900
Manganese	502	1250	569	588	692	615	520
Mercury	67	21	0.4	1.2	1.5	1.1	2.7
Nickel	J	J	J	J	40	J	J
Potassium	J	J	J	J	J	J	J
Selenium							
Silver					J	J	
Sodium	E	E	E	E	E	E	E
Thallium							
Tin							
Vanadium	J	J	J	J	J	J	J
Zinc	171	89	182	77	140	160	157

NOTES:

Blank space - compound analyzed for but not detected
E - analysis did not pass QA/QC requirements
J - compound present below the specified detection limit

TABLE 2 (cont'd)
ANALYTICAL DATA
NAME: SADDLE PARK
SAMPLING DATE: 11/21/05
CASE: 5263

INORGANICS

SAMPLE NUMBER	NYE5-S1	NYE5-S2	NYE5-S3	NYE5-S4	NYE5-S5	NYE5-S6	NYE5-S7
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
Aluminum	10200	4980	11200	10800	9630	13700	11300
Antimony							
Arsenic							
Barium	E	E	E	E	E	E	E
Beryllium							
Cadmium							
Calcium	16500	37300	51400	18900	21500	23200	48100
Chromium	27	30	57	29	118	68	113
Cobalt	J		J	J	J	J	J
Copper				J			
Iron	14100	8330	15900	12900	16100	17200	16600
Lead	100	38	48	35	27	44	26
Magnesium	5900	17200	13600	8830	8940	8190	23000
Manganese	392	310	421	599	403	660	416
Mercury	80		12	15		7	48
Nickel	J		J	J	J	45	J
Potassium	J	J	J	J	J	J	J
Selenium							
Silver		J			J		
Sodium	E	E	E	E	E	E	E
Thallium							
Tin		J					
Vanadium	J	J	J	J	J	J	J
Zinc	100	100	111	110	110	189	98

NOTES:

Blank space - compound analyzed for but not detected

E - analysis did not pass QA/QC requirements

J - compound present below the specified detection limit

TABLE 2 (cont'd)
ANALYTICAL DATA
NAME: SABRE PARK
SAMPLING DATE: 11/21/85
CASE: 5263

PESTICIDES/PCBs

SAMPLE NUMBER	NYE5-S8	NYE5-S9	NYE5-S10	NYE5-S11	NYE5-S12	NYE5-S13	NYE5-S14
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Alpha-BHC				E			
Beta-BHC				E			
Delta-BHC				E			
Gamma-BHC (Lindane)				E			4.5
Heptachlor				E			
Aldrin				E			
Heptachlor Epoxide				E			
Endosulfan I				E			
Dieldrin				E	18		
4,4'-DDE				E			
Endrin				E			
Endosulfan II				E			
4,4'-DDD				E			
Endosulfan sulfate				E			
Endrin Aldehyde				E			
4,4'-DDT				E			
Methoxychlor				E			
Endrin Ketone				E		25	
Chlordane				E			
Toxaphene				E			
Aroclor-1016				E			
Aroclor-1221				E			
Aroclor-1232				E			
Aroclor-1242				E			
Aroclor-1248				E			
Aroclor-1254				E			
Aroclor-1260				E			

NOTES:

Blank space - compound analyzed for but not detected
E - analysis did not pass QA/QC requirements
J - compound present below the specified detection limit

TABLE 2 (cont'd)
ANALYTICAL DATA
NAME: SAGE PARK
SAMPLING DATE: 11/21/05
CASE: 5263

PESTICIDES/PCBs

SAMPLE NUMBER	NYE5-S1	NYE5-S2	NYE5-S3	NYE5-S4	NYE5-S5	NYE5-S6	NYE5-S7
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Alpha-BHC							
Beta-BHC							
Delta-BHC							
Gamma-BHC (Lindane)							28
Heptachlor							
Aldrin							
Heptachlor Epoxide							
Endosulfan I							
Dieldrin							
4,4'-DDE							
Endrin							
Endosulfan II							
4,4'-DDD							
Endosulfon sulfate							
Endrin Aldehyde							
4,4'-DDT							
Heptachlor							
Endrin Ketone							
Chlordane							
Toxaphene							
Aroclor-1016							
Aroclor-1221							
Aroclor-1232							
Aroclor-1242							
Aroclor-1248							
Aroclor-1254		270					500
Aroclor-1260							

NOTES:

Blank space - compound analyzed for but not detected

E - analysis did not pass QA/QC requirements

J - compound present below the specified detection limit

TABLE 2 (cont'd)
ANALYTICAL DATA
NAME: SADDLE PARK
SAMPLING DATE: 11/21/85
CASE: 5263

SEMI-VOLATILES

SAMPLE NUMBER	NYE5-S8	NYE5-S9	NYE5-S10	NYE5-S11	NYE5-S12	NYE5-S13	NYE5-S14
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
4,6-Dinitro-2-Methylphenol							
N-Nitrosodiphenylamine							
4-Bromophenylphenyl ether							
Hexachlorobenzene	J		J	J			J
Pentachlorophenol							
Phenanthrene	20000	J	J	J	7100	J	J
Anthracene	4500			J	790		J
Di-n-Butylphthalate	E	E	E	E	E	E	E
Fluoranthene	5000	J	J	J	1400	J	J
Benzidine							
Pyrene	4300			J	1100	J	J
Butylbenzylphthalate							
3,3'-Dichlorobenzidine							
Benzo(a)Anthracene	11000		J	J	2400		J
Ris(2-Ethylhexyl)Phthalate	E	E	E	E	E	E	E
Chrysene	11000		J	J	3000	J	J
Di-n-Octyl Phthalate							
Benzo(b)Fluoranthene	11000	J	J	1100	2400	J	J
Benzo(k)Fluoranthene							
Benzo(a)Pyrene	9000	J	J	J	J	J	J
Indeno(1,2,3-cd)Pyrene				J	J		J
Dibenzo(a,h)Anthracene							
Benzo(ghi)Perylene	2500			J	750		

NOTES:

Blank space - compound analyzed for but not detected

E - analysis did not pass QA/QC requirements

J - compound present below the specified detection limit

TABLE 2 (cont'd)
ANALYTICAL DATA
NAME: SAYRE PARK
SAMPLING DATE: 11/21/85
CASE: 5263

SEMI-VOLATILES

SAMPLE NUMBER	NYE5-S1	NYE5-S2	NYE5-S3	NYE5-S4	NYE5-S5	NYE5-S6	NYE5-S7
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
4,6-Dinitro-2-Methylphenol							
N-Nitrosodiphenylamine							
4-Bromophenylphenyl ether							
Hexachlorobenzene				J			J
Pentachlorophenol							
Phenanthrene	J	J	J	J	J	J	J
Anthracene	J		J				J
Di-n-Butylphthalate	E	E	E	E	E	E	E
Fluoranthene	J	J	J	J	J	J	J
Benzidine							
Pyrene	J	J	J	J	J	J	J
Butylbenzylphthalate							
3,3'-Dichlorobenzidine							
Benzo(a)Anthracene	J	J	J		J	J	J
Bis(2-Ethylhexyl)Phthalate	E	E	E	E	E	E	E
Chrysene	J	J	J	J	J	J	J
Di-n-Octyl Phthalate							
Benzo(b)Fluoranthene	J	J		J	J	J	J
Benzo(k)Fluoranthene							
Benzo(a)Pyrene	J	J	J	J	J	J	J
Indeno(1,2,3-cd)Pyrene	J						J
Dibenzo(a,h)Anthracene							
Benzo(ghi)Perylene	J	J	J			J	J

NOTES:

Blank space - compound analyzed for but not detected

E - analysis did not pass QA/QC requirements

J - compound present below the specified detection limit

TABLE 2 (cont'd)
ANALYTICAL DATA
NAME: SADDY PARK
SAMPLING DATE: 11/21/85
CASE: 5263

SEMI-VOLATILES							
SAMPLE NUMBER	NYE5-S8	NYE5-S9	NYE5-S10	NYE5-S11	NYE5-S12	NYE5-S13	NYE5-S14
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Phenol							
Aniline							
Bis(2-Chloroethyl)Ether							
2-Chlorophenol							
1,3-Dichlorobenzene							
1,4-Dichlorobenzene							
Benzyl Alcohol							
1,2-Dichlorobenzene							
2-Ethylphenol							
Bis(2-Chloroisopropyl)Ether							
4-Ethylphenol							
N-Nitroso-Di-n-Propylamine							
Hexachloroethane							
Nitrobenzene							
Isophorone							
2-Nitrophenol							
2,4-Dimethylphenol							
Benzoic Acid							
Bis(2-Chloroethoxy)Methane							
2,4-Dichlorophenol							
1,2,4-Trichlorobenzene							
Naphthalene	1300				J		
4-Chloroaniline							
Hexachlorobutadiene							
4-Chloro-3-Methylphenol							
2-Ethyl-naphthalene	J				J		
Hexachlorocyclopentadiene							
2,4,6-Trichlorophenol							
2,4,5-Trichlorophenol							
2-Chloronaphthalene							
2-Nitroaniline							
Dimethyl Phthalate							
Acenaphthylene							
3-Nitroaniline							
Acenaphthene	2300				J		
2,4-Dinitrophenol							
4-Nitrophenol							
Dibenzofuran	1400				750		
2,4-Dinitrotoluene							
2,6-Dinitrotoluene							
Diethylphthalate							
4-Chlorophenylphenyl ether							
Fluorene	2300				900		
4-Nitroaniline							

TABLE 2 (cont'd)
ANALYTICAL DATA
NAME: SAURE PARK
SAMPLING DATE: 11/21/85
CASE: 5263

SEMI-VOLATILES

SAMPLE NUMBER	NYE5-S1	NYE5-S2	NYE5-S3	NYE5-S4	NYE5-S5	NYE5-S6	NYE5-S7
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Phenol							
Aniline							
Bis(2-Chloroethyl)Ether							
2-Chlorophenol							
1,3-Dichlorobenzene							
1,4-Dichlorobenzene							
Benzyl Alcohol							
1,2-Dichlorobenzene							
2-Methylphenol							
Bis(2-Chloroisopropyl)Ether							
4-Methylphenol							
N-Nitroso-Di-n-Propylamine							
Hexachloroethane							
Nitrobenzene							
Isophorone							
2-Nitrophenol							
2,4-Dimethylphenol							
Benzoic Acid							
Bis(2-Chloroethoxy)Methane							
2,4-Dichlorophenol							
1,2,4-Trichlorobenzene							J
Naphthalene							
4-Chloroaniline							
Hexachlorobutadiene				J			J
4-Chloro-3-Methylphenol							
2-Methylnaphthalene							
Hexachlorocyclopentadiene							
2,4,6-Trichlorophenol							
2,4,5-Trichlorophenol							
2-Chloronaphthalene							
2-Nitroaniline							
Dimethyl Phthalate							
Acenaphthylene							
3-Nitroaniline							
Acenaphthene							
2,4-Dinitrophenol							
4-Nitrophenol							
Dibenzofuran							
2,4-Dinitrotoluene							
2,6-Dinitrotoluene							
Diethylphthalate							
4-Chlorophenylphenyl ether							
Fluorene							
4-Nitroaniline							

TABLE 2 (cont'd)
ANALYTICAL DATA
NAME: SAGE PARK
SAMPLING DATE: 11/21/85
CASE: 5263

VOLATILES								
SAMPLE NUMBER	NYE5-S8	NYE5-S9	NYE5-S10	NYE5-S11	NYE5-S12	NYE5-S13	NYE5-S14	NYE5-R1
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	BLANK
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/L
Chloromethane	E	E	E	E	E	E	E	
Bromomethane	E	E	E	E	E	E	E	
Vinyl Chloride	E	E	E	E	E	E	E	
Chloroethane	E	E	E	E	E	E	E	
Methylene Chloride	E	E	E	E	E	E	E	E
Acetone	E	E	E	E	E	E	E	10
Carbon Disulfide	E	E	E	E	E	E	E	
1,1-Dichloroethene	E	E	E	E	E	E	E	
1,1-Dichloroethane	E	E	E	E	E	E	E	
Trans-1,2-Dichloroethene	E	E	E	E	E	E	E	
Chloroform	E	E	E	E	E	E	E	
1,2-Dichloroethane	E	E	E	E	E	E	E	
2-Butanone	E	E	E	E	E	E	E	
1,1,1-Trichloroethane	E	E	E	E	E	E	E	
Carbon Tetrachloride	E	E	E	E	E	E	E	
Vinyl Acetate	E	E	E	E	E	E	E	
Bromodichloromethane	E	E	E	E	E	E	E	
1,1,2,2-Tetrachloroethane	E	E	E	E	E	E	E	
1,2-Dichloropropane	E	E	E	E	E	E	E	
Trans-1,3-Dichloropropene	E	E	E	E	E	E	E	
Trichloroethene	E	E	E	E	E	E	E	
Dibromochloromethane	E	E	E	E	E	E	E	
1,1,2-Trichloroethane	E	E	E	E	E	E	E	
Benzene	E	E	E	E	E	E	E	
Cis-1,3-Dichloropropene	E	E	E	E	E	E	E	
2-Chloroethylvinylether	E	E	E	E	E	E	E	
Bromoform	E	E	E	E	E	E	E	
2-Hexanone	E	E	E	E	E	E	E	
4-Methyl-2-Pentanone	E	E	E	E	E	E	E	
Tetrachloroethene	E	E	E	E	E	E	E	
Toluene	E	E	E	E	E	E	E	
Chlorobenzene	E	E	E	E	E	E	E	
Ethylbenzene	E	E	E	E	E	E	E	
Styrene	E	E	E	E	E	E	E	
Total Xylenes	E	E	E	E	E	E	E	

NOTES:

Blank space - compound analyzed for but not detected

E - analysis did not pass QA/QC requirements

J - compound present below the specified detection limit

TABLE 2
ANALYTICAL DATA
NAME: SAGE PARK
SAMPLING DATE: 11/21/05
CASE: 5263

VOLATILES

SAMPLE NUMBER	NYE5-S1	NYE5-S2	NYE5-S3	NYE5-S4	NYE5-S5	NYE5-S6	NYE5-S7
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Chloromethane	E	E	E	E	E	E	E
Bromomethane	E	E	E	E	E	E	E
Vinyl Chloride	E	E	E	E	E	E	E
Chloroethane	E	E	E	E	E	E	E
Methylene Chloride	E	E	E	E	E	E	E
Acetone	E	E	E	E	E	E	E
Carbon Disulfide	E	E	E	E	E	E	E
1,1-Dichloroethene	E	E	E	E	E	E	E
1,1-Dichloroethane	E	E	E	E	E	E	E
Trans-1,2-Dichloroethene	E	E	E	E	E	E	E
Chloroform	E	E	E	E	E	E	E
1,2-Dichloroethane	E	E	E	E	E	E	E
2-Butanone	E	E	E	E	E	E	E
1,1,1-Trichloroethane	E	E	E	E	E	E	E
Carbon Tetrachloride	E	E	E	E	E	E	E
Vinyl Acetate	E	E	E	E	E	E	E
Bromodichloromethane	E	E	E	E	E	E	E
1,1,2,2-Tetrachloroethane	E	E	E	E	E	E	E
1,2-Dichloropropane	E	E	E	E	E	E	E
Trans-1,3-Dichloropropene	E	E	E	E	E	E	E
Trichloroethene	E	E	E	E	E	E	E
Dibromochloromethane	E	E	E	E	E	E	E
1,1,2-Trichloroethane	E	E	E	E	E	E	E
Benzene	E	E	E	E	E	E	E
Cis-1,3-Dichloropropene	E	E	E	E	E	E	E
2-Chloroethylvinylether	E	E	E	E	E	E	E
Bromoform	E	E	E	E	E	E	E
2-Hexanone	E	E	E	E	E	E	E
4-Methyl-2-Pentanone	E	E	E	E	E	E	E
Tetrachloroethene	E	E	E	E	E	E	E
Toluene	E	E	E	E	E	E	E
Chlorobenzene	E	E	E	E	E	E	E
Ethylbenzene	E	E	E	E	E	E	E
Styrene	E	E	E	E	E	E	E
Total Xylenes	E	E	E	E	E	E	E

NOTES:

Blank space - compound analyzed for but not detected

E - analysis did not pass QA/QC requirements

J - compound present below the specified detection limit

TABLE 2

ORGANIC DATA REPORTING QUALIFIERS

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of such flags must be explicit.

