D-2
6-9-87

SITE INSPECTION REPORT
FOR
ALCO SPRINGS INDUSTRIES
CHICAGO HEIGHTS
ILD048300412
F05-8704-003
FIL0493SI

JUNE 26, 1987

EPA Region 5 Records Ctr.
283354

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INDEX SYSTEM

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

MEMORANDUM

DATE: June 25, 1987
TO: File
FROM: Katherine Neswick K.N.
SUBJECT: Illinois/F05-8704-003/FIL0493SI
Chicago Heights/Alco Springs Industries
ILD048300412

Alco Springs Industries is a manufacturer of steel springs for heavy machinery. The company is located at 23rd and Euclid Streets in Chicago Heights. Operations began in 1913 on 42 acres of land as a division of American Locomotive. In 1972, 20 acres were sold to Sun Steel Company, and Alco Springs became part of the Studebaker Corporation.

Steel is the primary feedstock used in their spring manufacturing process. The springs are submerged in quench oil bath to remove the metal scale. The quench oil bath sludge (metal sludge) generated when the quench oil is filtered, is regulated as a special waste (F010). The oil is cooled and reused through a quench oil reclaiming system constructed in November 1980. This system utilizes three 275-gallon oil tanks equipped with baffles to separate the metal scale from the oil. There are several storage tanks within the plant, and one located outside. Approximately 38,000 gallons of quench oil are presently used at the plant. This oil is used repeatedly until volatilized.

Before the new quench oil reclaiming system was constructed in 1980, the oil was cooled with water which was later discharged into Thorn

Creek, a nearby recreational stream.

Alco Springs operated an unpermitted landfill until 1981 when it was covered with a 2-ft clay seal. Fill consisted of concrete, empty drums, wood pallets, general waste, scrap steel, and steel grindings. The landfill is located on the west end of the site and slopes 25 ft into standing water and trees. Thorn Creek is in close proximity to the landfill.

The site was first brought to public attention by a complainant, alleging pollution of a tributary to Thorn Creek by discharges from Alco Springs and an adjacent company called Sun Steel. On November 19, 1980, the IEPA investigated the complaint. Another complaint which cited dumping of waste was investigated November 19, 1981. The IEPA obtained soil samples from the fill face and earthen berm area located west of the standing water and trees. Water samples were obtained from Thorn Creek. Sample X202 taken from the top of the fill face contained lead.

On May 12, 1987, Ecology and Environment/FIT conducted an inspection of the site. Alco Springs personnel were interviewed, and the site was visually inspected. Access to the site is restricted by a fence. However, the fencing is not continuous, and an opening for truck entry is present near the landfill. South Chicago Heights and Park Forest residents rely on groundwater as a source of drinking water. In order to evaluate the quality of the water, FIT collected three water samples. These samples were taken from the South Chicago Heights Water Department, Park Forest Water Department, and nearby Cook County forest preserve well (W-3). Phenol was detected in all three samples and lead and copper were found in sample W-3.

95E:4W

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

I. IDENTIFICATION

01 STATE: IL | 02 SITE NUMBER: D048300412

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Alco Springs Industries	23rd St. + Euclid				
03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
CHICAGO HEIGHTS	IL	60411	Cook	031	4

09 COORDINATES: LATITUDE 41 28 30.0 | LONGITUDE 087 39 00.0

10 TYPE OF OWNERSHIP (Check one): ☒ A. PRIVATE ☐ B. FEDERAL ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION: 5 12 87 (MONTH DAY YEAR)

02 SITE STATUS: ☒ ACTIVE ☐ INACTIVE

03 YEARS OF OPERATION: 1913 (BEGINNING YEAR) , Present (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply): ☐ A. EPA ☒ B. EPA CONTRACTOR Ecology + Environment (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR ___ (Name of firm) ☐ E. STATE ☐ F. STATE CONTRACTOR ___ (Name of firm) ☐ G. OTHER ___ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO
PHIL SMITH	Geologist	E + E	(312) 663-9415

09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
KATHERINE NESWICK	Entomologist	E + E	(312) 663-9415
Gary Cobb	Geologist	E + E	(312) 663-9415
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Vito Grucdis	Vice President of manufacturing	W. 23rd + Euclid	(312) 755-0436
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	10:00 AM	Cool 60°F, sunny, east breeze

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Kenneth L. Page	IEPA RPM8	217 782-6761

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Katherine Neswick	U.S. EPA	Ecology + Environment	(312) 663-9415	06 24 87 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D048300412

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- [x] A SOLID
- [ ] B POWDER, FINES
- [x] C SLUDGE
- [ ] D OTHER _____ (Specify)
- [ ] E SLURRY
- [x] F LIQUID
- [ ] G GAS

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

TONS _____

CUBIC YARDS unknown

NO. OF DRUMS _____

03 WASTE CHARACTERISTICS (Check all that apply)

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

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE	UNK	unk	Quench oil
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	UNK	unk	Metal Scale + grindings

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

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
MES	LEAD	7439-92-1	landfill behind main bldg	29.27	mg/l
			At Alco Springs Ind.		
OCC	Phenol	108-95-2	Municipal wells +	1.2 + 0.6	mg/l
			PARK well were sampled		
			in the area + phenol		
			was detected - true		
			Source unknown		
MES	Copper	7440-50-8	PARK well	93	ug/l
MES	lead	7439-92-1	PARK well	8.5	ug/l

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 (Cite specific references, e.g., state files, sample analysis, reports)

IEPA Soil Sample Analysis collected 11/19/81
STATE File Information
Site Inspection + interview 5/12/87 conducted by E&E/FIT

EPA

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

I IDENTIFICATION
01 STATE: IL | 02 SITE NUMBER: D048300412

II HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE N/A) — ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 29,757
04 NARRATIVE DESCRIPTION
Contaminants in the soil may leach down into the silt, clay + fine sand of the Pleistocene system and possibly down further to the underlying Silurian System and deeper yet the Galesville Sandstone. These Aquifers serve the Industrial + municipal groundwater supplies in Southern Cook County.

01 ☒ B SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE N/A) — ☐ POTENTIAL ☒ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0
04 NARRATIVE DESCRIPTION
Thorn Creek, a recreational stream, has a pollution problem of heavy metals. The stream is 25 ft away from Alco Springs landfill.

01 ☐ C CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE N/A) — ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: N/A
04 NARRATIVE DESCRIPTION
N/A Before 1980 wood pallets were burned on site.

01 ☐ D FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE N/A) — ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: N/A
04 NARRATIVE DESCRIPTION
No complaints have been made on the fire/explosive conditions

01 ☐ E DIRECT CONTACT — 02 ☐ OBSERVED (DATE N/A) — ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: N/A
04 NARRATIVE DESCRIPTION
The site is fenced, except for a small area near the landfill. Thorn Creek, Trees, standing water + railroad tracks make the site unaccessible. There is guard service at night.

01 ☒ F CONTAMINATION OF SOIL — 02 ☐ OBSERVED (DATE 11/19/81) — ☐ POTENTIAL ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: 1 acre (Acres)
04 NARRATIVE DESCRIPTION
In 1981, the Illinois EPA obtained soil samples from the fill face, berned area and leachate. 29 ppm lead was detected in the leachate.

01 ☒ G DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE N/A) — ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 29,757
04 NARRATIVE DESCRIPTION
On May 12, 1987 Ecology + Environment/FIT sampled 3 drinking water wells, one in So. Chicago Heights, Park Forest + a forest preserve. Contaminants detected: phenol, lead + copper.

01 ☒ H WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE N/A) — ☒ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: 65
04 NARRATIVE DESCRIPTION
No exposure or injury incidents have been reported

01 ☐ I POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE N/A) — ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 29,822
04 NARRATIVE DESCRIPTION
Routes of exposure include drinking water contamination and worker exposure. See A, G, and H above

EPA

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

I. IDENTIFICATION
01 STATE: IL | 02 SITE NUMBER: D048300412

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ■ J DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE N/A) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
The potential exists for damage to flora. Thorn Creek has been documented to be polluted with heavy metal contamination.

01 ■ K DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE N/A) ☐ POTENTIAL ■ ALLEGED
04 NARRATIVE DESCRIPTION
In 1980, 1986 Two complaints were made alleging pollution of Thorn Creek. One complaint stated that the landfill gives off an unpleasant odor after rain + the rainwater washes the rust + metals into the Creek. The Creek is rust colored making animal life impossible

01 ■ L CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE N/A) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
The potential exists for contaminants to enter the food chain via contaminated water of Thorn Creek.

01 ■ M UNSTABLE CONTAINMENT OF WASTES — 02 ☐ OBSERVED (DATE 11/19/80) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED 3,028 — 04 NARRATIVE DESCRIPTION
IEPA investigated Alco Springs Nov. 19, 1980 & noticed 100-120 drums containing waste, identified as scale + Quench oil. On Nov 16, 1981 another investigation occured + drums in the same location were empty.

01 ☐ N DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE N/A) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
The property where the dumping has occured is owned by Alco Springs.

01 ☐ O CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE N/A) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
No contamination of sewers, storm drains, WWTPs. However, there is A 48" sewer seen on Alco Springs' property with a discharge of approximately 250 gpm to the creek. The flow does not originate from Alco Springs.

01 ■ P ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Alco Springs did not have an operating permit for landfilling activity. The landfill is presently covered with a 2 ft clay seal.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
NONE.

III. TOTAL POPULATION POTENTIALLY AFFECTED: 36,757

IV. COMMENTS
NONE

V. SOURCES OF INFORMATION
State file information
Site inspection 5/12/87 conducted by E&E/FIT

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D048300412

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
☐ A SURFACE IMPOUNDMENT		
☐ B PILES		
☐ C DRUMS, ABOVE GROUND		
■ D TANK, ABOVE GROUND	8	275 gallons
■ E TANK, BELOW GROUND	1	unk
■ F. LANDFILL		72ft x 25ft
☐ G LANDFARM		
☐ H OPEN DUMP		
☐ I OTHER (Specify)		

04 TREATMENT (Check all that apply)
☐ A. INCENERATION
☐ B UNDERGROUND INJECTION
☐ C CHEMICAL/PHYSICAL
☐ D BIOLOGICAL
■ E WASTE OIL PROCESSING
☐ F. SOLVENT RECOVERY
☐ G OTHER RECYCLING/RECOVERY
☐ H OTHER (Specify)

05 OTHER

■ A BUILDINGS ON SITE

06 AREA OF SITE: 22 acres

07 COMMENTS

3 tanks hold 275 gallons, the 6 others are of various sizes.

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

A 2 ft high berm surrounds the standing water + trees on the west side. The landfill borders on the east.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE ☐ YES ■ NO

02 COMMENTS

Facility is fenced and there is guard service at night. A small break in the fence near the landfill is notable but RR tracks, standing water, trees, Thorn Creek make it unaccessible.

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

FIT Site inspection and interview 5/12/87 conducted by E&E/FIT
State file information

EPA

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

I. IDENTIFICATION
01 STATE: IL
02 SITE NUMBER: D048300412

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)

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

02 STATUS

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

03 DISTANCE TO SITE
A. 3/4 (mi)
B. <2000 ft (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

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

02 POPULATION SERVED BY GROUND WATER 29,757

03 DISTANCE TO NEAREST DRINKING WATER WELL <2000 ft. (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
50 (ft)	South + S. West.	50 (ft)	300,000 (gpd)	■ YES ☐ NO

09 DESCRIPTION OF WELLS (including well logs, depth, and location relative to population and buildings)
Chicago Heights purchases LAKE Michigan water from Hammond, So. Chicago Heights + Park Forest have municipal wells. Groundwater supplies are obtained from Silurian dolomite at 390-425 ft.

10 RECHARGE AREA
■ YES ☐ NO
COMMENTS: In Cook County recharge occurs through precipitation + seepage

11 DISCHARGE AREA
■ YES ☐ NO
COMMENTS: Thorn Creek, standing water + trees is at the base of the landfill. Slope is 25 ft.

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
Thorn Creek	■	<50 ft. (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 3,028 NO OF PERSONS	B. 21,378 NO OF PERSONS	C. 36,757 NO OF PERSONS

02 DISTANCE TO NEAREST POPULATION 1/4 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE 3,000

04 DISTANCE TO NEAREST OFF-SITE BUILDING .5 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural village densely populated urban area)
The area within 3 miles of the site is densely populated Residential Areas.