- Value -If the result is a value greater than or equal to the detection limit, report the value.
- U -Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.
- J -Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. (e.g., 10J)
- C -This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥ 10 ng/ul in the final extract should be confirmed by GC/MS.
- B -This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.
- Other -Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

Organics Analysis Data Sheet

(Page 1)

Laboratory Name: ETC Corp.
 Lab Sample ID No: K6767V
 Sample Matrix: Soil
 Data Release Authorized By: [Signature]

Case No: 5263
 QC Report No: AV4056
 Contract No: 68-01-6766, 6788, 6789, 6790
 Date Sample Received: 11/22/85

Volatile Compounds

Concentration: Low Medium (Circle One)
 Date Extracted/Prepared: 85-12-04
 Date Analyzed: 85-12-04
 Conc/Dil Factor: 1 pH 7.8
 Percent Moisture: (Not Decanted) 34.24%

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	6.1 U
74-83-9	Bromomethane	6.1 U
75-01-4	Vinyl Chloride	6.1 U
75-00-3	Chloroethane	6.1 U
75-09-2	Methylene Chloride	250 B 250 B (JA)
67-64-1	Acetone	23 B
75-15-0	Carbon Disulfide	6.1 U
75-35-4	1, 1-Dichloroethene	6.1 U
75-34-3	1, 1-Dichloroethane	6.1 U
156-60-5	Trans-1, 2-Dichloroethene	6.1 U
67-66-3	Chloroform	6.1 U
107-06-2	1, 2-Dichloroethane	6.1 U
78-93-3	2-Butanone	6.1 U
71-55-6	1, 1, 1-Trichloroethane	6.1 U
56-23-5	Carbon Tetrachloride	6.1 U
108-05-4	Vinyl Acetate	6.1 U
75-27-4	Bromodichloromethane	6.1 U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	6.1 U
10061-02-6	Trans-1, 3-Dichloropropene	6.1 U
79-01-6	Trichloroethene	6.1 U
124-48-1	Dibromochloromethane	6.1 U
79-00-5	1, 1, 2-Trichloroethane	6.1 U
71-43-2	Benzene	6.1 U
10061-01-5	cis-1, 3-Dichloropropene	6.1 U
110-75-8	2-Chloroethylvinylether	6.1 U
75-25-2	Bromoform	6.1 U
108-10-1	4-Methyl-2-Pentanone	5.8 J
591-78-6	2-Hexanone	6.1 U
127-18-4	Tetrachloroethene	6.1 U
79-34-5	1, 1, 2, 2-Tetrachloroethane	6.1 U
108-88-3	Toluene	6.1 U
108-90-7	Chlorobenzene	6.1 U
100-41-4	Ethylbenzene	6.1 U
100-42-5	Styrene	6.1 U
	Total Xylenes	6.1 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

- | | |
|---|--|
| <p>Value If the result is a value greater than or equal to the detection limit, report the value</p> <p>U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample</p> <p>J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J</p> | <p>C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥ 10 ng-µl in the final extract should be confirmed by GC/MS</p> <p>B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action</p> <p>Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report</p> |
|---|--|

Laboratory Name
 Sample No: 5263

Organics Analysis Data Sheet
 (Page 2)

BD480

R. Baker

Semivolatiles Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 11/25/85

Date Analyzed: 12/4/85

Conc/Dil Factor: 1

CAS Number		ug/l or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	1000 U
108-95-2	Phenol	2000 U
62-53-3	Aniline	1000 U
111-44-4	bis(2-Chloroethyl)Ether	1000 U
95-57-8	2-Chlorophenol	2000 U
541-73-1	1, 3-Dichlorobenzene	1000 U
106-46-7	1, 4-Dichlorobenzene	1000 U
100-51-6	Benzyl Alcohol	1000 U
95-50-1	1, 2-Dichlorobenzene	1000 U
108-7	2-Methylphenol	2000 U
138-32-9	bis(2-chloroisopropyl)Ether	1000 U
106-44-5	4-Methylphenol	2000 U
621-64-7	N-Nitroso-Di-n-Propylamine	1000 U
67-72-1	Hexachloroethane	1000 U
98-95-3	Nitrobenzene	1000 U
78-59-1	Isophorone	1000 U
88-75-5	2-Nitrophenol	2000 U
105-67-9	2, 4-Dimethylphenol	2000 U
65-85-0	Benzoic Acid	2000 U
111-91-1	bis(2-Chloroethoxy)Methane	1000 U
120-83-2	2, 4-Dichlorophenol	2000 U
120-82-1	1, 2, 4-Trichlorobenzene	1000 U
91-20-3	Naphthalene	1000 U
106-47-8	4-Chloroaniline	1000 U
87-68-3	Hexachlorobutadiene	1000 U
59-50-7	4-Chloro-3-Methylphenol	2000 U
91-57-6	2-Methylnaphthalene	1000 U
77-47-4	Hexachlorocyclopentadiene	1000 U
88-06-2	2, 4, 6-Trichlorophenol	2000 U
95-95-4	2, 4, 5-Trichlorophenol	2000 U
91-58-7	2-Chloronaphthalene	1000 U
88-74-4	2-Nitroaniline	1000 U
131-11-3	Dimethyl Phthalate	1000 U
208-96-8	Acenaphthylene	1000 U
99-09-2	3-Nitroaniline	1000 U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	1000 U
51-28-5	2, 4-Dinitrophenol	2000 U
100-02-7	4-Nitrophenol	2000 U
132-64-9	Dibenzofuran	1000 U
121-14-2	2, 4-Dinitrotoluene	1000 U
606-20-2	2, 6-Dinitrotoluene	1000 U
84-66-2	Diethylphthalate	1000 U
7005-72-3	4-Chlorophenyl-phenylether	1000 U
86-73-7	Fluorene	1000 U
100-01-6	4-Nitroaniline	1000 U
534-52-1	4, 6-Dinitro-2-Methylphenol	2000 U
86-30-6	N-Nitrosodiphenylamine (1)	1000 U
101-55-3	4-Bromophenyl-phenylether	1000 U
118-74-1	Hexachlorobenzene	1000 U
87-86-5	Pentachlorophenol	2000 U
85-01-8	Phenanthrene	860 J
120-12-7	Anthracene	140 J
84-74-2	Di-n-Butylphthalate	360 J
206-44-0	Fluoranthene	450 J
92-87-5	Benzidine	1000 U
129-00-0	Pyrene	300 J
85-68-7	Butylbenzylphthalate	1000 U
91-94-1	3, 3'-Dichlorobenzidine	1000 U
56-55-3	Benzo(a)Anthracene	690 J
117-81-7	bis(2-Ethylhexyl)Phthalate	500 J
218-01-9	Chrysene	720 J
117-84-0	Di-n-Octyl Phthalate	1000 U
205-99-2	Benzo(b)Fluoranthene	870 J
207-08-9	Benzo(k)Fluoranthene	1000 U
50-32-8	Benzo(a)Pyrene	860 J
193-39-5	Indeno(1, 2, 3-cd)Pyrene	500 J
53-70-3	Dibenzo(a, h)Anthracene	1000 U
191-24-2	Benzo(g, h, i)Perylene	300 J

(1)-Cannot be separated from diphenylamine

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ETC Corp.
 Sample ID No: K6768V
 Sample Matrix: Soil
 Data Release Authorized By: K. Baker

Case No: 5263
 QC Report No: GV4056
 Contract No: 68-01-6766, 6788, 6789, 6790
 Date Sample Received: 11/22/85

Volatile Compounds

Concentration: Low Medium (Circle One)
 Date Extracted/Prepared: 12-4-85
 Date Analyzed: 12-4-85
 Conc/Dil Factor: 1 pH 7.8
 Percent Moisture: (Not Decanted) 18.64%

*EXCEEDS
Holding
Time*

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	4.9 U
74-83-9	Bromomethane	4.9 U
75-01-4	Vinyl Chloride	4.9 U
75-00-3	Chloroethane	4.9 U
75-09-2	Methylene Chloride	230 B
67-64-1	Acetone	24 B
75-15-0	Carbon Disulfide	2.1 J
75-35-4	1, 1-Dichloroethene	4.9 U
5-34-3	1, 1-Dichloroethane	4.9 U
156-60-5	Trans-1, 2-Dichloroethene	4.9 U
67-66-3	Chloroform	4.9 U
107-06-2	1, 2-Dichloroethane	4.9 U
78-93-3	2-Butanone	4.9 U
71-55-6	1, 1, 1-Trichloroethane	4.9 U
56-23-5	Carbon Tetrachloride	4.9 U
108-05-4	Vinyl Acetate	4.9 U
75-27-4	Bromodichloromethane	4.9 U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	4.9 U
10061-02-6	Trans-1, 3-Dichloropropene	4.9 U
79-01-6	Trichloroethene	4.9 U
124-48-1	Dibromochloromethane	4.9 U
79-00-5	1, 1, 2-Trichloroethane	4.9 U
71-43-2	Benzene	4.9 U
10061-01-5	cis-1, 3-Dichloropropene	4.9 U
110-75-8	2-Chloroethylvinylether	4.9 U
75-25-2	Bromoform	4.9 U
108-10-1	4-Methyl-2-Pentanone	4.9 U
591-78-6	2-Hexanone	4.9 U
127-18-4	Tetrachloroethene	4.9 U
79-34-5	1, 1, 2, 2-Tetrachloroethane	4.9 U
108-88-3	Toluene	6.7
108-90-7	Chlorobenzene	4.9 U
100-41-4	Ethylbenzene	4.9 U
100-42-5	Styrene	4.9 U
	Total Xylenes	4.9 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used.
 Additional flags or footnotes explaining results are encouraged. However, the
 definition of each flag must be explicit.

- Value** If the result is a value greater than or equal to the detection limit, report the value
- U** Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.
- J** Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

- C** This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥ 10 ng ul in the final extract should be confirmed by GC/MS.
- B** This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.
- Other** Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

Organics Analysis Data Sheet
(Page 2)DU 701
R. Baker

Semivolatile Compounds

Concentration: Low Medium (Circle One)Date Extracted/Prepared: 11/25/85Date Analyzed: 12/4/85Conc/Dil Factor: 1

CAS Number		ug/l or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	820 U
105-95-2	Phenol	1600 U
62-53-3	Aniline	820 U
111-44-4	bis(2-Chloroethyl)Ether	820 U
95-57-8	2-Chlorophenol	1600 U
541-73-1	1, 3-Dichlorobenzene	820 U
106-46-7	1, 4-Dichlorobenzene	820 U
100-51-6	Benzyl Alcohol	820 U
95-50-1	1, 2-Dichlorobenzene	820 U
95-48-7	2-Methylphenol	1600 U
39538-32-9	bis(2-chloroisopropyl)Ether	820 U
106-44-5	4-Methylphenol	1600 U
621-64-7	N-Nitroso-Di-n-Propylamine	820 U
67-72-1	Hexachloroethane	820 U
98-95-3	Nitrobenzene	820 U
78-59-1	Isophorone	820 U
88-75-5	2-Nitrophenol	1600 U
105-67-9	2, 4-Dimethylphenol	1600 U
65-85-0	Benzoic Acid	1600 U
111-91-1	bis(2-Chloroethoxy)Methane	820 U
120-83-2	2, 4-Dichlorophenol	1600 U
120-82-1	1, 2, 4-Trichlorobenzene	820 U
91-20-3	Naphthalene	820 U
106-47-8	4-Chloroaniline	820 U
87-68-3	Hexachlorobutadiene	820 U
59-50-7	4-Chloro-3-Methylphenol	1600 U
91-57-6	2-Methylnaphthalene	820 U
77-47-4	Hexachlorocyclopentadiene	820 U
88-06-2	2, 4, 6-Trichlorophenol	1600 U
95-95-4	2, 4, 5-Trichlorophenol	1600 U
91-58-7	2-Chloronaphthalene	820 U
88-74-4	2-Nitroaniline	820 U
131-11-3	Dimethyl Phthalate	820 U
208-96-8	Acenaphthylene	820 U
99-09-2	3-Nitroaniline	820 U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	820 U
51-28-5	2, 4-Dinitrophenol	1600 U
100-02-7	4-Nitrophenol	1600 U
132-64-9	Dibenzofuran	820 U
121-14-2	2, 4-Dinitrotoluene	820 U
606-20-2	2, 6-Dinitrotoluene	820 U
84-66-2	Diethylphthalate	820 U
7005-72-3	4-Chlorophenyl-phenylether	820 U
86-73-7	Fluorene	820 U
100-01-6	4-Nitroaniline	820 U
534-52-1	4, 6-Dinitro-2-Methylphenol	1600 U
86-30-6	N-Nitrosodiphenylamine (1)	820 U
101-55-3	4-Bromophenyl-phenylether	820 U
118-74-1	Hexachlorobenzene	820 U
87-86-5	Pentachlorophenol	1600 U
85-01-8	Phenanthrene	300 J
120-12-7	Anthracene	820 U
84-74-2	Di-n-Butylphthalate	370 J
206-44-0	Fluoranthene	250 J
92-87-5	Benzidine	820 U
129-00-0	Pyrene	170 J
85-68-7	Butylbenzylphthalate	820 U
91-94-1	3, 3'-Dichlorobenzidine	820 U
56-55-3	Benzo(a)Anthracene	270 J
117-81-7	bis(2-Ethylhexyl)Phthalate	300 J
218-01-9	Chrysene	390 J
117-84-0	Di-n-Octyl Phthalate	820 U
205-99-2	Benzo(b)Fluoranthene	470 J
207-08-9	Benzo(k)Fluoranthene	820 U
50-32-8	Benzo(a)Pyrene	400 J
193-39-5	Indeno(1, 2, 3-cd)Pyrene	820 U
53-70-3	Dibenz(a, h)Anthracene	820 U
191-24-2	Benzo(g, h, i)Perylene	90 J

(1)-Cannot be separated from diphenylamine

Laboratory Name ETC Corp.
 Lab Sample ID No: K6769V
 Sample Matrix: Soil
 Data Release Authorized By: R. Baker

Case No: 5263
 QC Report No: EV4056
 Contract No: 68-01-6766, 6788, 6789, 67
 Date Sample Received: 11/22/85

Volatile Compounds

Concentration: Low Medium (Circle One)
 Date Extracted/Prepared: 12-04-85
 Date Analyzed: 12-04-85
 Conc/Dil Factor: 1 pH 8.0
 Percent Moisture: (Not Decanted) 26.63%

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	5.5 U
74-83-9	Bromomethane	5.5 U
75-01-4	Vinyl Chloride	5.5 U
75-00-3	Chloroethane	5.5 U
75-09-2	Methylene Chloride	120 B
67-64-1	Acetone	10 B
75-15-0	Carbon Disulfide	5.5 U
75-35-4	1, 1-Dichloroethene	5.5 U
75-34-3	1, 1-Dichloroethane	5.5 U
156-60-5	Trans-1, 2-Dichloroethene	5.5 U
67-66-3	Chloroform	5.5 U
107-06-2	1, 2-Dichloroethane	5.5 U
78-93-3	2-Butanone	5.5 U
71-55-6	1, 1, 1-Trichloroethane	5.5 U
56-23-5	Carbon Tetrachloride	5.5 U
108-05-4	Vinyl Acetate	5.5 U
75-27-4	Bromodichloromethane	5.5 U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5.5 U
10061-02-6	Trans-1, 3-Dichloropropene	5.5 U
79-01-6	Trichloroethene	5.5 U
124-48-1	Dibromochloromethane	5.5 U
79-00-5	1, 1, 2-Trichloroethane	5.5 U
71-43-2	Benzene	5.5 U
10061-01-5	cis-1, 3-Dichloropropene	5.5 U
110-75-8	2-Chloroethylvinylether	5.5 U
75-25-2	Bromoform	5.5 U
108-10-1	4-Methyl-2-Pentanone	5.5 U
591-78-6	2-Hexanone	5.5 U
127-18-4	Tetrachloroethene	5.5 U
79-34-5	1, 1, 2, 2-Tetrachloroethane	5.5 U
108-88-3	Toluene	5.5 U
108-90-7	Chlorobenzene	5.5 U
100-41-4	Ethylbenzene	5.5 U
100-42-5	Styrene	5.5 U
	Total Xylenes	5.5 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used.
 Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

- Value If the result is a value greater than or equal to the detection limit report the value
- U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.
- J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J.

- C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥ 10 ng ul in the final extract should be confirmed by GC/MS.
- B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible probable blank contamination and warns the data user to take appropriate action.
- Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

Case No

5263

Organics Analysis Data Sheet
(Page 2)

BD 774

K. Behn

Semivolatile Compounds

Concentration: Low Medium (Circle One)Date Extracted/Prepared: 11/25/85Date Analyzed: 12/4/85Conc/Dil Factor: 1

CAS Number		ug/l or ug/Kg (Circle One)
55-75-9	N-Nitrosodimethylamine	900 U
108-95-2	Phenol	1800 U
62-53-3	Aniline	900 U
111-44-4	bis(2-Chloroethyl)Ether	900 U
135-57-8	2-Chlorophenol	1800 U
141-73-1	1, 3-Dichlorobenzene	900 U
106-46-7	1, 4-Dichlorobenzene	900 U
100-51-6	Benzyl Alcohol	900 U
195-50-1	1, 2-Dichlorobenzene	900 U
135-48-7	2-Methylphenol	1800 U
139638-32-9	bis(2-chloroisopropyl)Ether	900 U
105-44-5	4-Methylphenol	1800 U
121-64-7	N-Nitroso-Di-n-Propylamine	900 U
157-72-1	Hexachloroethane	900 U
98-95-3	Nitrobenzene	900 U
78-59-1	Isophorone	900 U
98-75-5	2-Nitrophenol	1800 U
105-67-9	2, 4-Dimethylphenol	1800 U
65-85-0	Benzoic Acid	1800 U
111-91-1	bis(2-Chloroethoxy)Methane	900 U
120-83-2	2, 4-Dichlorophenol	1800 U
120-82-1	1, 2, 4-Trichlorobenzene	900 U
91-20-3	Naphthalene	900 U
106-47-8	4-Chloroaniline	900 U
87-68-3	Hexachlorobutadiene	900 U
59-50-7	4-Chloro-3-Methylphenol	1800 U
91-57-6	2-Methylnaphthalene	900 U
77-47-4	Hexachlorocyclopentadiene	900 U
88-06-2	2, 4, 6-Trichlorophenol	1800 U
95-95-4	2, 4, 5-Trichlorophenol	1800 U
91-58-7	2-Chloronaphthalene	900 U
88-74-4	2-Nitroaniline	900 U
131-11-3	Dimethyl Phthalate	900 U
208-96-8	Acenaphthylene	900 U
99-09-2	3-Nitroaniline	900 U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	900 U
51-28-5	2, 4-Dinitrophenol	1800 U
100-02-7	4-Nitrophenol	1800 U
132-64-9	Dibenzofuran	900 U
121-14-2	2, 4-Dinitrotoluene	900 U
606-20-2	2, 6-Dinitrotoluene	900 U
84-66-2	Diethylphthalate	900 U
7005-72-3	4-Chlorophenyl-phenylether	900 U
86-73-7	Fluorene	900 U
100-01-6	4-Nitroaniline	900 U
534-52-1	4, 6-Dinitro-2-Methylphenol	1800 U
86-30-6	N-Nitrosodiphenylamine (1)	900 U
101-55-3	4-Bromophenyl-phenylether	900 U
118-74-1	Hexachlorobenzene	900 U
87-86-5	Pentachlorophenol	1800 U
85-01-8	Phenanthrene	670 J
120-12-7	Anthracene	100 J
84-74-2	Di-n-Butylphthalate	1100 J
206-44-0	Fluoranthene	480 J
92-87-5	Benzidine	900 U
129-00-0	Pyrene	300 J
85-68-7	Butylbenzylphthalate	900 U
91-94-1	3, 3'-Dichlorobenzidine	900 U
56-55-3	Benzo(a)Anthracene	530 J
117-81-7	bis(2-Ethylhexyl)Phthalate	~~500 J~~
218-01-9	Chrysene	730 J
117-84-0	Di-n-Octyl Phthalate	900 U
205-99-2	Benzo(b)Fluoranthene	900 U
207-08-9	Benzo(k)Fluoranthene	900 U
50-32-8	Benzo(a)Pyrene	740 J
193-39-5	Indeno(1, 2, 3-cd)Pyrene	900 U
53-70-3	Dibenzo(a, h)Anthracene	900 U
191-24-2	Benzo(g, h, i)Perylene	290 J

(1)-Cannot be separated from diphenylamine

Organics Analysis Data Sheet (Page 1)

Laboratory Name ETC Corp.
 Lab Sample ID No: K6770V
 Sample Matrix: SOIL
 Data Release Authorized By: R. Baker

Case No: 5263
 QC Report No: EV4056
 Contract No: 68-01-6766, 6788, 6789, 67
 Date Sample Received: 11/22/85

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 12-04-85

Date Analyzed: 12-04-85

Conc/Dil Factor: 1 pH 7.9

Percent Moisture: (Not Decanted) 14.58%

*Hold
Time*

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	4.7 U
74-83-9	Bromomethane	4.7 U
75-01-4	Vinyl Chloride	4.7 U
75-00-3	Chloroethane	4.7 U
75-09-2	Methylene Chloride	29 U
67-64-1	Acetone	2.2 U
75-15-0	Carbon Disulfide	2.2 U
75-35-4	1, 1-Dichloroethene	4.7 U
75-34-3	1, 1-Dichloroethane	4.7 U
156-60-5	Trans-1, 2-Dichloroethene	4.7 U
67-66-3	Chloroform	4.7 U
107-06-2	1, 2-Dichloroethane	4.7 U
78-93-3	2-Butanone	4.7 U
71-55-6	1, 1, 1-Trichloroethane	4.7 U
56-23-5	Carbon Tetrachloride	4.7 U
108-05-4	Vinyl Acetate	4.7 U
75-27-4	Bromodichloromethane	4.7 U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	4.7 U
10061-02-6	Trans-1, 3-Dichloropropene	4.7 U
79-01-6	Trichloroethene	4.7 U
124-48-1	Dibromochloromethane	4.7 U
79-00-5	1, 1, 2-Trichloroethane	4.7 U
71-43-2	Benzene	4.7 U
10061-01-5	cis-1, 3-Dichloropropene	4.7 U
110-75-8	2-Chloroethylvinylether	4.7 U
75-25-2	Bromoform	4.7 U
108-10-1	4-Methyl-2-Pentanone	4.5 U
591-78-6	2-Hexanone	4.7 U
127-18-4	Tetrachloroethene	4.7 U
79-34-5	1, 1, 2, 2-Tetrachloroethane	4.7 U
108-88-3	Toluene	1.4 U
108-90-7	Chlorobenzene	4.7 U
100-41-4	Ethylbenzene	4.7 U
100-42-5	Styrene	4.7 U
	Total Xylenes	1.5 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10U). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥ 10 ng·ul in the final extract should be confirmed by GC/MS.

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

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

Case No:

5263

Sample Number

BD775

Organics Analysis Data Sheet
(Page 2)*H. Baker*

Semivolatile Compounds

Concentration: Low Medium (Circle One)Date Extracted/Prepared: 11/25/85Date Analyzed: 12/4/85Conc/Dil Factor: 1

CAS Number		ug/l or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	780 U
106-95-2	Phenol	1600 U
62-53-3	Aniline	780 U
111-44-4	bis(2-Chloroethyl)Ether	780 U
95-57-8	2-Chlorophenol	1600 U
541-73-1	1,3-Dichlorobenzene	780 U
106-46-7	1,4-Dichlorobenzene	780 U
100-51-6	Benzyl Alcohol	780 U
95-50-1	1,2-Dichlorobenzene	780 U
95-48-7	2-Methylphenol	1600 U
39638-32-9	bis(2-chloroisopropyl)Ether	780 U
106-44-5	4-Methylphenol	1600 U
621-64-7	N-Nitroso-Di-n-Propylamine	780 U
67-72-1	Hexachloroethane	780 U
98-95-3	Nitrobenzene	780 U
78-59-1	Isophorone	780 U
88-75-5	2-Nitrophenol	1600 U
105-67-9	2,4-Dimethylphenol	1600 U
65-85-0	Benzoic Acid	1600 U
111-91-1	bis(2-Chloroethoxy)Methane	780 U
120-83-2	2,4-Dichlorophenol	1600 U
120-82-1	1,2,4-Trichlorobenzene	780 U
91-20-3	Naphthalene	780 U
106-47-8	4-Chloroaniline	780 U
87-68-3	Hexachlorobutadiene	91 J
59-50-7	4-Chloro-3-Methylphenol	1600 U
91-57-6	2-Methylnaphthalene	780 U
77-47-4	Hexachlorocyclopentadiene	780 U
88-06-2	2,4,6-Trichlorophenol	1600 U
95-95-4	2,4,5-Trichlorophenol	1600 U
91-58-7	2-Chloronaphthalene	780 U
88-74-4	2-Nitroaniline	780 U
131-11-3	Dimethyl Phthalate	780 U
208-96-8	Acenaphthylene	780 U
99-09-2	3-Nitroaniline	780 U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	780 U
51-28-5	2,4-Dinitrophenol	1600 U
100-02-7	4-Nitrophenol	1600 U
132-64-9	Dibenzofuran	780 U
121-14-2	2,4-Dinitrotoluene	780 U
606-20-2	2,6-Dinitrotoluene	780 U
84-66-2	Diethylphthalate	780 U
7005-72-3	4-Chlorophenyl-phenylether	780 U
86-73-7	Fluorene	780 U
100-01-6	4-Nitroaniline	780 U
534-52-1	4,6-Dinitro-2-Methylphenol	1600 U
86-30-6	N-Nitrosodiphenylamine (1)	780 U
101-55-3	4-Bromophenyl-phenylether	780 U
118-74-1	Hexachlorobenzene	360 J
87-86-5	Pentachlorophenol	1600 U
85-01-8	Phenanthrene	230 J
120-12-7	Anthracene	780 U
84-74-2	Di-n-Butylphthalate	~~450 JB~~
206-44-0	Fluoranthene	170 J
92-87-5	Benzidine	780 U
129-00-0	Pyrene	106 J
85-68-7	Butylbenzylphthalate	780 U
91-94-1	3,3'-Dichlorobenzidine	780 U
56-55-3	Benzo(a)Anthracene	780 U
117-81-7	bis(2-Ethylhexyl)Phthalate	~~200 JB~~
218-01-9	Chrysene	200 J
117-84-0	Di-n-Octyl Phthalate	780 U
205-99-2	Benzo(b)Fluoranthene	130 J
207-08-9	Benzo(k)Fluoranthene	780 U
50-32-8	Benzo(a)Pyrene	2013 ~~780 U~~ MM
193-39-5	Indeno(1,2,3-cd)Pyrene	780 U
53-70-3	Dibenz(a,h)Anthracene	780 U
191-24-2	Benzo(g,h,i)Perylene	~~780 U~~ MM

(1)-Cannot be separated from diphenylamine

Organics Analysis Data Sheet (Page 1)

Laboratory Name ETC Corp.
 Lab Sample ID No. K6771V
 Sample Matrix: SOIL
 Data Release Authorized By: R. Baker

Case No: 5263
 QC Report No: OV 4056
 Contract No: 68-01-6766, 6788, 6789, 6790
 Date Sample Received: 11/22/85

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 12-4-85

Date Analyzed: 12-4-85

Conc/Dil Factor: 1 pH 7.7

Percent Moisture: (Not Decanted) 19.08

Holding
Time

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	4.9 U
74-83-9	Bromomethane	4.9 U
75-01-4	Vinyl Chloride	4.9 U
75-00-3	Chloroethane	4.9 U
75-09-2	Methylene Chloride	27 B
67-64-1	Acetone	26 B
75-15-0	Carbon Disulfide	4.9 U
75-35-4	1, 1-Dichloroethene	4.9 U
75-34-3	1, 1-Dichloroethane	4.9 U
156-60-5	Trans-1, 2-Dichloroethene	4.9 U
66-3	Chloroform	4.9 U
107-06-2	1, 2-Dichloroethane	4.9 U
78-93-3	2-Butanone	4.9 U
71-55-6	1, 1, 1-Trichloroethane	2.2 J
56-23-5	Carbon Tetrachloride	4.9 U
108-05-4	Vinyl Acetate	4.9 U
75-27-4	Bromodichloromethane	4.9 U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	4.9 U
10061-02-6	Trans-1, 3-Dichloropropene	4.9 U
79-01-6	Trichloroethene	4.9 U
124-48-1	Dibromochloromethane	4.9 U
79-00-5	1, 1, 2-Trichloroethane	4.9 U
71-43-2	Benzene	4.9 U
10061-01-5	cis-1, 3-Dichloropropene	4.9 U
110-75-8	2-Chloroethylvinylether	4.9 U
75-25-2	Bromoform	4.9 U
108-10-1	4-Methyl-2-Pentanone	4.9 U
591-78-6	2-Hexanone	4.9 U
127-18-4	Tetrachloroethene	4.9 U
79-34-5	1, 1, 2, 2-Tetrachloroethane	4.9 U
108-88-3	Toluene	4.9 U
108-90-7	Chlorobenzene	4.9 U
100-41-4	Ethylbenzene	4.9 U
100-42-5	Styrene	4.9 U
	Total Xylenes	4.9 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used.
 Additional flags or footnotes explaining results are encouraged. However, the
 definition of each flag must be explicit.

- Value** If the result is a value greater than or equal to the detection limit, report the value
- U** Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample
- J** Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J

- C** This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥ 10 ng/ul in the final extract should be confirmed by GC/MS
- B** This flag is used when the analyte is found in the blank as well as a sample. It indicates possible probable blank contamination and warns the data user to take appropriate action
- Other** Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report

Organics Analysis Data Sheet
(Page 2)

A. Baker

Semi-volatile Compounds

Concentration: Low Medium (Circle One)Date Extracted/Prepared: 11/25/85Date Analyzed: 12/4/85Conc/Dil Factor: 1

CAS Number		ug/l or ug/Kg (Circle One)
52-75-9	N-Nitrosodimethylamine	820 U
108-95-2	Phenol	1600 U
52-53-3	Aniline	820 U
111-44-4	bis(2-Chloroethyl)Ether	820 ~~666~~ U MM
95-57-8	2-Chlorophenol	1600 U
541-73-1	1, 3-Dichlorobenzene	820 U
106-46-7	1, 4-Dichlorobenzene	820 U
100-51-6	Benzyl Alcohol	820 U
95-50-1	1, 2-Dichlorobenzene	~~MM~~ 820 U
95-48-7	2-Methylphenol	1600 U
39638-32-9	bis(2-chloroisopropyl)Ether	820 U
106-44-5	4-Methylphenol	1600 U
621-64-7	N-Nitroso-Di-n-Propylamine	820 U
57-72-1	Hexachloroethane	820 U
98-95-3	Nitrobenzene	820 U
78-59-1	Isophorone	820 U
88-75-5	2-Nitrophenol	1600 U
105-67-9	2, 4-Dimethylphenol	1600 U
65-85-0	Benzoic Acid	1600 U
111-91-1	bis(2-Chloroethoxy)Methane	820 U
120-83-2	2, 4-Dichlorophenol	1600 U
120-82-1	1, 2, 4-Trichlorobenzene	820 U
91-20-3	Naphthalene	820 U
106-47-8	4-Chloroaniline	820 U
87-68-3	Hexachlorobutadiene	820 U
59-50-7	4-Chloro-3-Methylphenol	1600 U
91-57-6	2-Methylnaphthalene	820 U
77-47-4	Hexachlorocyclopentadiene	820 U
88-06-2	2, 4, 6-Trichlorophenol	1600 U
95-95-4	2, 4, 5-Trichlorophenol	1600 U
91-58-7	2-Chloronaphthalene	820 U
88-74-4	2-Nitroaniline	820 U
131-11-3	Dimethyl Phthalate	820 U
208-96-8	Acenaphthylene	820 U
99-09-2	3-Nitroaniline	820 U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	820 U
51-28-5	2, 4-Dinitrophenol	1600 U
100-02-7	4-Nitrophenol	1600 U
132-64-9	Dibenzofuran	820 U
121-14-2	2, 4-Dinitrotoluene	820 U
606-20-2	2, 6-Dinitrotoluene	820 U
84-66-2	Diethylphthalate	820 U
7005-72-3	4-Chlorophenyl-phenylether	820 U
86-73-7	Fluorene	820 U
100-01-6	4-Nitroaniline	820 U
534-52-1	4, 6-Dinitro-2-Methylphenol	1600 U
86-30-6	N-Nitrosodiphenylamine (1)	820 U
101-55-3	4-Bromophenyl-phenylether	820 U
118-74-1	Hexachlorobenzene	820 U
87-86-5	Pentachlorophenol	1600 U
85-01-8	Phenanthrene	240 J
120-12-7	Anthracene	820 U
84-74-2	Di-n-Butylphthalate	~~530 JB~~
206-44-0	Fluoranthene	180 J
92-87-5	Benzidine	820 U
129-00-0	Pyrene	120 J
85-68-7	Butylbenzylphthalate	820 U
91-94-1	3, 3'-Dichlorobenzidine	820 U
56-55-3	Benzo(a)Anthracene	200 J
117-81-7	bis(2-Ethylhexyl)Phthalate	~~350 JB~~
218-01-9	Chrysene	220 J
117-84-0	Di-n-Octyl Phthalate	820 U
205-99-2	Benzo(b)Fluoranthene	200 J
207-08-9	Benzo(k)Fluoranthene	820 U
50-32-8	Benzo(a)Pyrene	210 ~~526~~ U MM
193-39-5	Indeno(1, 2, 3-cd)Pyrene	820 U
53-70-3	Dibenz(a, h)Anthracene	820 U
191-24-2	Benzo(g, h, i)Perylene	820 U

(1)-Cannot be separated from diphenylamine

Laboratory Name ETC Corp.
Lab Sample ID No K 6772 ✓
Sample Matrix: SOIL
Data Release Authorized By: H. Bahr

Case No 5263
QC Report No: 0V4056
Contract No: 68-01-6766, 6788, 6789, 6790
Date Sample Received: 11/22/85

Volatile Compounds

Concentration: Low Medium (Circle One)Date Extracted/Prepared: 12-05-85Date Analyzed: 12-05-85Conc/Dil Factor: 1 pH 7.8Percent Moisture: (Not Decanted) 21.08%

EXCEEDS
Holding
Time

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	5.1 U
74-83-9	Bromomethane	5.1 U
75-01-4	Vinyl Chloride	5.1 U
75-00-3	Chloroethane	5.1 U
75-09-2	Methylene Chloride	130 B
67-64-1	Acetone	22 B
75-15-0	Carbon Disulfide	5.1 U
75-35-4	1, 1-Dichloroethene	5.1 U
75-34-3	1, 1-Dichloroethane	5.1 U
156-60-5	Trans-1, 2-Dichloroethene	5.1 U
67-66-3	Chloroform	5.1 U
107-06-2	1, 2-Dichloroethane	5.1 U
78-93-3	2-Butanone	5.1 U
71-55-6	1, 1, 1-Trichloroethane	5.1 U
56-23-5	Carbon Tetrachloride	5.1 U
108-05-4	Vinyl Acetate	5.1 U
75-27-4	Bromodichloromethane	5.1 U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5.1 U
10061-02-6	Trans-1, 3-Dichloropropene	5.1 U
79-01-6	Trichloroethene	5.1 U
124-48-1	Dibromochloromethane	5.1 U
79-00-5	1, 1, 2-Trichloroethene	5.1 U
71-43-2	Benzene	5.1 U
10061-01-5	cis-1, 3-Dichloropropene	5.1 U
110-75-8	2-Chloroethylvinylether	5.1 U
75-25-2	Bromoform	5.1 U
108-10-1	4-Methyl-2-Pentanone	5.1 U
591-78-6	2-Hexanone	5.1 U
127-18-4	Tetrachloroethene	5.1 U
79-34-5	1, 1, 2, 2-Tetrachloroethane	5.1 U
108-88-3	Toluene	5.1 U
108-90-7	Chlorobenzene	5.1 U
100-41-4	Ethylbenzene	5.1 U
100-42-5	Styrene	5.1 U
	Total Xylenes	5.1 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used.
Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

- Value If the result is a value greater than or equal to the detection limit, report the value
- U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample
- J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J

- C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥ 10 ng/l in the final extract should be confirmed by GC/MS
- B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible probable blank contamination and warns the data user to take appropriate action
- Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report

Organics Analysis Data Sheet
(Page 2)*K. Baker*

Semivolatile Compounds

Concentration: Low Medium (Circle One)Date Extracted/Prepared: 11/25/85Date Analyzed: 12/4/85Conc/Dil Factor: 1

CAS Number		ug/l or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	840 U
108-95-2	Phenol	1700 U
62-53-3	Aniline	840 U
111-44-4	bis(2-Chloroethyl)Ether	840 U
95-57-8	2-Chlorophenol	1700 U
541-73-1	1,3-Dichlorobenzene	840 U
106-46-7	1,4-Dichlorobenzene	840 U
100-51-6	Benzyl Alcohol	840 U
95-50-1	1,2-Dichlorobenzene	840 U
95-48-7	2-Methylphenol	1700 U
39638-32-9	bis(2-chloroisopropyl)Ether	840 U
106-44-5	4-Methylphenol	1700 U
621-64-7	N-Nitroso-Di-n-Propylamine	840 U
67-72-1	Hexachloroethane	840 U
98-95-3	Nitrobenzene	840 U
78-59-1	Isophorone	840 U
88-75-5	2-Nitrophenol	1700 U
105-67-9	2,4-Dimethylphenol	1700 U
65-85-0	Benzoic Acid	1700 U
111-91-1	bis(2-Chloroethoxy)Methane	840 U
120-83-2	2,4-Dichlorophenol	1700 U
120-82-1	1,2,4-Trichlorobenzene	840 U
91-20-3	Naphthalene	840 U
106-47-8	4-Chloroaniline	840 U
87-68-3	Hexachlorobutadiene	840 U
59-50-7	4-Chloro-3-Methylphenol	1700 U
91-57-6	2-Methylnaphthalene	840 U
77-47-4	Hexachlorocyclopentadiene	840 U
88-06-2	2,4,6-Trichlorophenol	1700 U
95-95-4	2,4,5-Trichlorophenol	1700 U
91-58-7	2-Chloronaphthalene	840 U
88-74-4	2-Nitroaniline	840 U
131-11-3	Dimethyl Phthalate	840 U
208-96-8	Acenaphthylene	840 U
99-09-2	3-Nitroaniline	840 U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	840 U
51-28-5	2,4-Dinitrophenol	1700 U
100-02-7	4-Nitrophenol	1700 U
132-64-9	Dibenzofuran	840 U
121-14-2	2,4-Dinitrotoluene	840 U
606-20-2	2,6-Dinitrotoluene	840 U
84-66-2	Diethylphthalate	840 U
7005-72-3	4-Chlorophenyl-phenylether	840 U
86-73-7	Fluorene	840 U
100-01-6	4-Nitroaniline	840 U
534-52-1	4,6-Dinitro-2-Methylphenol	1700 U
86-30-6	N-Nitrosodiphenylamine (1)	840 U
101-55-3	4-Bromophenyl-phenylether	840 U
118-74-1	Hexachlorobenzene	840 U
87-86-5	Pentachlorophenol	1700 U
85-01-8	Phenanthrene	330 J
120-12-7	Anthracene	840 U
84-74-2	Di-n-Butylphthalate	240 JB
206-44-0	Fluoranthene	130 J
92-87-5	Benzidine	840 U
129-00-0	Pyrene	100 J
85-68-7	Butylbenzylphthalate	840 U
91-94-1	3,3'-Dichlorobenzidine	840 U
56-55-3	Benzo(a)Anthracene	260 J
117-81-7	bis(2-Ethylhexyl)Phthalate	240 JB
218-01-9	Chrysene	420 J
117-84-0	Di-n-Octyl Phthalate	840 U
205-99-2	Benzo(b)Fluoranthene	390 J
207-08-9	Benzo(k)Fluoranthene	840 U
50-32-8	Benzo(a)Pyrene	420 J
193-39-5	Indeno(1,2,3-cd)Pyrene	840 U
53-70-3	Dibenz(a,h)Anthracene	840 U
191-24-2	Benzo(g,h,i)Perylene	180 J

(1)-Cannot be separated from diphenylamine

Laboratory Name ETC Corp.
Lab Sample ID No: K6773V
Sample Matrix: Soil
Data Release Authorized By: H. Baker

Case No: 5263
QC Report No: DU 4056
Contract No: 68-01-6766, 6788, 6789, 6790
Date Sample Received: 11/22/85

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 12-05-85
Date Analyzed: 12-05-85
Conc/Dil Factor: 1 pH 7.6
Percent Moisture: (Not Decanted) 11.55%

EXCEED
Holdings
Times

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	4.5 U
74-83-9	Bromomethane	4.5 U
75-01-4	Vinyl Chloride	4.5 U
75-00-3	Chloroethane	4.5 U
75-09-2	Methylene Chloride	170 B
67-64-1	Acetone	19 B
75-15-0	Carbon Disulfide	4.5 U
75-35-4	1, 1-Dichloroethene	4.5 U
75-34-3	1, 1-Dichloroethane	4.5 U
156-60-5	Trans-1, 2-Dichloroethene	4.5 U
67-66-3	Chloroform	4.5 U
107-06-2	1, 2-Dichloroethane	4.5 U
78-93-3	2-Butanone	4.5 U
71-55-6	1, 1, 1-Trichloroethane	4.5 U
55-23-5	Carbon Tetrachloride	4.5 U
108-05-4	Vinyl Acetate	4.5 U
75-27-4	Bromodichloromethane	4.5 U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	4.5 U
10061-02-6	Trans-1, 3-Dichloropropene	4.5 U
79-01-6	Trichloroethene	4.5 U
124-48-1	Dibromochloromethane	4.5 U
79-00-5	1, 1, 2-Trichloroethane	4.5 U
71-43-2	Benzene	4.5 U
10061-01-5	cis-1, 3-Dichloropropene	4.5 U
110-75-8	2-Chloroethylvinylether	4.5 U
75-25-2	Bromoform	4.5 U
108-10-1	4-Methyl-2-Pentanone	6.3 U
591-78-6	2-Hexanone	4.5 U
127-18-4	Tetrachloroethene	4.5 U
79-34-5	1, 1, 2, 2-Tetrachloroethane	4.5 U
108-88-3	Toluene	2.7 J
108-90-7	Chlorobenzene	4.5 U
100-41-4	Ethylbenzene	4.5 U
100-42-5	Styrene	4.5 U
	Total Xylenes	4.5 U

PCS
12/13/85

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used.
Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥ 10 ng/l in the final extract should be confirmed by GC/MS.