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

I. IDENTIFICATION

01 STATE: IL | 02 SITE NUMBER: D048300412

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

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

02 PERMEABILITY OF BEDROCK (Check one)

☐ A IMPERMEABLE (Less than 10^{-6} cm/sec) ☐ B RELATIVELY IMPERMEABLE (10^{-4} – 10^{-6} cm/sec) ■ C RELATIVELY PERMEABLE (10^{-2} – 10^{-4} cm/sec) ☐ D VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH
65-95 (ft)	unk (ft)	unk

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
32 (in)	2.5 (in)	>8 %	North	<3 %

09 FLOOD POTENTIAL: SITE IS IN N/A YEAR FLOODPLAIN

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

11 DISTANCE TO WETLANDS (5 acre minimum): ESTUARINE A N/A (mi) OTHER B N/A (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species): N/A (mi) ENDANGERED SPECIES N/A

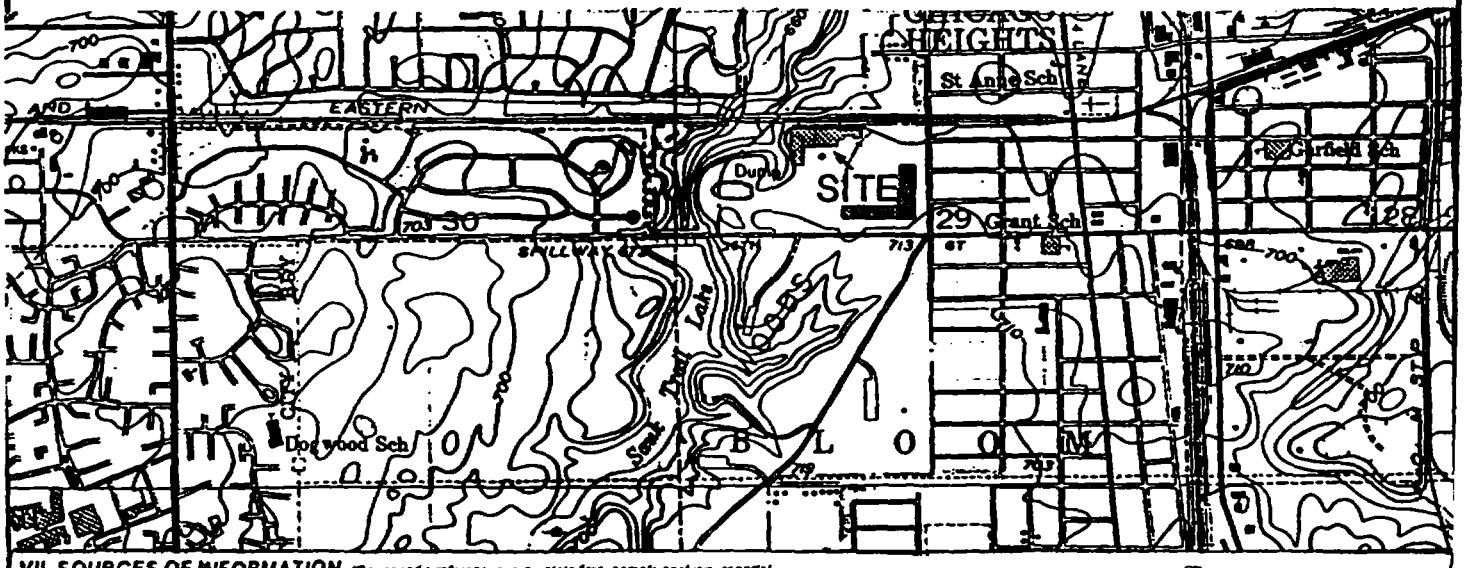
13 LAND USE IN VICINITY

DISTANCE TO

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS, NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A .5 (mi)	B 1/4 (mi)	C N/A (mi)	D N/A (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The landfill is surrounded by residential and wooded areas.



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

State Files
USGS Topographic Map - Steger, Il.
Site Inspection 5/12/87 conducted by E&E/FIT

EPA FORM 2070-13 (7-81)

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D048300412

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	3	Inorganics - Spectrix Organics - IOWA	Available
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL			
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
hnu Photoionizer	Constant monitoring revealed no contaminants
Explosimeter	on-site in the breathing zone
rad mini	
monitox	

IV. PHOTOGRAPHS AND MAPS

01 TYPE ■ GROUND ☐ AERIAL

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

03 MAPS ■ YES ☐ NO

04 LOCATION OF MAPS Alco Springs Property + specifics

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

NONE

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

Site Inspection 5/12/87 conducted by E+E/FIT

EPA FORM 2070-13 (7-81)

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D048300412

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
John Foxley		23RD + Euclid		Chicago Heights	Il.	60411
Bill Cunningham		23rd + Euclid		Chicago Heights	Il.	60411

PARENT COMPANY (If applicable)

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

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

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

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

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

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

Site Inspection 5/12/82 Conducted by E&E/FIT

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D048300412

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME: Alco Springs	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.): 23rd + Euclid	04 SIC CODE		
05 CITY: Chicago Heights	06 STATE: Il.	07 ZIP CODE: 60411	
08 YEARS OF OPERATION: 74	09 NAME OF OWNER: John Foxley / Bill Cunninghain		

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME: N/A	11 D+B NUMBER		
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE		
14 CITY	15 STATE	16 ZIP CODE	

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

01 NAME: N/A	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD		
01 NAME	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD		
01 NAME	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD		

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME: N/A	11 D+B NUMBER		
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE		
14 CITY	15 STATE	16 ZIP CODE	
10 NAME	11 D+B NUMBER		
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE		
14 CITY	15 STATE	16 ZIP CODE	
10 NAME	11 D+B NUMBER		
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE		
14 CITY	15 STATE	16 ZIP CODE	

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

Site Inspection 5/12/87 Conducted by E&E/FIT

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D048300412

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
Alco Springs Industries	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
23rd + Euclid	

05 CITY	06 STATE	07 ZIP CODE
Chicago Heights	I	60411

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
N/A			

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

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

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

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

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

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
N/A			

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

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

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

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

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

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

Site Inspection 5/12/87 conducted by E&E/FIT

EPA

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

I. IDENTIFICATION
01 STATE: TL | 02 SITE NUMBER: D048300412

II. PAST RESPONSE ACTIVITIES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D048300412

II PAST RESPONSE ACTIVITIES (Continue)

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

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

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

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

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

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

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

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

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

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

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

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

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

Site Inspection 5/12/87 conducted by E&E/FIT

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D048300412

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☒ NO

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

November 19, 1980 IEPA site inspection
November 13, 1981 IEPA site inspection
November 19, 1981 soil sampling IEPA
July 28, 1983 Site Inspection IEPA
October 11, 1984 IEPA Compliance conference
October 23, 1985 IEPA Site Inspection
MAY 12, 1987 FIT Site Inspection + well water sampling