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

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

Organics Analysis Data Sheet
(Page 2)

BD 778

K. Baker

Semivolatile Compounds

Concentration: Low Medium (Circle One)Date Extracted/Prepared: 11/25/85Date Analyzed: 12/4/85Conc/Dil Factor: 1

CAS Number		ug/l or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	750 U
108-95-2	Phenol	1500 U
62-53-3	Aniline	750 U
111-44-4	bis(2-Chloroethyl)Ether	750 U
95-57-8	2-Chlorophenol	1500 U
541-73-1	1,3-Dichlorobenzene	750 U
106-46-7	1,4-Dichlorobenzene	750 U
100-51-6	Benzyl Alcohol	750 U
95-50-1	1,2-Dichlorobenzene	750 U
95-48-7	2-Methylphenol	750 U
39638-32-9	bis(2-chloroisopropyl)Ether	750 U
106-44-5	4-Methylphenol	1500 U
621-64-7	N-Nitroso-Di-n-Propylamine	750 U
67-72-1	Hexachloroethane	750 U
98-95-3	Nitrobenzene	750 U
78-59-1	Isophorone	750 U
88-75-5	2-Nitrophenol	1500 U
105-67-9	2,4-Dimethylphenol	1500 U
65-85-0	Benzoic Acid	1500 U
111-91-1	bis(2-Chloroethoxy)Methane	750 U
120-83-2	2,4-Dichlorophenol	1500 U
120-82-1	1,2,4-Trichlorobenzene	130 J
91-20-3	Naphthalene	750 U
106-47-8	4-Chloroaniline	750 U
87-68-3	Hexachlorobutadiene	140 J
59-50-7	4-Chloro-3-Methylphenol	1500 U
91-57-6	2-Methylnaphthalene	750 U
77-47-4	Hexachlorocyclopentadiene	750 U
88-06-2	2,4,6-Trichlorophenol	7500 U
95-95-4	2,4,5-Trichlorophenol	1500 U
91-58-7	2-Chloronaphthalene	750 U
88-74-4	2-Nitroaniline	750 U
131-11-3	Dimethyl Phthalate	750 U
208-96-8	Acenaphthylene	750 U
99-09-2	3-Nitroaniline	750 U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	750 U
51-28-5	2,4-Dinitrophenol	1500 U
100-02-7	4-Nitrophenol	1500 U
132-64-9	Dibenzofuran	750 U
121-14-2	2,4-Dinitrotoluene	750 U
606-20-2	2,6-Dinitrotoluene	750 U
84-66-2	Diethylphthalate	750 U
7005-72-3	4-Chlorophenyl-phenylether	750 U
86-73-7	Fluorene	750 U
100-01-6	4-Nitroaniline	750 U
534-52-1	4,6-Dinitro-2-Methylphenol	1500 U
86-30-6	N-Nitrosodiphenylamine (1)	750 U
101-55-3	4-Bromophenyl-phenylether	750 U
118-74-1	Hexachlorobenzene	160 J
87-86-5	Pentachlorophenol	1500 U
85-01-8	Phenanthrene	560 J
120-12-7	Anthracene	110 J
~~84-74-2~~	~~Di-n-Butylphthalate~~	~~750 U~~
206-44-0	Fluoranthene	200 J
92-87-5	Benzidine	750 U
129-00-0	Pyrene	160 J
85-68-7	Butylbenzylphthalate	750 U
91-94-1	3,3'-Dichlorobenzidine	750 U
56-55-3	Benzo(a)Anthracene	470 J
~~117-81-7~~	~~bis(2-Ethylhexyl)Phthalate~~	~~290 J~~
218-01-9	Chrysene	440 J
117-84-0	Di-n-Octyl Phthalate	750 U
205-99-2	Benzo(b)Fluoranthene	440 J
207-08-9	Benzo(k)Fluoranthene	750 U
50-32-8	Benzo(a)Pyrene	530 J
193-39-5	Indeno(1,2,3-cd)Pyrene	270 J
53-70-3	Dibenz(a,h)Anthracene	750 U
191-24-2	Benzo(g,h,i)Perylene	86 J

(1)-Cannot be separated from diphenylamine

Organics Analysis Data Sheet (Page 1)

SD 117

Laboratory Name: ETC Corp.
 Sample ID No: K6774V
 Sample Matrix: SOIL
 Data Release Authorized By: H. Baker

Case No: 5263
 QC Report No: OU4056
 Contract No: 68-01-6766, 6788, 6789, 6790
 Date Sample Received: 11/22/85

Volatile Compounds

Concentration: Low Medium (Circle One)
 Date Extracted/Prepared: 12-04-85
 Date Analyzed: 12-04-85
 Conc/Dil Factor: 1 pH 7.9
 Percent Moisture: (Not Decanted) 16.75%

EXCEEDS

Holding

Time

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	4.8 U
74-83-9	Bromomethane	4.8 U
75-01-4	Vinyl Chloride	4.8 U
75-00-3	Chloroethane	4.8 U
75-09-2	Methylene Chloride	240B
67-64-1	Acetone	19B
75-15-0	Carbon Disulfide	4.8 U
75-35-4	1, 1-Dichloroethene	4.8 U
75-34-3	1, 1-Dichloroethane	4.8 U
156-60-5	Trans-1, 2-Dichloroethene	4.8 U
67-66-3	Chloroform	4.8 U
107-06-2	1, 2-Dichloroethane	4.8 U
78-93-3	2-Butanone	4.8 U
71-55-6	1, 1, 1-Trichloroethane	4.8 U
56-23-5	Carbon Tetrachloride	4.8 U
108-05-4	Vinyl Acetate	4.8 U
75-27-4	Bromodichloromethane	4.8 U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	4.8 U
10061-02-6	Trans-1, 3-Dichloropropene	4.8 U
79-01-6	Trichloroethene	4.8 U
724-48-1	Dibromochloromethane	4.8 U
73-00-5	1, 1, 2-Trichloroethane	4.8 U
71-43-2	Benzene	4.8 U
10061-01-5	cis-1, 3-Dichloropropene	4.8 U
110-75-8	2-Chloroethylvinylether	4.8 U
75-25-2	Bromoform	4.8 U
108-10-1	4-Methyl-2-Pentanone	3.4 J
591-78-6	2-Hexanone	4.8 U
127-18-4	Tetrachloroethene	4.8 U
79-34-5	1, 1, 2, 2-Tetrachloroethane	4.8 U
108-88-3	Toluene	2.5 J
108-90-7	Chlorobenzene	4.8 U
100-41-4	Ethylbenzene	4.8 U
100-42-5	Styrene	4.8 U
	Total Xylenes	4.8 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

- Value If the result is a value greater than or equal to the detection limit, report the value
- U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample
- J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J

- C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥ 10 ng/l in the final extract should be confirmed by GC/MS
- B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action
- Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 11/25/85

Date Analyzed: 12/7/85

Conc/Dil Factor: 1

CAS Number		ug/l or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	790 U
105-95-2	Phenol	1600 U
62-53-3	Aniline	790 U
111-44-4	bis(2-Chloroethyl)Ether	790 U
95-57-8	2-Chlorophenol	1600 U
54-73-1	1, 3-Dichlorobenzene	790 U
106-46-7	1, 4-Dichlorobenzene	790 U
100-51-6	Benzyl Alcohol	790 U
95-50-1	1, 2-Dichlorobenzene	790 U
95-46-7	2-Methylphenol	1600 U
39538-32-9	bis(2-chloroisopropyl)Ether	790 U
106-44-5	4-Methylphenol	790 U
621-64-7	N-Nitroso-Di-n-Propylamine	790 U
67-72-1	Hexachloroethane	790 U
98-95-3	Nitrobenzene	790 U
78-59-1	Isophorone	790 U
85-75-5	2-Nitrophenol	1600 U
105-67-9	2, 4-Dimethylphenol	1600 U
65-85-0	Benzoic Acid	1600 U
111-91-1	bis(2-Chloroethoxy)Methane	790 U
120-83-2	2, 4-Dichlorophenol	1600 U
120-82-1	1, 2, 4-Trichlorobenzene	790 U
91-20-3	Naphthalene	1300
106-47-8	4-Chloroaniline	790 U
87-68-3	Hexachlorobutadiene	790 U
59-50-7	4-Chloro-3-Methylphenol	790 U
91-57-6	2-Methylnaphthalene	470 J
77-47-4	Hexachlorocyclopentadiene	790 U
88-06-2	2, 4, 6-Trichlorophenol	1600 U
95-95-4	2, 4, 5-Trichlorophenol	1600 U
91-58-7	2-Chloronaphthalene	790 U
88-74-4	2-Nitroaniline	790 U
131-11-3	Dimethyl Phthalate	790 U
208-96-8	Acenaphthylene	790 U
99-09-2	3-Nitroaniline	790 U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	2300
51-28-5	2, 4-Dinitrophenol	1600 U
100-02-7	4-Nitrophenol	1600 U
132-64-9	Dibenzofuran	1400
121-14-2	2, 4-Dinitrotoluene	790 U
606-20-2	2, 6-Dinitrotoluene	790 U
84-66-2	Diethylphthalate	790 U
7005-72-3	4-Chlorophenyl-phenylether	790 U
86-73-7	Fluorene	2300
100-01-6	4-Nitroaniline	790 U
534-52-1	4, 6-Dinitro-2-Methylphenol	1600 U
86-30-6	N-Nitrosodiphenylamine (1)	790 U
101-55-3	4-Bromophenyl-phenylether	790 U
118-74-1	Hexachlorobenzene	160 J
87-86-5	Pentachlorophenol	1600 U
85-01-8	Phenanthrene	25,000
120-12-7	Anthracene	4500
84-74-2	~~Di-n-Butylphthalate~~	~~560 JB~~
206-44-0	Fluoranthene	5000
92-87-5	Benzidine	790 U
129-00-0	Pyrene	4300
85-68-7	Butylbenzylphthalate	790 U
91-94-1	3, 3'-Dichlorobenzidine	790 U
56-55-3	Benzo(a)Anthracene	11000
117-81-7	~~bis(2-Ethylhexyl)Phthalate~~	~~470 JB~~
218-01-9	Chrysene	11000
117-84-0	Di-n-Octyl Phthalate	790 U
205-99-2	Benzo(b)Fluoranthene	11000
207-08-9	Benzo(k)Fluoranthene	790 U
50-32-8	Benzo(a)Pyrene	9000
193-39-5	Indeno(1, 2, 3-cd)Pyrene	790 U
53-70-3	Dibenz(a, h)Anthracene	790 U
191-24-2	Benzo(g, h, i)Perylene	2500

(1)-Cannot be separated from diphenylamine

Laboratory Name ETC Corp.
Sample ID No: K 6775
Sample Matrix: SOIL
Data Release Authorized By: K. Baker

Case No. 5263
QC Report No: EU4056
Contract No: 68-01-6766, 6788, 6789, 6790
Date Sample Received: 11/22/85

Volatile Compounds

Concentration: Low Medium (Circle One)Date Extracted/Prepared: 12-04-85Date Analyzed: 12-04-85Conc/Dil Factor: 1 pH 7.5Percent Moisture: (Not Decanted) 25.71%

Holding
Time

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	5.4 U
74-83-9	Bromomethane	5.4 U
75-01-4	Vinyl Chloride	5.4 U
75-00-3	Chloroethane	5.4 U
75-09-2	Methylene Chloride	340 B
67-64-1	Acetone	14 B
75-15-0	Carbon Disulfide	5.4 U
75-35-4	1, 1-Dichloroethene	5.4 U
75-34-3	1, 1-Dichloroethane	5.4 U
156-60-5	Trans-1, 2-Dichloroethene	5.4 U
67-66-3	Chloroform	5.4 U
107-06-2	1, 2-Dichloroethane	5.4 U
78-93-3	2-Butanone	5.4 U
71-55-6	1, 1, 1-Trichloroethane	5.4 U
55-23-5	Carbon Tetrachloride	5.4 U
108-05-4	Vinyl Acetate	5.4 U
75-27-4	Bromodichloromethane	5.4 U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5.4 U
10061-02-6	Trans-1, 3-Dichloropropene	5.4 U
79-01-6	Trichloroethene	5.4 U
124-48-1	Dibromochloromethane	5.4 U
79-00-5	1, 1, 2-Trichloroethane	5.4 U
71-43-2	Benzene	5.4 U
10061-01-5	cis-1, 3-Dichloropropene	5.4 U
110-75-8	2-Chloroethylvinylether	5.4 U
75-25-2	Bromoform	5.4 U
108-10-1	4-Methyl-2-Pentanone	5.4 U
591-78-6	2-Hexanone	5.4 U
127-18-4	Tetrachloroethene	5.4 U
79-34-5	1, 1, 2, 2-Tetrachloroethane	5.4 U
108-88-3	Toluene	4.34 B
108-90-7	Chlorobenzene	5.4 U
100-41-4	Ethylbenzene	5.4 U
100-42-5	Styrene	5.4 U
	Total Xylenes	5.4 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used.
Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥ 10 ng/l in the final extract should be confirmed by GC/MS.

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

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

Organics Analysis Data Sheet
(Page 2)

K. Baker

Semivolatile Compounds

Concentration: Low Medium (Circle One)Date-Extracted/Prepared: 11/25/85Date Analyzed: 12/4/85Conc/Dil Factor: 1

CAS Number	Compound	ug/l or ug/Kg (Circle One)
59-9	N-Nitrosodimethylamine	890 U
95-2	Phenol	1800 U
93-3	Aniline	890 U
101-44-4	bis(2-Chloroethyl)Ether	890 U
5-8	2-Chlorophenol	1800 U
73-1	1,3-Dichlorobenzene	890 U
46-7	1,4-Dichlorobenzene	890 U
51-6	Benzyl Alcohol	890 U
5-1	1,2-Dichlorobenzene	890 U
43-7	2-Methylphenol	1800 U
36-32-9	bis(2-chloroisopropyl)Ether	890 U
44-5	4-Methylphenol	1800 U
64-7	N-Nitroso-Di-n-Propylamine	890 U
72-1	Hexachloroethane	890 U
95-3	Nitrobenzene	890 U
59-1	Isophorone	890 U
75-5	2-Nitrophenol	1800 U
57-9	2,4-Dimethylphenol	1800 U
85-0	Benzoic Acid	1800 U
111-91-1	bis(2-Chloroethoxy)Methane	890 U
83-2	2,4-Dichlorophenol	1800 U
82-1	1,2,4-Trichlorobenzene	890 U
123	Naphthalene	890 U
26-47-8	4-Chloroaniline	890 U
66-3	Hexachlorobutadiene	890 U
50-7	4-Chloro-3-Methylphenol	1800 U
57-6	2-Methylnaphthalene	890 U
47-4	Hexachlorocyclopentadiene	890 U
06-2	2,4,6-Trichlorophenol	1800 U
95-4	2,4,5-Trichlorophenol	1800 U
58-7	2-Chloronaphthalene	890 U
74-4	2-Nitroaniline	890 U
31-11-3	Dimethyl Phthalate	890 U
95-8	Acenaphthylene	890 U
09-2	3-Nitroaniline	890 U

CAS Number	Compound	ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	890 U
51-28-5	2,4-Dinitrophenol	1800 U
100-02-7	4-Nitrophenol	1800 U
132-64-9	Dibenzofuran	890 U
121-14-2	2,4-Dinitrotoluene	890 U
606-20-2	2,6-Dinitrotoluene	890 U
84-66-2	Diethylphthalate	890 U
7005-72-3	4-Chlorophenyl-phenylether	890 U
86-73-7	Fluorene	890 U
100-01-6	4-Nitroaniline	890 U
534-52-1	4,6-Dinitro-2-Methylphenol	1800 U
86-30-6	N-Nitrosodiphenylamine (1)	890 U
101-55-3	4-Bromophenyl-phenylether	890 U
118-74-1	Hexachlorobenzene	890 U
87-86-5	Pentachlorophenol	1800 U
85-01-8	Phenanthrene	208 J 890 U
120-12-7	Anthracene	890 U
84-74-2	Di-n-Butylphthalate	890 U
206-44-0	Fluoranthene	140 J
92-87-5	Benzidine	890 U
129-00-0	Pyrene	890 U
85-68-7	Butylbenzylphthalate	890 U
91-94-1	3,3'-Dichlorobenzidine	890 U
56-55-3	Benzo(a)Anthracene	890 U
117-81-7	bis(2-Ethylhexyl)Phthalate	200 J
218-01-9	Chrysene	890 U
117-84-0	Di-n-Octyl Phthalate	890 U
205-99-2	Benzo(b)Fluoranthene	200 J
207-08-9	Benzo(k)Fluoranthene	890 U
50-32-8	Benzo(a)Pyrene	200 J
193-39-5	Indeno(1,2,3-cd)Pyrene	890 U
53-70-3	Dibenz(a,h)Anthracene	890 U
191-24-2	Benzo(g,h,i)Perylene	200 J 890 U

(1)-Cannot be separated from diphenylamine

Organics Analysis Data Sheet

(Page 1)

Laboratory Name: ETC Corp.
 Sample ID No: K6776V
 Sample Matrix: SOIL
 Release Authorized By: R. Baker

Case No: 5263
 QC Report No: QV4056
 Contract No: 68-01-6766, 6788, 6789, 679
 Date Sample Received: 11/22/05

Volatile Compounds

Concentration: Low Medium (Circle One)
 Date Extracted/Prepared: 12-04-85
 Date Analyzed: 12-04-85
 Conc/Dil Factor: 1 pH 8.0
 Percent Moisture: (Not Decanted) 15.4%

E 15-85
Holding
Time

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	4.7 U
74-83-9	Bromomethane	4.7 U
75-01-4	Vinyl Chloride	4.7 U
75-00-3	Chloroethane	4.7 U
75-09-2	Methylene Chloride	340 R
67-64-1	Acetone	1.6 B
75-15-0	Carbon Disulfide	4.7 U
75-35-4	1, 1-Dichloroethene	4.7 U
75-34-3	1, 1-Dichloroethane	4.7 U
75-60-5	Trans-1, 2-Dichloroethene	4.7 U
67-66-3	Chloroform	4.7 U
127-06-2	1, 2-Dichloroethane	4.7 U
78-93-3	2-Butanone	4.7 U
71-55-6	1, 1, 1-Trichloroethane	4.7 U
56-23-5	Carbon Tetrachloride	4.7 U
108-05-4	Vinyl Acetate	4.7 U
75-27-4	Bromodichloromethane	4.7 U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	4.7 U
10061-02-6	Trans-1, 3-Dichloropropene	4.7 U
79-01-6	Trichloroethene	4.7 U
124-48-1	Dibromochloromethane	4.7 U
79-00-5	1, 1, 2-Trichloroethane	4.7 U
71-43-2	Benzene	4.7 U
10061-01-5	cis-1, 3-Dichloropropene	4.7 U
110-75-8	2-Chloroethylvinylether	4.7 U
75-25-2	Bromoform	4.7 U
108-10-1	4-Methyl-2-Pentanone	4.7 U
591-78-6	2-Hexanone	4.7 U
127-18-4	Tetrachloroethene	4.7 U
79-34-5	1, 1, 2, 2-Tetrachloroethane	4.7 U
108-88-3	Toluene	2.1 J
108-90-7	Chlorobenzene	4.7 U
100-41-4	Ethylbenzene	4.7 U
100-42-5	Styrene	4.7 U
	Total Xylenes	4.7 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

- Value** If the result is a value greater than or equal to the detection limit, report the value
- U** Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.
- J** Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J.

- C** This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥ 10 ng/gul in the final extract should be confirmed by GC/MS.
- B** This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.
- Other** Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

Organics Analysis Data Sheet
(Page 2)

BD 781

H. Baker

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 11/25/85

Date Analyzed: 12/4/85

Conc/Dil Factor: 1

		ug/l or ug/Kg (Circle One)
95-9	N-Nitrosodimethylamine	790 U
95-2	Phenol	1600 U
93-3	Aniline	790 U
94-4	bis(2-Chloroethyl)Ether	790 U
97-8	2-Chlorophenol	1600 U
93-1	1, 3-Dichlorobenzene	790 U
96-7	1, 4-Dichlorobenzene	790 U
95-6	Benzyl Alcohol	790 U
95-1	1, 2-Dichlorobenzene	790 U
95-7	2-Methylphenol	1600 U
95-32-9	bis(2-chloroisopropyl)Ether	790 U
94-5	4-Methylphenol	1600 U
96-7	N-Nitroso-Di-n-Propylamine	790 U
97-1	Hexachloroethane	790 U
95-3	Nitrobenzene	790 U
95-1	Isophorone	790 U
95-5	2-Nitrophenol	1600 U
95-67-9	2, 4-Dimethylphenol	1600 U
95-85-0	Benzoic Acid	1600 U
111-91-1	bis(2-Chloroethoxy)Methane	790 U
120-83-2	2, 4-Dichlorophenol	1600 U
120-82-1	1, 2, 4-Trichlorobenzene	790 U
91-20-3	Naphthalene	790 U
106-47-8	4-Chloroaniline	790 U
97-68-3	Hexachlorobutadiene	790 U
95-50-7	4-Chloro-3-Methylphenol	1600 U
91-57-6	2-Methylnaphthalene	790 U
77-47-4	Hexachlorocyclopentadiene	790 U
88-06-2	2, 4, 6-Trichlorophenol	1600 U
95-95-4	2, 4, 5-Trichlorophenol	1600 U
91-58-7	2-Chloronaphthalene	790 U
95-74-4	2-Nitroaniline	790 U
131-11-3	Dimethyl Phthalate	790 U
128-96-8	Acenaphthylene	790 U
99-09-2	3-Nitroaniline	790 U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	790 U
51-28-5	2, 4-Dinitrophenol	1600 U
100-02-7	4-Nitrophenol	1600 U
132-64-9	Dibenzofuran	790 U
121-14-2	2, 4-Dinitrotoluene	790 U
606-20-2	2, 6-Dinitrotoluene	790 U
84-66-2	Diethylphthalate	790 U
7005-72-3	4-Chlorophenyl-phenylether	790 U
86-73-7	Fluorene	790 U
100-01-6	4-Nitroaniline	790 U
534-52-1	4, 6-Dinitro-2-Methylphenol	1600 U
86-30-6	N-Nitrosodiphenylamine (1)	790 U
101-55-3	4-Bromophenyl-phenylether	790 U
118-74-1	Hexachlorobenzene	690 J
87-86-5	Pentachlorophenol	1600 U
85-01-8	Phenanthrene	290 J
120-12-7	Anthracene	790 U
84-74-2	~~Di-n-Butylphthalate~~	~~800 J~~
206-44-0	Fluoranthene	100 J
92-87-5	Benzidine	790 U
129-00-0	Pyrene	790 U
85-68-7	Butylbenzylphthalate	790 U
91-94-1	3, 3'-Dichlorobenzidine	790 U
56-55-3	Benzo(a)Anthracene	240 J
117-81-7	~~bis(2-Ethylhexyl)Phthalate~~	~~320 J~~
218-01-9	Chrysene	300 J
117-84-0	Di-n-Octyl Phthalate	790 U
205-99-2	Benzo(b)Fluoranthene	540 J
207-08-9	Benzo(k)Fluoranthene	790 U
50-32-8	Benzo(a)Pyrene	280 J
193-39-5	Indeno(1, 2, 3-cd)Pyrene	790 U
53-70-3	Dibenz(a, h)Anthracene	790 U
191-24-2	Benzo(g, h, i)Perylene	790 U

(1)-Cannot be separated from diphenylamine

Organics Analysis Data Sheet
(Page 1)

Company Name: ETC Corp.
Sample ID No: K 6777V
Matrix: SDIL
Release Authorized By: R. Baker

Case No: 5263
QC Report No: OV4056
Contract No: 68-01-6766, 6788, 6789, 6790
Date Sample Received: 11/22/85

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 12-4-85
Date Analyzed: 12-4-85
Conc/Dil Factor: 1 pH 7.8
Percent Moisture: (Not Decanted) 13.70%

Handwritten:
11-13-85
Time

CAS Number		ug/l or ug/Kg (Circle One)
78-87-3	Chloromethane	4.6 U
78-83-9	Bromomethane	4.6 U
75-01-4	Vinyl Chloride	4.6 U
75-00-3	Chloroethane	4.6 U
75-09-2	Methylene Chloride	8 NB
67-64-1	Acetone	15 NB
75-15-0	Carbon Disulfide	4.6 U
75-35-4	1, 1-Dichloroethene	4.6 U
75-34-3	1, 1-Dichloroethane	4.6 U
75-60-5	Trans-1, 2-Dichloroethene	4.6 U
67-66-3	Chloroform	4.6 U
75-06-2	1, 2-Dichloroethane	4.6 U
79-93-3	2-Butanone	4.6 U
71-55-6	1, 1, 1-Trichloroethane	4.6 U
56-23-5	Carbon Tetrachloride	4.6 U
108-05-4	Vinyl Acetate	4.6 U
75-27-4	Bromodichloromethane	4.6 U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	4.6 U
10061-02-6	Trans-1, 3-Dichloropropene	4.6 U
79-01-6	Trichloroethene	4.6 U
124-48-1	Dibromochloromethane	4.6 U
79-00-5	1, 1, 2-Trichloroethane	4.6 U
71-43-2	Benzene	4.6 U
10061-01-5	cis-1, 3-Dichloropropene	4.6 U
110-75-8	2-Chloroethylvinylether	4.6 U
75-25-2	Bromoform	4.6 U
108-10-1	4-Methyl-2-Pentanone	6.3 U
591-78-6	2-Hexanone	4.6 U
127-18-4	Tetrachloroethene	4.6 U
79-34-5	1, 1, 2, 2-Tetrachloroethane	4.6 U
108-88-3	Toluene	4.6 U
108-90-7	Chlorobenzene	4.6 U
100-41-4	Ethylbenzene	4.6 U
100-42-5	Styrene	4.6 U
	Total Xylenes	4.6 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used.
Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

- | | |
|---|---|
| <p>Value If the result is a value greater than or equal to the detection limit, report the value</p> <p>U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample</p> <p>J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J</p> | <p>C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥ 10 ng/l in the final extract should be confirmed by GC/MS</p> <p>B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action</p> <p>Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report</p> |
|---|---|

Organics Analysis Data Sheet
(Page 2)

K. Baker

Semivolatile Compounds

Concentration: Low Medium (Circle One)Date Extracted/Prepared: 11/25/82Date Analyzed: 12/4/82Conc/Dil Factor: 1

		ug/l or ug/Kg (Circle One)
75-9	N-Nitrosodimethylamine	780 U
95-2	Phenol	1600 U
51-3	Aniline	780 U
41-4	bis(2-Chloroethyl)Ether	780 U
57-8	2-Chlorophenol	1600 U
73-1	1, 3-Dichlorobenzene	780 U
45-7	1, 4-Dichlorobenzene	780 U
51-6	Benzyl Alcohol	780 U
55-1	1, 2-Dichlorobenzene	780 U
45-7	2-Methylphenol	1600 U
35-32-9	bis(2-chloroisopropyl)Ether	780 U
44-5	4-Methylphenol	1600 U
64-7	N-Nitroso-Di-n-Propylamine	780 U
72-1	Hexachloroethane	780 U
95-3	Nitrobenzene	780 U
55-1	Isophorone	780 U
75-5	2-Nitrophenol	1600 U
67-9	2, 4-Dimethylphenol	1600 U
85-0	Benzoic Acid	1600 U
111-91-1	bis(2-Chloroethoxy)Methane	780 U
122-83-2	2, 4-Dichlorophenol	1600 U
120-82-1	1, 2, 4-Trichlorobenzene	780 U
19-20-3	Naphthalene	780 U
106-47-8	4-Chloroaniline	780 U
137-68-3	Hexachlorobutadiene	780 U
155-50-7	4-Chloro-3-Methylphenol	1600 U
191-57-6	2-Methylnaphthalene	780 U
177-47-4	Hexachlorocyclopentadiene	780 U
186-06-2	2, 4, 6-Trichlorophenol	1600 U
135-95-4	2, 4, 5-Trichlorophenol	1600 U
131-58-7	2-Chloronaphthalene	780 U
185-74-4	2-Nitroaniline	780 U
131-11-3	Dimethyl Phthalate	780 U
1208-96-8	Acenaphthylene	780 U
139-09-2	3-Nitroaniline	780 U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	780 U
51-28-5	2, 4-Dinitrophenol	1600 U
100-02-7	4-Nitrophenol	1600 U
132-64-9	Dibenzofuran	780 U
121-14-2	2, 4-Dinitrotoluene	780 U
606-20-2	2, 6-Dinitrotoluene	780 U
84-66-2	Diethylphthalate	780 U
7005-72-3	4-Chlorophenyl-phenylether	780 U
86-73-7	Fluorene	780 U
100-01-6	4-Nitroaniline	780 U
534-52-1	4, 6-Dinitro-2-Methylphenol	1600 U
86-30-6	N-Nitrosodiphenylamine (1)	780 U
101-55-3	4-Bromophenyl-phenylether	780 U
118-74-1	Hexachlorobenzene	230 J
87-86-5	Pentachlorophenol	1600 U
85-01-8	Phenanthrene	540 J
120-12-7	Anthracene	120 J
84-74-2	Di-n-Butylphthalate	780 U
206-44-0	Fluoranthene	260 J
92-87-5	Benzidine	780 U
129-00-0	Pyrene	170 J
85-68-7	Butylbenzylphthalate	780 U
91-94-1	3, 3'-Dichlorobenzidine	780 U
56-55-3	Benzo(a)Anthracene	530 J
117-81-7	bis(2-Ethylhexyl)Phthalate	3300 J
218-01-9	Chrysene	580 J
117-84-0	Di-n-Octyl Phthalate	780 U
205-99-2	Benzo(b)Fluoranthene	1100 J
207-08-9	Benzo(k)Fluoranthene	780 U
50-32-8	Benzo(a)Pyrene	600 J
193-39-5	Indeno(1, 2, 3-cd)Pyrene	240 J
53-70-3	Dibenz(a, h)Anthracene	780 U
191-24-2	Benzo(g, h, i)Perylene	150 J

(1)-Cannot be separated from diphenylamine

Organics Analysis Data Sheet

(Page 1)

Laboratory Name: ETC Corp.
 Sample ID No: K6778
 Sample Matrix: SOIL
 Release Authorized By: X. Baker

Case No: 5263
 QC Report No: CV4056
 Contract No: 68-01-6766, 6788, 6789, 67
 Date Sample Received: 11/22/85

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 12-04-85 12-05-85 (C)

Date Analyzed: 12-04-85 12-05-85 (C)

Conc/Dil Factor: 1 pH 7.8

Percent Moisture: (Not Decanted) 11.76%

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	4.5 U
74-83-9	Bromomethane	4.5 U
75-01-4	Vinyl Chloride	4.5 U
75-00-3	Chloroethane	4.5 U
75-09-2	Methylene Chloride	4.5 U
67-64-1	Acetone	4.5 U
75-15-0	Carbon Disulfide	4.5 U
75-35-4	1, 1-Dichloroethene	4.5 U
75-34-3	1, 1-Dichloroethane	4.5 U
156-60-5	Trans-1, 2-Dichloroethene	4.5 U
67-66-3	Chloroform	4.5 U
107-06-2	1, 2-Dichloroethane	4.5 U
78-93-3	2-Butanone	4.5 U
77-55-6	1, 1, 1-Trichloroethane	4.5 U
56-23-5	Carbon Tetrachloride	4.5 U
106-05-4	Vinyl Acetate	4.5 U
75-27-4	Bromodichloromethane	4.5 U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	4.5 U
10061-02-6	Trans-1, 3-Dichloropropene	4.5 U
79-01-6	Trichloroethene	4.5 U
124-48-1	Dibromochloromethane	4.5 U
79-00-5	1, 1, 2-Trichloroethane	4.5 U
71-43-2	Eanzene	4.5 U
10061-01-5	cis-1, 3-Dichloropropene	4.5 U
110-75-8	2-Chloroethylvinylether	4.5 U
75-25-2	Bromoform	4.5 U
108-10-1	4-Methyl-2-Pentanone	4.5 U
591-78-6	2-Hexanone	4.5 U
127-18-4	Tetrachloroethene	4.5 U
79-34-5	1, 1, 2, 2-Tetrachloroethane	4.5 U
108-88-3	Toluene	4.5 U
108-90-7	Chlorobenzene	4.5 U
100-41-4	Ethylbenzene	4.5 U
100-42-5	Styrene	4.5 U
	Total Xylenes	4.5 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

- Value** If the result is a value greater than or equal to the detection limit, report the value
- U** Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample
- J** Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J

- C** This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥ 10 ng/ul in the final extract should be confirmed by GC/MS
- B** This flag is used when the analyte is found in the blank as well as a sample. It indicates possible probable blank contamination and warns the data user to take appropriate action
- Other** Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report

Organics Analysis Data Sheet
(Page 2)

BD940

K. Baker

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 11/25/85

Date Analyzed: 12/4/85

Conc/Dil Factor: 1

		ug/l or ug/Kg (Circle One)
55-9	N-Nitrosodimethylamine	750 U
95-2	Phenol	1500 U
53-3	Aniline	750 U
144-4	bis(2-Chloroethyl)Ether	750 U
5-8	2-Chlorophenol	1500 U
73-1	1, 3-Dichlorobenzene	750 U
46-7	1, 4-Dichlorobenzene	750 U
51-6	Benzyl Alcohol	750 U
50-1	1, 2-Dichlorobenzene	750 U
45-7	2-Methylphenol	1500 U
32-9	bis(2-chloroisopropyl)Ether	750 U
44-5	4-Methylphenol	1500 U
64-7	N-Nitroso-Di-n-Propylamine	750 U
72-1	Hexachloroethane	750 U
95-3	Nitrobenzene	750 U
55-1	Isophorone	750 U
75-5	2-Nitrophenol	1500 U
67-9	2, 4-Dimethylphenol	1500 U
85-0	Benzoic Acid	1500 U
91-1	bis(2-Chloroethoxy)Methane	750 U
83-2	2, 4-Dichlorophenol	1500 U
82-1	1, 2, 4-Trichlorobenzene	750 U
20-3	Naphthalene	300 J
47-8	4-Chloroaniline	750 U
68-3	Hexachlorobutadiene	750 U
50-7	4-Chloro-3-Methylphenol	1500 U
57-6	2-Methylnaphthalene	230 J
47-4	Hexachlorocyclopentadiene	750 U
06-2	2, 4, 6-Trichlorophenol	1500 U
95-4	2, 4, 5-Trichlorophenol	1500 U
58-7	2-Chloronaphthalene	750 U
74-4	2-Nitroaniline	750 U
31-11-3	Dimethyl Phthalate	750 U
96-8	Acenaphthylene	750 U
09-2	3-Nitroaniline	750 U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	900 J
51-28-5	2, 4-Dinitrophenol	1500 U
100-02-7	4-Nitrophenol	1500 U
132-64-9	Dibenzofuran	750
121-14-2	2, 4-Dinitrotoluene	750 U
606-20-2	2, 6-Dinitrotoluene	750 U
84-66-2	Diethylphthalate	750 U
7005-72-3	4-Chlorophenyl-phenylether	750 U
86-73-7	Fluorene	900
100-01-6	4-Nitroaniline	750 U
534-52-1	4, 6-Dinitro-2-Methylphenol	1500 U
86-30-6	N-Nitrosodiphenylamine (1)	750 U
101-55-3	4-Bromophenyl-phenylether	750 U
118-74-1	Hexachlorobenzene	750 U
87-86-5	Pentachlorophenol	1500 U
85-01-8	Phenanthrene	7100
120-12-7	Anthracene	790
84-74-2	Di-n-Butylphthalate	500 J
206-44-0	Fluoranthene	1400
92-87-5	Benzidine	750 U
129-00-0	Pyrene	1100
85-68-7	Butylbenzylphthalate	750 U
91-94-1	3, 3'-Dichlorobenzidine	750 U
56-55-3	Benzo(a)Anthracene	2400
117-81-7	bis(2-Ethylhexyl)Phthalate	280 J
218-01-9	Chrysene	3000
117-84-0	Di-n-Octyl Phthalate	750 U
205-99-2	Benzo(b)Fluoranthene	2400
207-08-9	Benzo(k)Fluoranthene	750 U
50-32-8	Benzo(a)Pyrene	660 J
193-39-5	Indeno(1, 2, 3-cd)Pyrene	190 J
53-70-3	Dibenzo(a, h)Anthracene	750 U
191-24-2	Benzo(g, h, i)Perylene	750