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

State file information

EPA FORM 2070-13 (7-81)

Immediate Removal Action Check Sheet

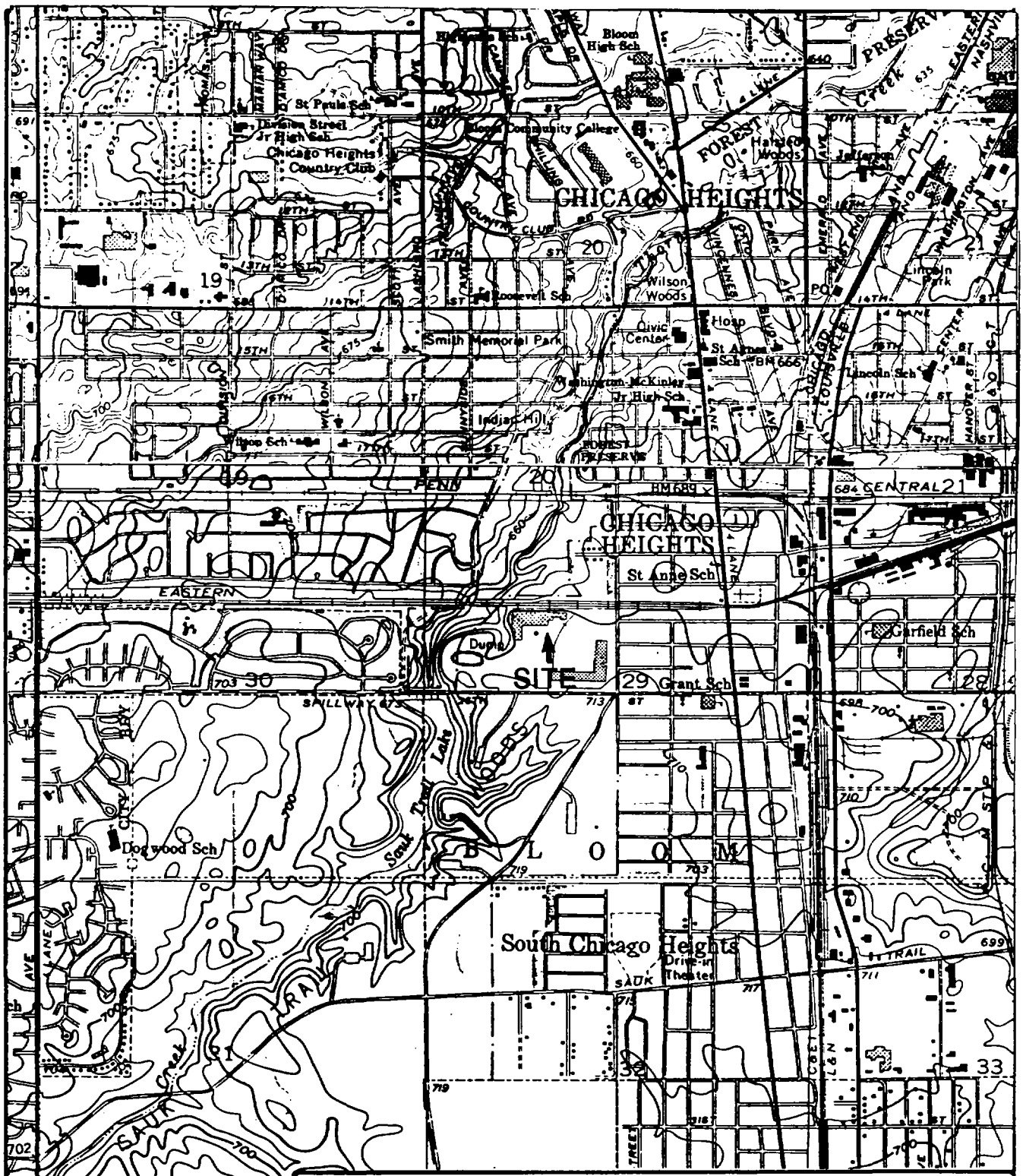
		High	Moderate	Low
Fire and Explosion Hazard				
Flammable Materials	N/A			
Explosives	N/A			
Incompatable Chemicals	N/A			
Direct Contact with Acutely Toxic Chemicals				
Site Security	Fence / guard service at night			X
Leaking Drums or Tanks	NONE			
Open Lagoons or pits	landfill w/ 2 ft cover			X
Materials on Surface	Scrap metal			X
Proximity of Population	1/2 mi.			X
Evidence of Casual Site Use	NONE			X
Contaminated Water Supply				
Exceeds 10 Day Snarl	N/A			
Gross Taste or Odors	N/A			
Alternate Water Available	yes			X
Potential Contamination	drinking H_2O			X
Is the site abandoned or active?				

Comments

Site is a covered landfill. Site hazards are not high enough to require immediate removal action.