(1)-Cannot be separated from diphenylamine

Organics Analysis Data Sheet (Page 1)

Laboratory Name: ETC Corp.
Sample ID No: K6779V
Matrix: SOIL
Release Authorized By: H. Baker

Case No: 5263
QC Report No: 664056
Contract No: 68-01-6766, 6788, 6789, 6790
Date Sample Received: 11/22/85

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 12-03-85
Date Analyzed: 12-03-85
Conc/Dil Factor: 1 pH: 8.0
Percent Moisture: (Not Decanted) 7.42%

EXCEEDS
Holding
Time

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	4.8 U
74-83-9	Bromomethane	4.8 U
75-01-4	Vinyl Chloride	4.8 U
75-00-3	Chloroethane	4.8 U
75-09-2	Methylene Chloride	120
67-64-1	Acetone	1.83
75-15-0	Carbon Disulfide	4.8 U
75-35-4	1, 1-Dichloroethene	4.8 U
75-34-3	1, 1-Dichloroethane	4.8 U
75-60-5	Trans-1, 2-Dichloroethene	4.8 U
67-66-3	Chloroform	4.8 U
107-06-2	1, 2-Dichloroethane	4.8 U
78-93-3	2-Butanone	4.8 U
71-55-6	1, 1, 1-Trichloroethane	4.8 U
56-23-5	Carbon Tetrachloride	4.8 U
108-05-4	Vinyl Acetate	4.8 U
75-27-4	Bromodichloromethane	4.8 U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	4.8 U
10061-02-6	Trans-1, 3-Dichloropropene	4.8 U
79-01-6	Trichloroethene	4.8 U
124-48-1	Dibromochloromethane	4.8 U
79-00-5	1, 1, 2-Trichloroethane	4.8 U
71-43-2	Benzene	4.8 U
10061-01-5	cis-1, 3-Dichloropropene	4.8 U
110-75-8	2-Chloroethylvinylether	4.8 U
75-25-2	Bromoform	4.8 U
108-10-1	4-Methyl-2-Pentanone	4.6 J
591-78-6	2-Hexanone	4.8 U
127-18-4	Tetrachloroethene	4.8 U
79-34-5	1, 1, 2, 2-Tetrachloroethane	4.8 U
108-88-3	Toluene	10.4
108-90-7	Chlorobenzene	4.8 U
100-41-4	Ethylbenzene	4.8 U
100-42-5	Styrene	4.8 U
	Total Xylenes	4.8 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used.
Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

- Value If the result is a value greater than or equal to the detection limit, report the value.
- U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.
- J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

- C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥ 10 ng/l in the final extract should be confirmed by GC-MS.
- B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.
- Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

Organics Analysis Data Sheet
(Page 2)

R. Baker

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 11/25/85

Date Analyzed: 12/19/85

Conc/Dil Factor: 1

CAS Number		ug/l or ug/Kg (Circle One)
75-9	N-Nitrosodimethylamine	800 U
95-2	Phenol	1600 U
53-3	Aniline	800 U
144-4	bis(-2-Chloroethyl)Ether	800 U
57-8	2-Chlorophenol	1600 U
173-1	1, 3-Dichlorobenzene	800 U
46-7	1, 4-Dichlorobenzene	800 U
51-6	Benzyl Alcohol	800 U
50-1	1, 2-Dichlorobenzene	800 U
48-7	2-Methylphenol	1600 U
38-32-9	bis(2-chloroisopropyl)Ether	800 U
26-44-5	4-Methylphenol	1600 U
164-7	N-Nitroso-Di-n-Propylamine	800 U
72-1	Hexachloroethane	800 U
95-3	Nitrobenzene	800 U
59-1	Isophorone	800 U
75-5	2-Nitrophenol	1600 U
5-67-9	2, 4-Dimethylphenol	1600 U
85-0	Benzoic Acid	1600 U
11-91-1	bis(-2-Chloroethoxy)Methane	800 U
20-83-2	2, 4-Dichlorophenol	1600 U
20-82-1	1, 2, 4-Trichlorobenzene	800 U
31-20-3	Naphthalene	800 U
106-47-8	4-Chloroaniline	800 U
67-68-3	Hexachlorobutadiene	800 U
59-50-7	4-Chloro-3-Methylphenol	1600 U
91-57-6	2-Methylnaphthalene	800 U
77-47-4	Hexachlorocyclopentadiene	800 U
88-06-2	2, 4, 6-Trichlorophenol	1600 U
95-95-4	2, 4, 5-Trichlorophenol	1600 U
91-58-7	2-Chloronaphthalene	800 U
88-74-4	2-Nitroaniline	800 U
131-11-3	Dimethyl Phthalate	800 U
208-96-8	Acenaphthylene	800 U
99-09-2	3-Nitroaniline	800 U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	800 U
51-28-5	2, 4-Dinitrophenol	1600 U
100-02-7	4-Nitrophenol	1600 U
132-64-9	Dibenzofuran	800 U
121-14-2	2, 4-Dinitrotoluene	800 U
606-20-2	2, 6-Dinitrotoluene	800 U
84-66-2	Diethylphthalate	800 U
7005-72-3	4-Chlorophenyl-phenylether	800 U
86-73-7	Fluorene	800 U
100-01-6	4-Nitroaniline	800 U
534-52-1	4, 6-Dinitro-2-Methylphenol	1600 U
86-30-6	N-Nitrosodiphenylamine (1)	800 U
101-55-3	4-Bromophenyl-phenylether	800 U
118-74-1	Hexachlorobenzene	800 U
87-86-5	Pentachlorophenol	1600 U
85-01-8	Phenanthrene	230 J
120-12-7	Anthracene	800 U
84-74-2	Di-n-Butylphthalate	370 J
206-44-0	Fluoranthene	170 J
92-87-5	Benzidine	800 U
129-00-0	Pyrene	190 J
85-68-7	Butylbenzylphthalate	800 U
91-94-1	3, 3'-Dichlorobenzidine	800 U
56-55-3	Benzo(a)Anthracene	800 U
117-81-7	bis(2-Ethylhexyl)Phthalate	240 J
218-01-9	Chrysene	650 J
117-84-0	Di-n-Octyl Phthalate	800 U
205-99-2	Benzo(b)Fluoranthene	320 J
207-08-9	Benzo(k)Fluoranthene	800 U
50-32-8	Benzo(a)Pyrene	390 J
193-39-5	Indeno(1, 2, 3-cd)Pyrene	800 U
53-70-3	Dibenz(a, h)Anthracene	800 U
191-24-2	Benzo(g, h, i)Perylene	800 U

(1)-Cannot be separated from diphenylamine

Organics Analysis Data Sheet (Page 1)

DL 142

Laboratory Name: ETC Corp.
Sample ID No: K 7158V
Sample Matrix: SDIL
Release Authorized By: [Signature]

Case No: 5263
QC Report No: EN 4056
Contract No: 68-01-6766, 6788, 6789, 6790
Date Sample Received: 11/22/85

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 12-03-85
Date Analyzed: 12-03-85
Conc/Dil Factor: 1 pH 7.8
Percent Moisture: (Not Decanted) 18.02%

ETC-DS
Holding
TIME

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	4.9 U
74-83-9	Bromomethane	4.9 U
75-01-4	Vinyl Chloride	4.9 U
75-00-3	Chloroethane	4.9 U
75-09-2	Methylene Chloride	4.9 U
67-64-1	Acetone	26 U
75-15-0	Carbon Disulfide	4.9 U
75-35-4	1, 1-Dichloroethene	4.9 U
75-34-3	1, 1-Dichloroethane	4.9 U
156-60-5	Trans-1, 2-Dichloroethene	4.9 U
67-66-3	Chloroform	4.9 U
107-06-2	1, 2-Dichloroethane	4.9 U
78-93-3	2-Butanone	4.9 U
71-55-6	1, 1, 1-Trichloroethane	4.9 U
56-23-5	Carbon Tetrachloride	4.9 U
108-05-4	Vinyl Acetate	4.9 U
75-27-4	Bromodichloromethane	4.9 U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	4.9 U
10061-02-6	Trans-1, 3-Dichloropropene	4.9 U
79-01-6	Trichloroethene	4.9 U
124-48-1	Dibromochloromethane	4.9 U
79-00-5	1, 1, 2-Trichloroethane	4.9 U
71-43-2	Benzene	4.9 U
10061-01-5	cis-1, 3-Dichloropropene	4.9 U
110-75-8	2-Chloroethylvinylether	4.9 U
75-25-2	Bromoform	4.9 U
108-10-1	4-Methyl-2-Pentanone	4.5 U
591-78-6	2-Hexanone	4.9 U
127-18-4	Tetrachloroethene	4.9 U
79-34-5	1, 1, 2, 2-Tetrachloroethane	4.9 U
108-88-3	Toluene	7.8 U
108-90-7	Chlorobenzene	4.9 U
100-41-4	Ethylbenzene	4.9 U
100-42-5	Styrene	4.9 U
	Total Xylenes	4.9 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used.
Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

- U** If the result is a value greater than or equal to the detection limit, report the value.
- U** Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample
- J** Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

- C** This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥ 10 ng/ul in the final extract should be confirmed by GC/MS
- B** This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action
- Other** Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report

Organics Analysis Data Sheet (Page 2)

BD942

K. Baker

Semivolatile Compounds

Concentration: Low Medium (Circle One)Date Extracted/Prepared: 11/25/85Date Analyzed: 12/4/85Conc/Dil Factor: 1

CAS Number		ug/l or ug/Kg (Circle One)
75-9	N-Nitrosodimethylamine	800 U
95-2	Phenol	1600 U
53-3	Aniline	800 U
11-44-4	bis(2-Chloroethyl)Ether	800 U
57-8	2-Chlorophenol	1600 U
11-73-1	1, 3-Dichlorobenzene	800 U
46-7	1, 4-Dichlorobenzene	800 U
51-6	Benzyl Alcohol	800 U
50-1	1, 2-Dichlorobenzene	800 U
48-7	2-Methylphenol	1600 U
38-32-9	bis(2-chloroisopropyl)Ether	800 U
44-5	4-Methylphenol	1600 U
1-64-7	N-Nitroso-Di-n-Propylamine	800 U
72-1	Hexachloroethane	800 U
95-3	Nitrobenzene	800 U
59-1	Isophorone	800 U
75-5	2-Nitrophenol	1600 U
5-67-9	2, 4-Dimethylphenol	1600 U
85-0	Benzoic Acid	1600 U
11-91-1	bis(2-Chloroethoxy)Methane	800 U
20-83-2	2, 4-Dichlorophenol	1600 U
20-82-1	1, 2, 4-Trichlorobenzene	800 U
20-3	Naphthalene	800 U
6-47-8	4-Chloroaniline	800 U
7-68-3	Hexachlorobutadiene	800 U
9-50-7	4-Chloro-3-Methylphenol	1600 U
11-57-6	2-Methylnaphthalene	800 U
7-47-4	Hexachlorocyclopentadiene	800 U
8-06-2	2, 4, 6-Trichlorophenol	1600 U
5-95-4	2, 4, 5-Trichlorophenol	1600 U
11-58-7	2-Chloronaphthalene	800 U
8-74-4	2-Nitroaniline	800 U
31-11-3	Dimethyl Phthalate	800 U
08-96-8	Acenaphthylene	800 U
9-09-2	3-Nitroaniline	800 U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	800 U
51-28-5	2, 4-Dinitrophenol	1600 U
100-02-7	4-Nitrophenol	1600 U
132-64-9	Dibenzofuran	800 U
121-14-2	2, 4-Dinitrotoluene	800 U
606-20-2	2, 6-Dinitrotoluene	800 U
84-66-2	Diethylphthalate	800 U
7005-72-3	4-Chlorophenyl-phenylether	800 U
86-73-7	Fluorene	800 U
100-01-6	4-Nitroaniline	800 U
534-52-1	4, 6-Dinitro-2-Methylphenol	1600 U
86-30-6	N-Nitrosodiphenylamine (1)	800 U
101-55-3	4-Bromophenyl-phenylether	800 U
118-74-1	Hexachlorobenzene	96 J
87-86-5	Pentachlorophenol	1600 U
85-01-8	Phenanthrene	450 J
120-12-7	Anthracene	87 J
84-74-2	~~Di-n-Butylphthalate~~	~~800 U~~
206-44-0	Fluoranthene	190 J
92-87-5	Benzidine	800 U
129-00-0	Pyrene	140 J
85-68-7	Butylbenzylphthalate	800 U
91-94-1	3, 3'-Dichlorobenzidine	800 U
56-55-3	Benzo(a)Anthracene	370 J
117-81-7	~~bis(2-Ethylhexyl)Phthalate~~	~~260 J~~
218-01-9	Chrysene	440 J
117-84-0	Di-n-Octyl Phthalate	800 U
205-99-2	Benzo(b)Fluoranthene	390 J
207-08-9	Benzo(k)Fluoranthene	800 U
50-32-8	Benzo(a)Pyrene	370 J
193-39-5	Indeno(1, 2, 3-cd)Pyrene	340 J
53-70-3	Dibenzo(a, h)Anthracene	800 U
191-24-2	Benzo(g, h, i)Perylene	800 U

(1)-Cannot be separated from diphenylamine

Organics Analysis Data Sheet
(Page 1)

B0743

Laboratory Name: ETC Corp.
Lab Sample ID No: 1C7159
Sample Matrix: Water
Data Release Authorized By: K. Baker

Case No: 5263
QC Report No: QC 4042
Contract No: 68-01-6766, 6788, 6789, 6790
Date Sample Received: 11/22/85

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 11/29/85
Date Analyzed: 11/29/85
Conc/Dil Factor: 1 pH _____
Percent Moisture: (Not Decanted) _____

CAS Number		<u>ug/l</u> or ug/Kg (Circle One)
74-87-3	Chloromethane	4.0U
74-83-9	Bromomethane	4.0U
75-01-4	Vinyl Chloride	4.0U
75-00-3	Chloroethane	4.0U
75-09-2	~~Methylene Chloride~~	~~4.5B~~
67-64-1	Acetone	18 ~~B~~ <u>U</u>
75-15-0	Carbon Disulfide	4.0U
75-35-4	1, 1-Dichloroethene	4.0U
75-34-3	1, 1-Dichloroethane	4.0U
56-60-5	Trans-1, 2-Dichloroethene	4.0U
67-66-3	Chloroform	4.0U
107-06-2	1, 2-Dichloroethane	4.0U
78-93-3	2-Butanone	4.0U
71-55-6	1, 1, 1-Trichloroethane	4.0U
56-23-5	Carbon Tetrachloride	4.0U
108-05-4	Vinyl Acetate	4.0U
75-27-4	Bromodichloromethane	4.0U

CAS Number		<u>ug/l</u> or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	4.0U
10061-02-6	Trans-1, 3-Dichloropropene	4.0U
79-01-6	Trichloroethene	4.0U
124-48-1	Dibromochloromethane	4.0U
79-00-5	1, 1, 2-Trichloroethane	4.0U
71-43-2	Benzene	4.0U
10061-01-5	cis-1, 3-Dichloropropene	4.0U
110-75-8	2-Chloroethylvinylether	4.0U
75-25-2	Bromoform	4.0U
108-10-1	4-Methyl-2-Pentanone	4.0U
591-78-6	2-Hexanone	4.0U
127-18-4	Tetrachloroethene	4.0U
79-34-5	1, 1, 2, 2-Tetrachloroethane	4.0U
108-88-3	Toluene	4.0U
108-90-7	Chlorobenzene	4.0U
100-41-4	Ethylbenzene	4.0U
100-42-5	Styrene	4.0U
	Total Xylenes	4.0U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used.
Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS

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

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report

Laboratory Name: ETC Corp.Case No: 5263

Sample Number

BD480Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)Date Extracted/Prepared: 11/22/85 11/25/85 CD-121Date Analyzed: 12/28/85Conc/Dil Factor: 1

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	3.5u
319-85-7	Beta-BHC	3.5u
319-86-8	Delta-BHC	12u
58-89-9	Gamma-BHC (Lindane)	3.5u
76-44-8	Heptachlor	6.4u
309-00-2	Aldrin	6.4u
1024-57-3	Heptachlor Epoxide	45u
959-98-8	Endosulfan I	13u
60-57-1	Dieldrin	18u
72-55-9	4, 4'-DDE	14u
72-20-8	Endrin	25u
33213-65-9	Endosulfan II	14u
72-54-8	4, 4'-DDD	3.5u
7421-93-4	Endrin Aldehyde	41u
1031-07-8	Endosulfan Sulfate	86u
50-29-3	4, 4'-DDT	6.4u
72-43-5	Methoxychlor	110u
53494-70-5	Endrin Ketone	14u
57-74-9	Chlordane	39u
8001-35-2	Toxaphene	390u
12674-11-2	Aroclor-1018	210u
11104-28-2	Aroclor-1221	170u
11141-16-5	Aroclor-1232	~~120~~ 50u or 20u
53469-21-9	Aroclor-1242	120u
12672-29-8	Aroclor-1248	170u or 110u
11097-89-1	Aroclor-1254	55u
11096-82-5	Aroclor-1260	57u

 V_i = Volume of extract injected (ul) V_s = Volume of water extracted (ml) W_s = Weight of sample extracted (g) V_t = Volume of total extract (ul) V_s 0.76 or W_s _____ V_t 1000 V_i 3

Laboratory Name ETC Corp.
Case No: 5263

Sample Number
BD401

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 11/29/85 11/25/85 CO

Date Analyzed: 11/11/86 12/28/85 RPP

Conc/Dil Factor: 1

CAS Number ug/l or ug/Kg
(Circle One)

319-84-6	Alpha-BHC	2.8u
319-85-7	Beta-BHC	2.8u
319-86-8	Delta-BHC	10u
58-89-9	Gamma-BHC (Lindane)	2.8u
76-44-8	Heptachlor	5.7u
309-00-2	Aldrin	5.7u
1024-57-3	Heptachlor Epoxide	37u
959-98-8	Endosulfan I	10u
60-57-1	Dieldrin	15u
72-55-9	4, 4'-DDE	11u
72-20-8	Endrin	20u
33213-65-9	Endosulfan II	11u
72-54-8	4, 4'-DDD	2.8u
7421-93-4	Endrin Aldehyde	33u
1031-07-8	Endosulfan Sulfate	70u
50-29-3	4, 4'-DDT	5.7u
72-43-5	Methoxychlor	87u
53494-70-5	Endrin Ketone	11u
57-74-9	Chlordane	32u
8001-35-2	Toxaphene	320u
12674-11-2	Aroclor-1016	170u
11104-28-2	Aroclor-1221	140u
11141-16-5	Aroclor-1232	16u
53469-21-9	Aroclor-1242	120u
12672-29-8	Aroclor-1248	87u
11097-69-1	Aroclor-1254	270
11096-82-5	Aroclor-1260	47u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s 0.75 or W_s _____ V_t 1000 V_i 3