4

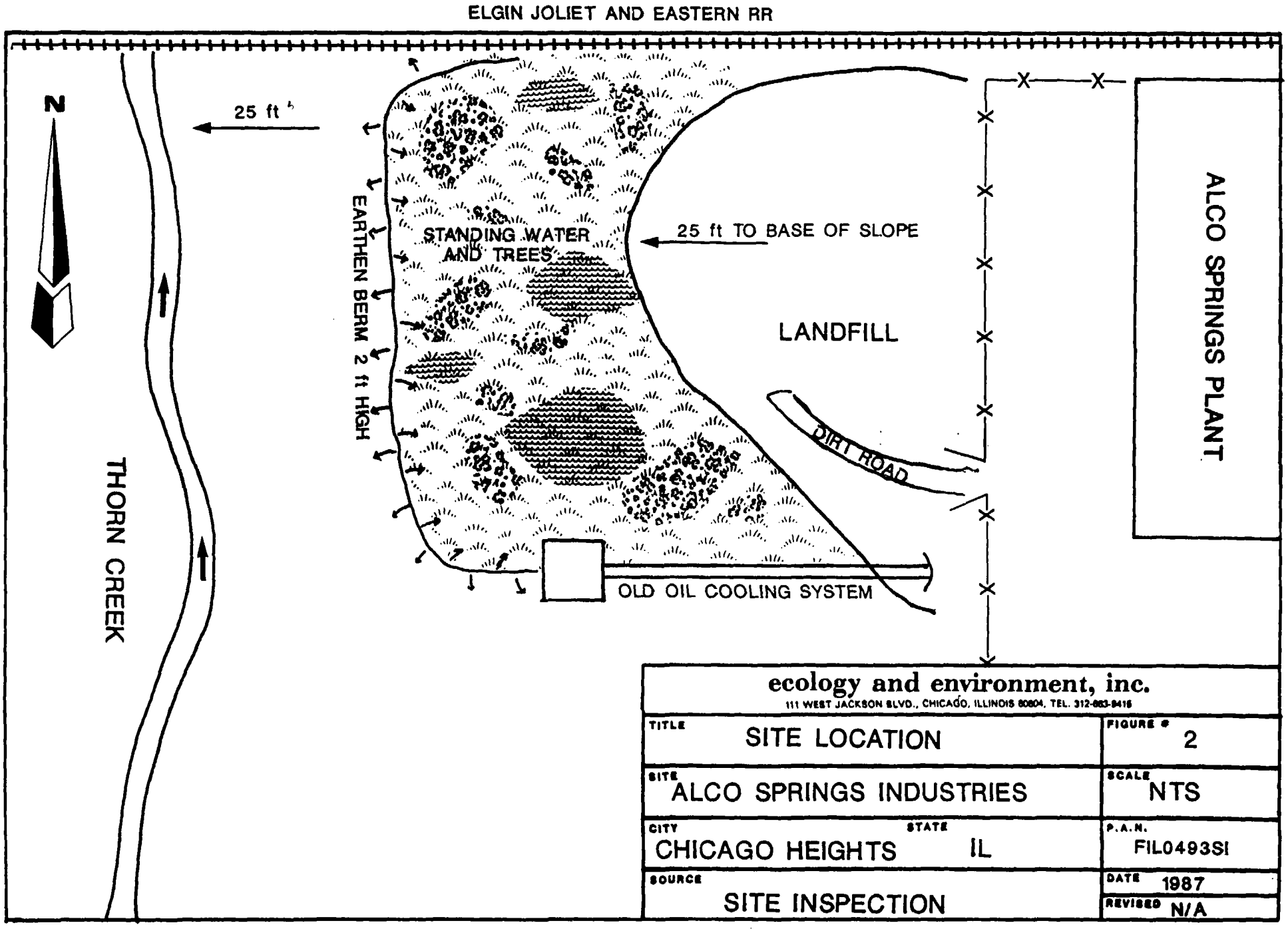
Cardinal



ecology and environment, inc.

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

TITLE: SITE MAP	FIGURE #: 1
SITE: ALCO SPRINGS INDUSTRIES	SCALE: 1:24000
CITY: CHICAGO HEIGHTS STATE: IL.	P.A.N.: FIL0493SI
SOURCE: USGS 7.5 MINUTE TOPO MAP	DATE: 1987
STEGER, HARVEY, CALUMET CITY, DYER QUADS	REVISED: N/A



ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415

TITLE: SITE LOCATION	FIGURE #: 2
SITE: ALCO SPRINGS INDUSTRIES	SCALE: NTS
CITY: CHICAGO HEIGHTS STATE: IL	P.A.N.: FIL0493SI
SOURCE: SITE INSPECTION	DATE: 1987
	REVISED: N/A

3

inal

FIELD PHOTOGRAPHY LOG SHEET

PAGE 1

DATE 5/12/87

TIME 11:50 (A.M.) P.M.

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

WEATHER Cool 60°F, Sunny, east breeze

SITE Alco Springs IND.

TDD# F05-8612-071

PHOTOGRAPHED BY: Phil Smith

SAMPLE ID# (if applicable)

DESCRIPTION: West lot and landfill

DATE 5/12/87

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

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

WEATHER Cool 60°F, Sunny, east breeze

SITE Alco Springs IND.

TDD# F05-8612-071

PHOTOGRAPHED BY: Phil Smith

SAMPLE ID# (if applicable)

DESCRIPTION: West lot and landfill

FIELD PHOTOGRAPHY LOG SHEET

DATE 5/12/87

TIME 11:50 A.M. P.M.

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

WEATHER Cool 60°F, Sunny, east breeze

SITE Alco Springs IND.

TDD# F05-8612-071

PHOTOGRAPHED BY: Phil Smith

SAMPLE ID# (if applicable)

DESCRIPTION: West lot + landfill

DATE 5/12/87

TIME 11:50 A.M. P.M.

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

WEATHER Cool 60°F, Sunny, east breeze

SITE Alco Springs IND.

TDD# F05-8612-071

PHOTOGRAPHED BY: Phil Smith

SAMPLE ID# (if applicable)

DESCRIPTION: EDGE of landfill, looking down at trees

FIELD PHOTOGRAPHY LOG SHEET

DATE 5/12/87

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

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

WEATHER Cool 60°F, Sunny, east breeze

SITE Alco Springs IND.

TDD# F05-8612-071

PHOTOGRAPHED BY: Phil Smith

SAMPLE ID# (if applicable)

DESCRIPTION: Edge of landfill looking down ~25ft at standing water + trees

DATE 5/12/87

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

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

WEATHER Cool 60°F, Sunny, east breeze

SITE Alco Springs IND.

TDD# F05-8612-071

PHOTOGRAPHED BY: Phil Smith

SAMPLE ID# (if applicable)

DESCRIPTION: Vegetation on landfill slope

FIELD PHOTOGRAPHY LOG SHEET

PAGE 4

DATE 5/12/87

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

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

WEATHER Cool 60°F, Sunny, east breeze

SITE Alco Springs IND.

TDD# F05-8612-071

PHOTOGRAPHED BY: Phil Smith

SAMPLE ID# (if applicable)

DESCRIPTION: BASE of landfill with scrap metal in view

DATE 5/12/87

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

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

WEATHER Cool 60°F, Sunny, east breeze

SITE Alco Springs IND.

TDD# F05-8612-071

PHOTOGRAPHED BY: Phil Smith

SAMPLE ID# (if applicable)

DESCRIPTION: Trees at base of landfill

FIELD PHOTOGRAPHY LOG SHEET

PAGE 5

DATE 5/12/87

TIME 12:00 A.M. (P.M.)

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

WEATHER Cool 60°F, Sunny, east breeze

SITE Alco Springs IND.

TDD# F05-8612-071

PHOTOGRAPHED BY: Phil Smith

SAMPLE ID# (if applicable)

DESCRIPTION: West lot behind Alco springs plant

DATE 5/12/87

TIME 12:30 (A.M.) P.M.

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

WEATHER Cool 60°F, Sunny, east breeze

SITE Alco Springs IND.

TDD# F05-8612-071

PHOTOGRAPHED BY: Phil Smith

SAMPLE ID# (if applicable)

DESCRIPTION: Oil tank

FIELD PHOTOGRAPHY LOG SHEET

PAGE 6

DATE 5/12/87

TIME 12:30 A.M. P.M.

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

WEATHER Cool 60°F, Sunny, east breeze

SITE Alco Springs IND.

TDD# F05-8612-071

PHOTOGRAPHED BY: Phil Smith

SAMPLE ID# (if applicable)

DESCRIPTION: Alco Springs office

DATE 5/12/87

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

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

WEATHER Cool 60°F, Sunny, east breeze

SITE Alco Springs IND.

TDD# F05-8612-071

PHOTOGRAPHED BY: Phil Smith

SAMPLE ID# (if applicable)

DESCRIPTION: Well W-1

FIELD PHOTOGRAPHY LOG SHEET

PAGE 7

DATE 5/12/87

TIME 1 15 A.M. P.M.

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

WEATHER Cool 60°F, Sunny, east breeze

SITE Alco Springs IND.

TDD# F05-8612-071

PHOTOGRAPHED BY: Phil Smith

SAMPLE ID# (if applicable)

DESCRIPTION: Well W-1

DATE 5/12/87

TIME 2 00 A.M. P.M.

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

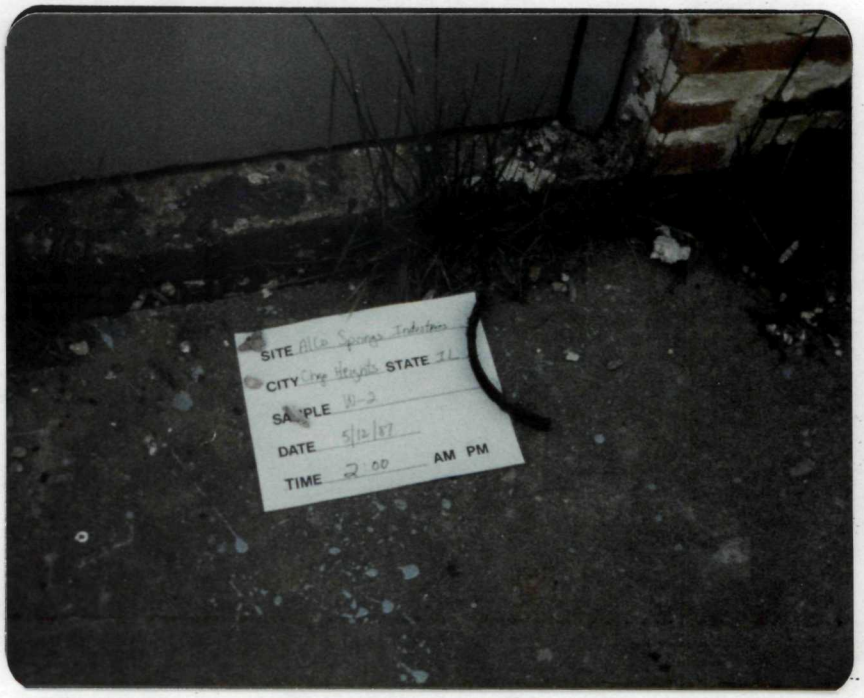
WEATHER Cool 60°F, Sunny, east breeze

SITE Alco Springs IND.

TDD# F05-8612-071

PHOTOGRAPHED BY: Phil Smith

SAMPLE ID# (if applicable)



DESCRIPTION: Well W-2

FIELD PHOTOGRAPHY LOG SHEET

DATE 5/12/87

TIME 2.00 A.M. P.M.

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

WEATHER Cool 60°F, Sunny, east breeze

SITE Alco Springs IND.

TDD# F05-8612-071

PHOTOGRAPHED BY: Phil Smith

SAMPLE ID# (if applicable)

DESCRIPTION: Well W-2

DATE 5/12/87

TIME 2.00 A.M. P.M.

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

WEATHER Cool 60°F, Sunny, east breeze

SITE Alco Springs IND.

TDD# F05-8612-071

PHOTOGRAPHED BY: Phil Smith

SAMPLE ID# (if applicable)

DESCRIPTION: Well W-2

FIELD PHOTOGRAPHY LOG SHEET

DATE 5/12/87

TIME 3:00 A.M. P.M.

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

WEATHER Cool 60°F, Sunny, east breeze

SITE Alco Springs IND.

TDD# F05-8612-071

PHOTOGRAPHED BY: Phil Smith

SAMPLE ID# (if applicable)

DESCRIPTION: Well W-3

DATE 5/12/87

TIME 3:10 A.M. P.M.

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

WEATHER Cool 60°F, Sunny, east breeze

SITE Alco Springs IND.

TDD# F05-8612-071

PHOTOGRAPHED BY: Phil Smith

SAMPLE ID# (if applicable)

DESCRIPTION: Well W-3

FIELD PHOTOGRAPHY LOG SHEET

PAGE 10

DATE 5/12/87

TIME 5:20 A.M. P.M.

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

WEATHER Cool 60°F, Sunny, east breeze

SITE Alco Springs IND.

TDD# F05-8612-071

PHOTOGRAPHED BY: Phil Smith

SAMPLE ID# (if applicable)

DESCRIPTION: Cooler of samples to be shipped to an organics lab

DATE 5/12/87

TIME 5:20 A.M. P.M.