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)Date Extracted/Prepared: 11/29/85 11/25/85Date Analyzed: 12/28/85Conc/Dil Factor: 1

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	3.2u
319-85-7	Beta-BHC	3.2u
319-86-8	Delta-BHC	11u
58-89-9	Gamma-BHC (Lindane)	3.2u
76-44-8	Heptachlor	6.3u
309-00-2	Aldrin	6.3u
1024-57-3	Heptachlor Epoxide	41u
959-98-8	Endosulfan I	12u
60-57-1	Dieldrin	16u
72-55-9	4, 4'-DDE	13u
72-20-8	Endrin	22u
33213-65-9	Endosulfan II	13u
72-54-8	4, 4'-DDD	3.2u
7421-93-4	Endrin Aldehyde	37u
1031-07-8	Endosulfan Sulfate	78u
50-29-3	4, 4'-DDT	6.3u
72-43-5	Methoxychlor	96u
53494-70-5	Endrin Ketone	13u
57-74-9	Chlordane	36u
8001-35-2	Toxaphene	360u
12674-11-2	Aroclor-1016	190u
11104-28-2	Aroclor-1221	160u
11141-16-5	Aroclor-1232	18u
53469-21-9	Aroclor-1242	130u
12672-29-6	Aroclor-1248	97u
11097-89-1	Aroclor-1254	50u
11096-82-5	Aroclor-1260	52u

 V_i = Volume of extract injected (ul) V_s = Volume of water extracted (ml) W_s = Weight of sample extracted (g) V_t = Volume of total extract (ul) V_s 0.75 or W_s _____ V_t 1000 V_i 3

Laboratory Name: ETC Corp.Case No: 5263

Sample Number

BD775Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)Date Extracted/Prepared: 11/29/85 11/25/85 60Date Analyzed: 12/28/85Conc/Dil Factor: 1

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	2.7u
319-85-7	Beta-BHC	2.7u
319-86-8	Delta-BHC	9.7u
58-89-9	Gamma-BHC (Lindane)	2.7u
76-44-8	Heptachlor	5.4u
309-00-2	Aldrin	5.4u
1024-57-3	Heptachlor Epoxide	35u
959-98-8	Endosulfan I	9.9u
60-57-1	Dieldrin	14u
72-55-9	4, 4'-DDE	11u
72-20-8	Endrin	19u
33213-65-9	Endosulfan II	11u
72-54-8	4, 4'-DDD	2.7u
7421-93-4	Endrin Aldehyde	32u
1031-07-8	Endosulfan Sulfate	67u
50-29-3	4, 4'-DDT	5.4u
72-43-5	Methoxychlor	83u
53494-70-5	Endrin Ketone	11u
57-74-9	Chlordane	31u
8001-35-2	Toxaphene	310u
12674-11-2	Aroclor-1016	170u
11104-28-2	Aroclor-1221	140u
11141-16-5	Aroclor-1232	16u
53469-21-9	Aroclor-1242	110u
12672-29-6	Aroclor-1248	83u
11097-69-1	Aroclor-1254	43u
11096-82-5	Aroclor-1260	45u

 V_i = Volume of extract injected (ul) V_s = Volume of water extracted (ml) W_s = Weight of sample extracted (g) V_t = Volume of total extract (ul) V_s 0.75 or W_s _____ V_i 1000 V_t 3

Laboratory Name: ETC Corp.Case No: 5263

Sample Number

BD774Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)Date Extracted/Prepared: 11/25/85 11/25/85 00Date Analyzed: 12/22/85Conc/Dil Factor: 1

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	2.8u
319-85-7	Beta-BHC	2.8u
319-86-8	Delta-BHC	10u
58-89-9	Gamma-BHC (Lindane)	2.8u
76-44-8	Heptachlor	5.7u
309-00-2	Aldrin	5.7u
1024-57-3	Heptachlor Epoxide	37u
959-98-8	Endosulfan I	10u
60-57-1	Dieldrin	15u
72-55-9	4, 4'-DDE	12u
72-20-8	Endrin	20u
33213-65-9	Endosulfan II	12u
72-54-8	4, 4'-DDD	2.8u
7421-93-4	Endrin Aldehyde	34u
1031-07-8	Endosulfan Sulfate	71u
50-29-3	4, 4'-DDT	5.7u
72-43-5	Methoxychlor	87u
53494-70-5	Endrin Ketone	12u
57-74-9	Chlordane	33u
8001-35-2	Toxaphene	330u
12674-11-2	Aroclor-1016	180u
11104-28-2	Aroclor-1221	140u
11141-16-5	Aroclor-1232	17u
53489-21-9	Aroclor-1242	120u
12672-29-6	Aroclor-1248	88u
11097-69-1	Aroclor-1254	45u
11096-82-5	Aroclor-1260	47u

 V_i = Volume of extract injected (ul) V_s = Volume of water extracted (ml) W_s = Weight of sample extracted (g) V_t = Volume of total extract (ul) V_s 0.75 or W_s _____ V_t 1000 V_i 3

Laboratory Name: _____

Case No: _____

5263

Sample Number

BD777

Organics Analysis Data Sheet

(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)Date Extracted/Prepared: 4/29/85 11/25/85 90-Date Analyzed: 12/28/85Conc/Dil Factor: 1

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	2.9u
319-85-7	Beta-BHC	2.9u
319-86-8	Delta-BHC	10u
58-89-9	Gamma-BHC (Lindane)	2.9u
76-44-8	Heptachlor	5.8u
309-00-2	Aldrin	5.8u
1024-57-3	Heptachlor Epoxide	38u
959-98-8	Endosulfan I	11u
60-57-1	Dieldrin	15u
72-55-9	4, 4'-DDE	12u
72-20-8	Endrin	21u
33213-65-9	Endosulfan II	12u
72-54-8	4, 4'-DDD	2.9u
7421-93-4	Endrin Aldehyde	34u
1031-07-8	Endosulfan Sulfate	73u
50-29-3	4, 4'-DDT	5.8u
72-43-5	Methoxychlor	90u
53494-70-5	Endrin Ketone	12u
57-74-9	Chlordane	33u
8001-35-2	Toxaphene	330u
12674-11-2	Aroclor-1016	180u
11104-28-2	Aroclor-1221	150u
11141-16-5	Aroclor-1232	17u
53489-21-9	Aroclor-1242	120u
12672-29-6	Aroclor-1248	90u
11097-89-1	Aroclor-1254	410u
11096-82-5	Aroclor-1260	48u

 V_i = Volume of extract injected (ul) V_s = Volume of water extracted (ml) W_s = Weight of sample extracted (g) V_t = Volume of total extract (ul) V_s 0.75 or W_s _____ V_t 1000 V_i 3

5263

BD 778

Organics Analysis Data Sheet

(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)Date Extracted/Prepared: 11/29/85 11/25/85Date Analyzed: 11/26/85 12/28/85 RFPConc/Dil Factor: 1

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	2.6u
319-85-7	Beta-BHC	2.6u
319-86-8	Delta-BHC	9.2u
58-89-9	Gamma-BHC (Lindane)	17.2u
76-44-8	Heptachlor	5.2u
309-00-2	Aldrin	5.2u
1024-57-3	Heptachlor Epoxide	34u
959-98-8	Endosulfan I	9.4u
60-57-1	Dieldrin	13u
72-55-9	4, 4'-DDE	10u
72-20-8	Endrin	18u
33213-65-9	Endosulfan II	10u
72-54-8	4, 4'-DDD	2.6u
7421-93-4	Endrin Aldehyde	30u
1031-07-8	Endosulfan Sulfate	64u
50-29-3	4, 4'-DDT	5.2u
72-43-5	Methoxychlor	79u
53494-70-5	Endrin Ketone	10u
57-74-9	Chlordane	29u
8001-35-2	Toxaphene	290u
12674-11-2	Aroclor-1016	160u
11104-28-2	Aroclor-1221	130u
11141-16-5	Aroclor-1232	15u
53489-21-9	Aroclor-1242	110u
12672-29-6	Aroclor-1248	79u
11097-69-1	Aroclor-1254	500
11096-82-5	Aroclor-1260	73u

 V_i = Volume of extract injected (ul) V_s = Volume of water extracted (ml) W_s = Weight of sample extracted (g) V_t = Volume of total extract (ul)
 V_s 0.76 or W_s _____ V_t 1000 V_i 3

Laboratory Name: ETC Corp.
Case No: 5263

Sample Number

BD779

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 11/29/85 11/25/85

Date Analyzed: 12/20/85

Conc/Dil Factor: 1

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	2.7u
319-85-7	Beta-BHC	2.7u
319-86-8	Delta-BHC	9.9u
58-89-9	Gamma-BHC (Lindane)	2.7u
76-44-8	Heptachlor	5.5u
309-00-2	Aldrin	5.5u
1024-57-3	Heptachlor Epoxide	3.6u
959-98-8	Endosulfan I	10u
60-57-1	Dieldrin	14u
72-55-9	4, 4'-DDE	11u
72-20-8	Endrin	19u
33213-65-9	Endosulfan II	11u
72-54-8	4, 4'-DDD	2.7u
7421-93-4	Endrin Aldehyde	32u
1031-07-8	Endosulfan Sulfate	68u
50-29-3	4, 4'-DDT	5.5u
72-43-5	Methoxychlor	84u
53494-70-5	Endrin Ketone	11u
57-74-9	Chlordane	31u
8001-35-2	Toxaphene	310u
12674-11-2	Aroclor-1016	170u
11104-28-2	Aroclor-1221	140u
11141-16-5	Aroclor-1232	16u
53469-21-9	Aroclor-1242	120u
12672-29-6	Aroclor-1248	84u
11097-69-1	Aroclor-1254	43u
11096-82-5	Aroclor-1260	45u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s 0.76 or W_s _____ V_t 1000 V_i 3

Laboratory Name: ELC Corp.
Case No: 5263

Sample Number

BD780

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 11/29/85 11/25/85 00

Date Analyzed: 12/28/85

Conc/Dil Factor: 1

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	3.1u
319-85-7	Beta-BHC	3.1u
319-86-8	Delta-BHC	11u
58-89-9	Gamma-BHC (Lindane)	3.1u
76-44-8	Heptachlor	16.1u
309-00-2	Aldrin	16.1u
1024-57-3	Heptachlor Epoxide	40u
959-98-8	Endosulfan I	11u
60-57-1	Dieldrin	116u
72-55-9	4, 4'-DDE	12u
72-20-8	Endrin	22u
33213-65-9	Endosulfan II	12u
72-54-8	4, 4'-DDD	3.1u
7421-93-4	Endrin Aldehyde	36u
1031-07-8	Endosulfan Sulfate	76u
50-29-3	4, 4'-DDT	16.1u
72-43-5	Methoxychlor	94u
53494-70-5	Endrin Ketone	12u
57-74-9	Chlordane	35u
8001-35-2	Toxaphene	350u
12674-11-2	Aroclor-1016	190u
11104-28-2	Aroclor-1221	150u
11141-16-5	Aroclor-1232	18u
53489-21-9	Aroclor-1242	130u
12672-29-6	Aroclor-1248	95u
11097-69-1	Aroclor-1254	48u
11096-82-5	Aroclor-1260	51u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s 0.76 or W_s _____ V_t 1000 V_i 3

Laboratory Name: ETC Corp.

Case No: 52623

Sample Number

BD781

Organics Analysis Data Sheet (Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 11/29/85 11/25/85 ∞

Date Analyzed: 12/28/85

Conc. Dil Factor: 1

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	2.7u
319-85-7	Beta-BHC	2.7u
319-86-8	Delta-BHC	9.8u
58-89-9	Gamma-BHC (Lindane)	2.7u
76-44-8	Heptachlor	5.5u
309-00-2	Aldrin	5.5u
1024-57-3	Heptachlor Epoxide	3u
959-98-8	Endosulfan I	10u
60-57-1	Dieldrin	14u
72-55-9	4,4'-DDE	11u
72-20-8	Endrin	19u
33213-85-9	Endosulfan II	11u
72-54-8	4,4'-DDD	2.7u
7421-93-4	Endrin Aldehyde	32u
1031-07-8	Endosulfan Sulfate	108u
50-29-3	4,4'-DDT	5.5u
72-43-5	Methoxychlor	84u
53494-70-5	Endrin Ketone	11u
57-74-9	Chlordane	31u
8001-35-2	Toxaphene	310u
12674-11-2	Aroclor-1016	170u
11104-28-2	Aroclor-1221	140u
11141-16-5	Aroclor-1232	16u
53469-21-9	Aroclor-1242	120u
12672-29-6	Aroclor-1248	84u
11097-89-1	Aroclor-1254	43u
11096-82-5	Aroclor-1260	45u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s 0.75 or W_s _____ V_t 1000 V_i 3

Laboratory Name: 5263

Case No: _____

Sample Number

BD782

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)Date Extracted/Prepared: 11/29/85 11/25/85Date Analyzed: 1/12/86 12/28/85Conc/Dil Factor: 1CAS
Number ug/l or ug/Kg
(Circle One)

319-84-6	Alpha-BHC	2.7u
319-85-7	Beta-BHC	2.7u
319-86-8	Delta-BHC	9.6u
58-89-9	Gamma-BHC (Lindane)	8.7
76-44-8	Heptachlor	5.4u
309-00-2	Aldrin	5.4u
1024-57-3	Heptachlor Epoxide	3.5u
959-98-8	Endosulfan I	13u
60-57-1	Dieldrin	14u
72-55-9	4, 4'-DDE	1u
72-20-8	Endrin	19u
33213-65-9	Endosulfan II	1u
72-54-8	4, 4'-DDD	2.2u
7421-93-4	Endrin Aldehyde	3.5u
1031-07-8	Endosulfan Sulfate	1.6u
50-29-3	4, 4'-DDT	5.4u
72-43-5	Methoxychlor	8.2u
53494-70-5	Endrin Ketone	1u
57-74-9	Chlordane	30u
8001-35-2	Toxaphene	300u
12674-11-2	Aroclor-1016	160u
11104-28-2	Aroclor-1221	130u
11141-16-5	Aroclor-1232	15u
53469-21-9	Aroclor-1242	170u
12672-29-6	Aroclor-1248	82u
11097-69-1	Aroclor-1254	15u
11096-82-5	Aroclor-1260	44u

 V_i = Volume of extract injected (ul) V_s = Volume of water extracted (ml) W_s = Weight of sample extracted (g) V_t = Volume of total extract (ul) V_s 0.75 or W_s _____ V_t 1000 V_i 3

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

11/29/85 11/25/85 GO

Date Analyzed:

1/12/86 12/28/85

Conc./Dil Factor:

1

CAS

Number

ug/l or ug/Kg

(Circle One)

319-84-6	Alpha-BHC	2.6u
319-85-7	Beta-BHC	2.6u
319-86-8	Delta-BHC	9.3u
58-89-9	Gamma-BHC (Lindane)	2.6u
76-44-8	Heptachlor	5.2u
309-00-2	Aldrin	5.2u
1024-57-3	Heptachlor Epoxide	34u
959-98-8	Endosulfan I	9.4u
90-57-1	Dieldrin	18
72-55-9	4, 4'-DDE	10u
72-20-8	Endrin	18u
33213-65-9	Endosulfan II	10u
72-54-8	4, 4'-DDD	2.6u
7421-93-4	Endrin Aldehyde	30u
1031-07-8	Endosulfan Sulfate	64u
50-29-3	4, 4'-DDT	5.2u
72-43-5	Methoxychlor	79u
53494-70-5	Endrin Ketone	10u
57-74-9	Chlordane	29u
8001-35-2	Toxaphene	290u
12674-11-2	Aroclor-1018	160u
11104-28-2	Aroclor-1221	130u
11141-16-5	Aroclor-1232	15u
53489-21-9	Aroclor-1242	110u
12672-29-8	Aroclor-1248	79u
11097-69-1	Aroclor-1254	41u
11096-82-5	Aroclor-1260	43u

 V_i = Volume of extract injected (ul) V_s = Volume of water extracted (ml) W_s = Weight of sample extracted (g) V_t = Volume of total extract (ul) V_s 0.76 or W_s _____ V_t 1000 V_i 3

Laboratory Name: 5263Case No: 5263

Sample Number

BD942

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)Date Extracted/Prepared: 11/29/85 11/25/85 ∞Date Analyzed: 12/28/85Conc/Dil Factor: 1

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	2.8u
319-85-7	Beta-BHC	2.8u
319-86-8	Delta-BHC	10u
58-89-9	Gamma-BHC (Lindane)	4.5
76-44-8	Heptachlor	5.6u
309-00-2	Aldrin	5.6u
1024-57-3	Heptachlor Epoxide	37u
959-98-8	Endosulfan I	10u
60-57-1	Dieldrin	15u
72-55-9	4, 4'-DDE	11u
72-20-8	Endrin	20u
33213-65-9	Endosulfan II	11u
72-54-8	4, 4'-DDD	2.8u
7421-93-4	Endrin Aldehyde	33u
1031-07-8	Endosulfan Sulfate	70u
50-29-3	4, 4'-DDT	5.6u
72-43-5	Methoxychlor	86u
53494-70-5	Endrin Ketone	11u
57-74-9	Chlordane	32u
8001-35-2	Toxaphene	320u
12674-11-2	Aroclor-1016	170u
11104-28-2	Aroclor-1221	140u
11141-16-5	Aroclor-1232	16u
53469-21-9	Aroclor-1242	120u
12672-29-8	Aroclor-1248	87u
11097-69-1	Aroclor-1254	44u
11096-82-5	Aroclor-1260	47u

 V_i = Volume of extract injected (ul) V_s = Volume of water extracted (ml) W_s = Weight of sample extracted (g) V_t = Volume of total extract (ul) V_s 0.75 or W_s _____ V_t 1000 V_i 3

Laboratory Name: 5263

Case No. _____

Sample Number

BD941

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)Date Extracted/Prepared: 11/29/85 11/25/85 coDate Analyzed: 1/12/86 12/28/85Conc/Dil Factor: 1

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	2.8u
319-85-7	Beta-BHC	2.8u
319-86-8	Delta-BHC	10u
58-89-9	Gamma-BHC (Lindane)	2.8u
76-44-8	Heptachlor	5.6u
309-00-2	Aldrin	5.6u
1024-57-3	Heptachlor Epoxide	37u
959-98-8	Endosulfan I	10u
60-57-1	Dieldrin	14u
72-55-9	4, 4'-DDE	11u
72-20-8	Endrin	20u
33213-65-9	Endosulfan II	11u
72-54-8	4, 4'-DDD	2.8u
7421-93-4	Endrin Aldehyde	33u
1031-07-8	Endosulfan Sulfate	169u
50-29-3	4, 4'-DDT	5.6u
72-43-5	Methoxychlor	86u
53494-70-5	Endrin Ketone	25
57-74-9	Chlordane	32u
8001-35-2	Toxaphene	380u
12674-11-2	Aroclor-1016	170u
11104-28-2	Aroclor-1221	140u
11141-16-5	Aroclor-1232	16u
53469-21-9	Aroclor-1242	120u
12672-29-8	Aroclor-1248	810u
11097-69-1	Aroclor-1254	44u
11096-82-5	Aroclor-1260	46u

 V_i = Volume of extract injected (ul) V_s = Volume of water extracted (ml) W_s = Weight of sample extracted (g) V_t = Volume of total extract (ul) V_s 0.75 or W_s _____ V_t 1000 V_i 3

- 93

TABLE 2

INORGANIC DATA QUALIFIER

Footnotes:

NR - not required by contract at this time.