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

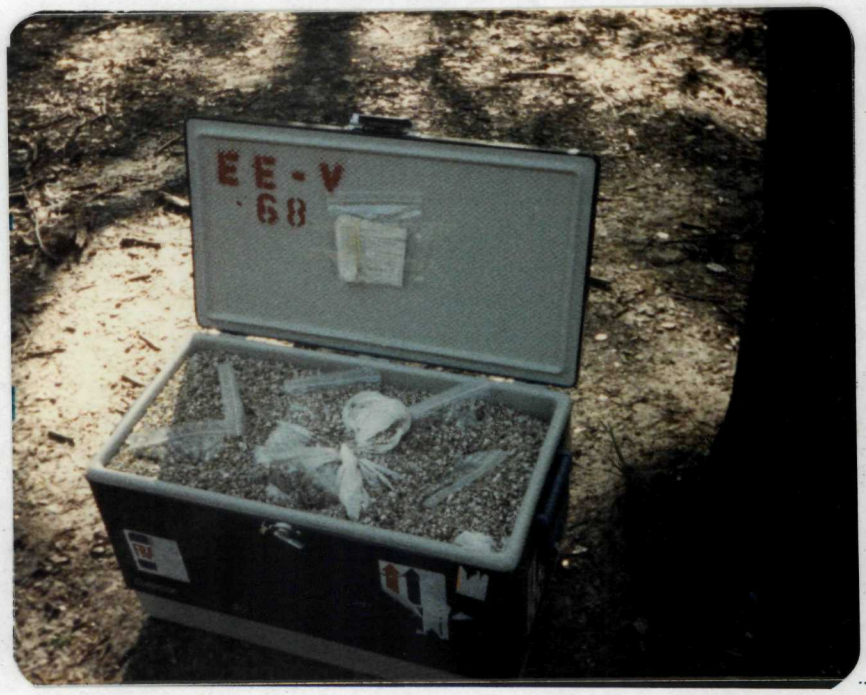
WEATHER Cool 60°F, Sunny, east breeze

SITE Alco Springs IND.

TDD# F05-8612-071

PHOTOGRAPHED BY: Phil Smith

SAMPLE ID# (if applicable)



DESCRIPTION: Cooler of samples to be shipped to an organics lab

FIELD PHOTOGRAPHY LOG SHEET

PAGE 11

DATE 5/12/87

TIME 5:20 A.M. P.M.

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

WEATHER Cool 60°F, Sunny, east breeze

SITE Alco Springs IND.

TDD# F05-8612-071

PHOTOGRAPHED BY: Phil Smith

SAMPLE ID# (if applicable)

DESCRIPTION: Cooler of Samples to be shipped to an inorganics lab

DATE 5/12/87

TIME 5:30 A.M. P.M.

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

WEATHER Cool 60°F, Sunny, east breeze

SITE Alco Springs IND.

TDD# F05-8612-071

PHOTOGRAPHED BY: Phil Smith

SAMPLE ID# (if applicable)

DESCRIPTION: Cooler ready to be shipped to an inorganics lab

FIELD PHOTOGRAPHY LOG SHEET

PAGE 12

DATE 5/12/87

TIME 5 30 A.M. P.M.

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

WEATHER Cool 60°F, Sunny, east breeze

SITE Alco Springs IND.

TDD# F05-8612-071

PHOTOGRAPHED BY: Phil Smith

SAMPLE ID# (if applicable)

DESCRIPTION: Cooler ready to be shipped to an organics lab.

DATE 5/12/87

TIME 5 30 A.M. P.M.

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

WEATHER Cool 60°F, Sunny, east breeze

SITE Alco Springs IND.

TDD# F05-8612-071

PHOTOGRAPHED BY: Phil Smith

SAMPLE ID# (if applicable)

DESCRIPTION: Coolers prepared for shipment

COMPOUND											
ITC	MEM 238	MEM 239	MEM 240	MEM 245	MEM 247						
OTC	EL 636	EL 637	EL 638	EL 643	EL 642						
SAMPLE	W-1	W-2	W-3	W-3 Dup	Blank						
chloromethane											
bromomethane											
vinyl chloride											
chloroethane											
methylene chloride											
acetone											
carbon disulfide											
1,1-dichloroethene											
1,1-dichloroethane											
trans-1,2,-dichloroethene											
chloroform											
1,2-dichloroethane											
2-butanone											
1,1,1-trichloroethane											
carbon tetrachloride											
vinyl acetate											
bromodichloromethane											
1,1,2,2-tetrachloroethane											
1,2-dichloropropane											
trans-1,3-dichloropropene											
trichloroethene											
dibromochloromethane											
1,1,2-trichloroethane											
benzene											
cis-1,3-dichloropropene											
2-chloroethylvinylether											
bromoform											
2-hexanone											
4-methyl-2-pentanone					1.6						
tetrachloroethene											
toluene					0.9						
chlorobenzene											
ethylbenzene											
styrene											
total xylenes					2.0						
N-nitrosodimethylamine											
phenol	1.2		0.6	0.6							
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											
naphthalene											
4-chloroaniline											
hexachlorobutadiene											
4-chloro-3-methylphenol											
2-methylnaphthalene					1						
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-chlorophenyl-phenylether											
fluorene											
4-nitroaniline											
4,6-dinitro-2-methylphenol											
N-nitrosodiphenylamine											
4-bromophenyl-phenylether											
hexachlorobenzene											

STATE Illinois SITE Alco Springs TDD F05-8704-003 PAGE 1 OF 2, SET # 1

COMPOUND											
ITC	mem 238	mem 239	mem 240	mem 245	mem 244						
DTC	EL 636	EL 637	EL 638	EL 643	EL 642						
SAMPLE	W-1	W-2	W-3	W-3 Dup	Blank						
pentachlorophenol											
phenanthrene											
anthracene											
di-n-butylphthalate											
fluoranthene											
benzidine											
pyrene											
butylbenzylphthalate											
3,3'-dichlorobenzidine											
benzo(a)anthracene											
bis(2-ethylhexyl)phthalate											
chrysene											
di-n-octylphthalate											
benzo(bik)fluoranthene											
benzo(a)pyrene											
indeno(1,2,3-cd)pyrene											
dibenzo(a,h)anthracene											
benzo(g,h,i)perylene											
alpha-BHC											
beta-BHC											
delta-BHC											
gamma-BHC(lindane)											
heptachlor											
aldrin											
heptachlor epoxide											
endosulfan I											
dieldrin											
4,4'-DDE											
endrin											
endosulfan II											
4,4'-DDD											
endrin aldehyde											
endosulfan sulfate											
4,4'-DDT											
methoxychlor											
endrin ketone											
chlordane											
toxephene											
Aroclor-1016											
Aroclor-1221											
Aroclor-1232											
Aroclor-1242											
Aroclor-1248											
Aroclor-1254											
Aroclor-1260											
ELEMENT											
aluminum											
antimony											
arsenic											
barium											
beryllium											
cadmium											
calcium											
chromium											
cobalt											
copper			93	17							
iron											
lead			8.5	2							
magnesium											
manganese											
mercury											
nickel											
potassium											
selenium											
silver											
sodium											
thallium											
tin											
vanadium											
zinc											
cyanide CHECK IF ANALYZED ( )											
TENTATIVELY IDENTIFIED ORGANICS											

STATE Illinois SITE Alco Springs TDD FDS-8704-003 PAGE 2 OF 2, SET # 2

A SURVEY OF THE ANALYTICAL RESULTS FOR SAMPLES WHICH WERE TAKEN DURING FIELD ACTIVITIES CAN BE FOUND IN THE FOLLOWING TABLES. ONLY DETECTABLE CONCENTRATIONS ARE REPORTED. HOWEVER, IF THE COMPOUND HAS A FOOTNOTE FOLLOWING THE VALUE, CONSULT THE DEFINITION OF THE FOOTNOTE PROVIDED BELOW. ADDITIONAL QA/QC INFORMATION IS PROVIDED IN THE ATTACHED DATA SHEETS.