Form I:

Value - If the result is a value greater than or equal to the instrument detection limit but less than the contract required detection limit, report the value in brackets (i.e., [10]). Indicate the analytical method used with P (for ICP/Flame AA) or F (for furnace).

U - Indicates element was analyzed for but not detected. Report with the detection limit value (e.g., 10U).

E - Indicates a value estimated or not reported due to the presence of interference. Explanatory note included on cover page.

s - Indicates value determined by Method of Standard Addition.

R - Indicates spike sample recovery is not within control limits.

* - Indicates duplicate analysis is not within control limits.

+ - Indicates the correlation coefficient for method of standard addition is less than 0.995

Form I

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

EPA Sample No.

MBE 469

Date 12-22-85

INORGANIC ANALYSIS DATA SHEET

LAB NAME HITMAN EBASCO ASSOCIATES INC.

CASE NO.

5263

SOW NO. 784

LAB SAMPLE ID. NO. NA

QC REPORT NO. 11

Elements Identified and Measured

Concentration: Low ☒ Medium ☐
 Matrix: Water ☐ Soil ☒ Sludge ☐ Other ☐

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

1. Aluminum	10200 P	13. Magnesium	5900 P
2. Antimony	27 UFR	14. Manganese	392 P
3. Arsenic	9.3 U F	15. Mercury	80 CL
4. Barium	5933 P E	16. Nickel	5143 P
5. Beryllium	2.0 U P	17. Potassium	51103 P
6. Cadmium	4.8 U P	18. Selenium	2.4 U =
7. Calcium	16500 P *	19. Silver	0.6 UFR =
8. Chromium	27 F	20. Sodium	2243 P
9. Cobalt	8.43 P	21. Thallium	316 UFR
10. Copper	5.4 U P	22. Tin	17 U F
11. Iron	14100 P	23. Vanadium	223 P
12. Lead	100 SFR	24. Zinc	100 P E *
Cyanide		Percent Solids (Z)	77.63

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

Comments:

Lab Manager

Neil Solomon

Form I

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

EPA Sample No.

WBE 470

Date 12-20-85

INORGANIC ANALYSIS DATA SHEET

LAB NAME HITTMAN EBASCO ASSOCIATES INC.

CASE NO. 5263

SOW NO. 784

LAB SAMPLE ID. NO.

QC REPORT NO. 11

Elements Identified and Measured

Concentration: Low ☒ Medium ☐
 Matrix: Water ☐ Soil ☒ Sludge ☐ Other ☐

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

1. Aluminum	4980 P	13. Magnesium	17200 P
2. Antimony	270 FR	14. Manganese	310 P
3. Arsenic	9.30 F	15. Mercury	0.2000
4. Barium	5442 PE	16. Nickel	8.8 UP
5. Beryllium	2.0 UP	17. Potassium	27413 P
6. Cadmium	4.8 UP	18. Selenium	241 =
7. Calcium	37300 P *	19. Silver	0.6 FR
8. Chromium	30 F	20. Sodium	22133 P
9. Cobalt	7.6 UP	21. Thallium	2.00 FR
10. Copper	5.40 P	22. Tin	173 F
11. Iron	8330 P	23. Vanadium	23 P
12. Lead	385 FR	24. Zinc	100 PE *
Cyanide		Percent Solids (2)	81.03

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

Comments: E for Ba

Lab Manager

Gail Solomon

Form I

004

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

EPA Sample No.

WIBE 471

Date 12 20 85

INORGANIC ANALYSIS DATA SHEET

LAB NAME HITMAN ERASCO ASSOCIATES INC.

CASE NO. 5263

SOW NO. 784

LAB SAMPLE ID. NO. NA

QC REPORT NO. 11

Elements Identified and Measured

Concentration: Low ☒ Medium ☐
Matrix: Water ☐ Soil ☒ Sludge ☐ Other ☐

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

1. Aluminum	11300 P	13. Magnesium	13600 P
2. Antimony	270 FR	14. Manganese	421 P
3. Arsenic	9.30 P	15. Mercury	12 CV
4. Barium	5873 PE	16. Nickel	5213 P
5. Beryllium	2.00 P	17. Potassium	517803 P
6. Cadmium	4.80 P	18. Selenium	2.00 P
7. Calcium	51400 P +	19. Silver	0.60 FR J
8. Chromium	575 P	20. Sodium	52123
9. Cobalt	5113 P	21. Thallium	2.60 FR
10. Copper	5.40 P	22. Tin	17.0 P
11. Iron	15900 P	23. Vanadium	5293 P
12. Lead	485 FR	24. Zinc	115 PE
Cyanide		Percent Solids (X)	79.34

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

Comments:

Lab Manager

Neil Solomon

Form I

005

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

EPA Sample No.

MBE 472

Date 12-20-85

INORGANIC ANALYSIS DATA SHEET

LAB NAME: HITTMAN EBASCO ASSOCIATES INC.

CASE NO.

5263

SOW NO.

784

LAB SAMPLE ID. NO.

NA

QC REPORT NO.

11

Elements Identified and Measured

Concentration:

Low

X

Medium

Matrix: Water

Soil

X

Sludge

Other

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

1. Aluminum	10800 P	13. Magnesium	8830 P
2. Antimony	37 UFRJ	14. Manganese	599 P
3. Arsenic	9.30 P	15. Mercury	15 CL
4. Barium	5137 PE	16. Nickel	5183 P
5. Beryllium	2.0 UP	17. Potassium	511003 P
6. Cadmium	4.8 UP	18. Selenium	2.10 F
7. Calcium	18900 P	19. Silver	0.60 UFRJ
8. Chromium	29 F	20. Sodium	51843 P
9. Cobalt	9.63 P	21. Thallium	2.6 UFR
10. Copper	423 P	22. Tin	17 UFR
11. Iron	12900 P	23. Vanadium	5223 P
12. Lead	35 FR	24. Zinc	110 PE
Cyanide		Percent Solids (X)	78.69

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

Comments:

Lab Manager

Keith Salmon

Form I

006

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

EPA Sample No.

MBE 473

Date 12-20-75

INORGANIC ANALYSIS DATA SHEET

LAB NAME HITMAN EBASCO ASSOCIATES INC.

CASE NO. 5263

SOW NO. 784

LAB SAMPLE ID. NO. UA

QC REPORT NO. 11

Elements Identified and Measured

Concentration: Low ☒ Medium ☐
 Matrix: Water ☐ Soil ☒ Sludge ☐ Other ☐

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

1. Aluminum	9630 P	13. Magnesium	8940 P
2. Antimony	27 UFR J	14. Manganese	483 P
3. Arsenic	9.30 P	15. Mercury	0.33 U
4. Barium	5123 PE	16. Nickel	173 P
5. Beryllium	2.0 UP	17. Potassium	8603 P
6. Cadmium	4.8 UP	18. Selenium	2.1 U
7. Calcium	21500 P *	19. Silver	0.6 ER
8. Chromium	118 F	20. Sodium	5573 P
9. Cobalt	9.83 P	21. Thallium	2.1 U
10. Copper	5.4 UP	22. Tin	17 UP
11. Iron	16100 P	23. Vanadium	363 P
12. Lead	27 FR	24. Zinc	110 PE
Cyanide		Percent Solids (Z)	81.4

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

Comments:

Lab Manager Gail Solomon

Form I

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

EPA Sample No.

WBE 474

Date 12-30-85

INORGANIC ANALYSIS DATA SHEET

LAB NAME HITMAN REASCO ASSOCIATES INC.

CASE NO. 5263

SOW NO. 784

LAB SAMPLE ID. NO. NA

QC REPORT NO. 11

Elements Identified and Measured

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

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

1. Aluminum	13700 P	13. Magnesium	8190 P
2. Antimony	270 FR	14. Manganese	660 P
3. Arsenic	9.30 P	15. Mercury	700 V
4. Barium	2106 P	16. Nickel	45 P
5. Beryllium	2.00 P	17. Potassium	13843 P
6. Cadmium	4.80 P	18. Selenium	2.90 F
7. Calcium	23200 P	19. Silver	0.60 FR
8. Chromium	68 F	20. Sodium	2253 P
9. Cobalt	153 P	21. Thallium	2.50 FR
10. Copper	5.40 P	22. Tin	170 F
11. Iron	17200 P	23. Vanadium	313 P
12. Lead	44 FR	24. Zinc	189 P
Cyanide		Percent Solids (%)	79.51

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

Comments:

Lab Manager Garit Salomon

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

EPA Sample No.

118E 475

Date 12-26-85

INORGANIC ANALYSIS DATA SHEET

LAB NAME HITMAN EBASCO ASSOCIATES INC.

CASE NO. 5263

SOW NO. 784

LAB SAMPLE ID. NO. N4

QC REPORT NO. 11

Elements Identified and Measured

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

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

1. Aluminum	11300 P	13. Magnesium	23000 P
2. Antimony	270 FR	14. Manganese	416 P
3. Arsenic	9.30 F	15. Mercury	48 CV
4. Barium	5873 PE	16. Nickel	5263 P
5. Beryllium	2.00 P	17. Potassium	512703 P
6. Cadmium	4.80 P	18. Selenium	2.00 F
7. Calcium	48100 P *	19. Silver	0.60 FR
8. Chromium	113 SF	20. Sodium	2563 P
9. Cobalt	123 P	21. Thallium	2.40 FR
10. Copper	5.40 P	22. Tin	170 F
11. Iron	16600 P	23. Vanadium	5253 P
12. Lead	26 FR	24. Zinc	98 PE *
Cyanide		Percent Solids (X)	38.91

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

Comments:

Lab Manager

Gail Solomon

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

EPA Sample No.

MBE 476

Date 12-20-88

INORGANIC ANALYSIS DATA SHEET

LAB NAME BITTMAN EBASCO ASSOCIATES INC.

CASE NO. 5363

SOW NO. 784

LAB SAMPLE ID. NO. NA

QC REPORT NO. 11

Elements Identified and Measured

Concentration: Low ☒ Medium ☐
 Matrix: Water ☐ Soil ☒ Sludge ☐ Other ☐

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

1. Aluminum	15300 P	13. Magnesium	18900 P
2. Antimony	27UFR	14. Manganese	502 P
3. Arsenic	9.3 UF	15. Mercury	67.01
4. Barium	51303 PE	16. Nickel	5335 P
5. Beryllium	2.0 UP	17. Potassium	23303 P
6. Cadmium	4.8 UP	18. Selenium	2.91 F
7. Calcium	45200 P	19. Silver	0.60 UFR
8. Chromium	50 F	20. Sodium	5223 P
9. Cobalt	5153 P	21. Thallium	2.66 UFR
10. Copper	5213 P	22. Tin	17 UF
11. Iron	21000 P	23. Vanadium	5323 P
12. Lead	64 FR	24. Zinc	171 PE
Cyanide		Percent Solids (X)	81.81

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

Comments:

Lab Manager

Neil Salomon

Form I

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

EPA Sample No.

WBE 477

Date 12-30-85

INORGANIC ANALYSIS DATA SHEET

LAB NAME HITTMAN EBASCO ASSOCIATES INC.

CASE NO. 5263

SOW NO. 784

LAB SAMPLE ID. NO. N/A

QC REPORT NO. 11

Elements Identified and Measured

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

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

1. Aluminum	20300 P	13. Magnesium	6360 P
2. Antimony	27 UFR	14. Manganese	1250 P
3. Arsenic	9.8 F	15. Mercury	31 U
4. Barium	{+22} PE	16. Nickel	{323} P
5. Beryllium	2.0 P	17. Potassium	{23203} P
6. Cadmium	5.3 P	18. Selenium	2.9 U
7. Calcium	6750 P	19. Silver	0.60 UFR
8. Chromium	45 SF	20. Sodium	{2193} P
9. Cobalt	{333} P	21. Thallium	2 UFR
10. Copper	5.4 U P	22. Tin	17 U
11. Iron	33600 P	23. Vanadium	45 P
12. Lead	25 SF	24. Zinc	89 PE
Cyanide		Percent Solids (Z)	75.25

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

Comments:

Lab Manager

Neil Solomon

Form I

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

EPA Sample No.

WBE 478

Date 12-20-77

INORGANIC ANALYSIS DATA SHEET

LAB NAME HITMAN EBASCO ASSOCIATES INC.

CASE NO. 5263

SOW NO. 784

LAB SAMPLE ID. NO. NA

QC REPORT NO. 11

Elements Identified and Measured

Concentration: Low ☒ Medium ☐
 Matrix: Water ☐ Soil ☒ Sludge ☐ Other ☐

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

1. Aluminum	15900 P	13. Magnesium	21700 P
2. Antimony	27 UFR	14. Manganese	569 P
3. Arsenic	9.30 P	15. Mercury	0.400
4. Barium	51433 PE	16. Nickel	5333 P
5. Beryllium	2.00 P	17. Potassium	525303 P
6. Cadmium	48 UP	18. Selenium	2.90 P
7. Calcium	61000 P *	19. Silver	0.60 = RJ
8. Chromium	54 P	20. Sodium	-5284 P
9. Cobalt	5173 P	21. Thallium	2.60 = RJ
10. Copper	5103 P	22. Tin	17 UP
11. Iron	23500 P	23. Vanadium	5343 P
12. Lead	455 + FR	24. Zinc	182 PE *
Cyanide		Percent Solids (Z)	87.05

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

Comments:

Lab Manager

Shil Solomon

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

EPA Sample No.

MBE 479

Date 12-22-75

INORGANIC ANALYSIS DATA SHEET

LAB NAME HITMAN ERASCO ASSOCIATES INC.

CASE NO. 5263

SOW NO. 784

LAB SAMPLE ID. NO. NA

QC REPORT NO. 11

Elements Identified and Measured

Concentration: Low ☒ Medium ☐
 Matrix: Water ☐ Soil ☒ Sludge ☐ Other ☐

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

1. Aluminum	10400 P	13. Magnesium	9930 P
2. Antimony	27 UFR	14. Manganese	588 P
3. Arsenic	10 F	15. Mercury	1.2 CL
4. Barium	5053 PE	16. Nickel	192 P
5. Beryllium	2.0 UP	17. Potassium	11003 P
6. Cadmium	4.8 UP	18. Selenium	2.4 UF
7. Calcium	21000 P	19. Silver	100 ~~UF~~ UR
8. Chromium	128 F	20. Sodium	200? P
9. Cobalt	233 P	21. Thallium	2.4 UF
10. Copper	5.4 UP	22. Tin	17 UF
11. Iron	17300 P	23. Vanadium	193 P
12. Lead	54 > FR	24. Zinc	77 PE *
Cyanide		Percent Solids (2)	80.34

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

Comments: At result due to spike 2.4 UF, Cl- in sample x
 CRTC = 10 x 10 = 100

Lab Manager

Gail Solomon

Form 1

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

EPA Sample No.

WBE 480

Date 12-20-78

INORGANIC ANALYSIS DATA SHEET

LAB NAME HITMAN EBASCO ASSOCIATES INC.

CASE NO. 5263

SOW NO. 784

LAB SAMPLE ID. NO. NA

QC REPORT NO. 11

Elements Identified and Measured

Concentration: Low ☒ Medium ☐
 Matrix: Water ☐ Soil ☒ Sludge ☐ Other ☐

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

1. Aluminum	14900 P	13. Magnesium	36100 P
2. Antimony	270 FR	14. Manganese	692 P
3. Arsenic	9.30 P	15. Mercury	1.50 V
4. Barium	5118 PE	16. Nickel	40 P
5. Beryllium	2.00 P	17. Potassium	14703 P
6. Cadmium	4.80 P	18. Selenium	2.40 V
7. Calcium	74500 P *	19. Silver	1.23 = RJ
8. Chromium	94 F	20. Sodium	2843 P
9. Cobalt	1133 P	21. Thallium	2.66 FR
10. Copper	27.33 P	22. Tin	170 P
11. Iron	23300 P	23. Vanadium	5263
12. Lead	54 FR	24. Zinc	170 PE *
Cyanide		Percent Solids (%)	81.76

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

Comments:

Lab Manager Neil Solomon

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

EPA Sample No.

MBE 481

Date 12-20-85

INORGANIC ANALYSIS DATA SHEET

LAB NAME HITTMAN EBASCO ASSOCIATES INC.

CASE NO. 5263

SOW NO. 784

LAB SAMPLE ID. NO. NA

QC REPORT NO. 11

Elements Identified and Measured

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

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

1. Aluminum	11000 P	13. Magnesium	37800 P
2. Antimony	27 UFR	14. Manganese	615 P
3. Arsenic	11 F	15. Mercury	1.1 U
4. Barium	5103 PE	16. Nickel	5223 P
5. Beryllium	2.0 UP	17. Potassium	511003 P
6. Cadmium	4.8 UP	18. Selenium	2.9 UF
7. Calcium	81400 P	19. Silver	0.6 FRT
8. Chromium	210 F	20. Sodium	5200 P
9. Cobalt	2103 P	21. Thallium	3.6 UFR
10. Copper	5.4 UP	22. Tin	17 UF
11. Iron	17400 P	23. Vanadium	5253 P
12. Lead	74 S+ F	24. Zinc	160 PE
Cyanide		Percent Solids (Z)	84.77

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

Comments:

Lab Manager

Neil Solomon

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

EPA Sample No.

MBE 482

Date 12-20-85

INORGANIC ANALYSIS DATA SHEET

LAB NAME HITMAN PRASCO ASSOCIATES INC.

CASE NO. 5263

SOV NO. 784

LAB SAMPLE ID. NO. NA

QC REPORT NO. 11

Elements Identified and Measured

Concentration: Low ☒ Medium ☐
 Matrix: Water ☐ Soil ☒ Sludge ☐ Other ☐

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

1. Aluminum	12000 P	13. Magnesium	35900 P
2. Antimony	27 UFR I	14. Manganese	520 P
3. Arsenic	9.3 UF	15. Mercury	2.7 CV
4. Barium	5963 PE	16. Nickel	5325 P
5. Beryllium	2.0 UP	17. Potassium	10003 P
6. Cadmium	4.8 UP	18. Selenium	39 UF
7. Calcium	77300 P.	19. Silver	0.6 UFR I
8. Chromium	60 F	20. Sodium	2223 P
9. Cobalt	113 P	21. Thallium	2.6 UFR
10. Copper	95 P	22. Tin	17 UF
11. Iron	17800 P	23. Vanadium	2313 P
12. Lead	35 F	24. Zinc	157 PE.
Cyanide		Percent Solids (2)	82.41

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

Comments:

Lab Manager

Phil Solomon