I. REPORTING UNITS

A. Organics

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - ug/kg or ppb (parts per billion)

B. Metals

1. Water Samples - ug/L or ppb
2. Soils or Sediments - mg/kg or ppm

II. DEFINITION OF FOOTNOTES TO ANALYTICAL DATA

A. Organics

FOOTNOTE	DEFINITION	INTERPRETATION
UJ	Detection Limit (DL) is estimated because of a Quality Control (QC) protocol. DL is possibly above or below Contract Required Detection Limit (CRDL).	Compound was not detected
UB	Compound found in laboratory blank. No value above CRDL.	Compound was not detected
UJB	Compound found in laboratory blank, but not detected in sample. CRDL is estimated because of a QC protocol.	Compound was not detected
B	Compound found in blank. Two interpretations are possible:	
	a. If sample value is equivalent to DL to 5x blank concentration;	Compound value is semi-quantitative
	b. If sample value is greater than 5x the blank concentration.	Compound value is quantitative
JB	Compound found in blank, value is estimated because of QC protocol.	Compound value is semi-quantitative
R	Do Not Use Value. Major Violation of QC Protocol.	Compound value is not usable
C	Value adjusted for blank (an unacceptable procedure).	Compound value is semi-quantitative
J	Value is above CRDL and is an estimated value because of a QC protocol.	Compound value is semi-quantitative
Q	No Analytical Result.	Compound was not detected
N	Presumptive evidence for the presence of a compound as used for a Tentatively Identified Compound (TIC).	Compound value is semi-quantitative

B. Metals

FOOTNOTE	DEFINITION	INTERPRETATION
E	Estimated or not reported due to interference. See laboratory narrative.	Compound or element was not detected or value is semi-quantitative
a	Analysis by Method of Standard Additions (Look for a "+" footnote).	Value is quantitative
R	Spike recoveries outside QC protocols which indicates a possible matrix problem. Data may be biased high or low See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative
*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value is semi-quantitative
+	Correlation coefficient for standard additions is less than 0.995. See review and laboratory narrative.	Data value is biased
[ ]	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative
UJ	DL is estimated because of a QC protocol. DL is possibly above or below CRDL.	Compound or element was not detected
J	Value is above CRDL and is an estimated value because of a QC Protocol.	Value is semi-quantitative

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

Date Received for Review 6/16 Date Review Completed 6/17

To: Phil Smith

From: Zena Gold-Kaufman ZGK

Subject: Alco Springs

PAN: IL0493 Case # 7261/2938E

Sample Description

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

Project Data Status _____ Completed!!

✓ Incomplete, awaiting: 5 drinking water samples - organic

FIT Data Review Findings:

Lead and Copper were detected in 2 samples

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

Book No. 6 Page No. 100

sampled 5/12

recycled paper

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CHICAGO, ILLINOIS

CHEMICAL EVALUATION FORM

SITE NAME: Alco Springs PAN# IL0493 DATE: 6/16/17

CASE # 7261/2938E UNITS- ug/l REVIEWER: ZGK

TOX/ PERS	COMPOUND	CRDL	3-5xCRDL	MEM 240	MEM 245	MEM 240				
	Lead	2	6-10	8.5	2					
	Copper	8	24-40	93	17	93				

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

RECEIVED JUN 16 1987

DATE: 6-12-87

SUBJECT: Review of Region V CLP Data Received for Review on 6/9/87

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

TO: Data User: FIT

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

SITE NAME: Alco Springs Industries SMO case No. 7261/2938E

EPA Data Set No. SF4015 No. of Samples: 5 D.U./Activity Numbers Y905/C72100

CRL No. 87FS06581 - 87FS06083

SMO Traffic No. mem238 - mem245

CLP Laboratory: Spectrix Hrs. Required for Review: 2

Following are our findings: This review covers 5 drinking water samples analyzed for metals and cyanide.
Sample MEM 244 was reported wrong on Form I for Pb. This was corrected by reviewer.
All QC audits are acceptable.

Ada Levin
6.12.87

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

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

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

7261-05-06

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

SAS #2938E-05-05

Date 5-18-87

RECEIVED JUN 16 1987

COVER PAGE
INORGANIC ANALYSES DATA PACKAGE

Lab Name SPECTRIX Case No. 7261

SOW No. 785 Q.C. Report No. 108

Sample Numbers

EPA No.	Lab ID No.	EPA No.	Lab ID No.
MEM238	8705043-03A,03B		
239	06A,06B		
240	07A,07B		
244	08A,08B		
245	09A,09B		

CDF

CR

Comments: The flag "FZ" denotes analysis performed by Zeeman correction furnace.

ICP interelement and background corrections applied? Yes ✓ No ____.

If yes, corrections applied before ✓ or after ____ generation of raw data.

Footnotes:

NR - Not required by contract at this time

Form I:

Value - If the result is a value greater than or equal to the instrument detecion 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), A (for Flame AA) or F (for Furnace AA).

U - Indicates element was analyzed for but not detected. Report with the instrument detection limit value (e.g., 10U).

E - Indicates a value estimated or not reported due to the presence of interference. Explanatory note included on cover page.

S - Indicates value determined by Method of Standard Addition.

N - Indicates spike sample recovery is not within control limits.

* - Indicates duplicate analysis is not within control limits.

\+ - Indicates the correlation coefficient for method of standard addition is less than 0.995

M - Indicates duplicate injection results exceeded control limits.

Indicate method used: P for ICP; A for Flame AA and F for Furnace.

7261-05-06

SAS #2938E-05-05

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. mEM 238

Date 5-18-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME SPECTRIX

CASE NO. 7261

SOW NO. 785

Lab Receipt Date 5-13-87

LAB SAMPLE ID. NO. 8705043-03A,03B

QC REPORT NO. 108

Elements Identified and Measured

Concentration: Low ✓ Medium ____

Matrix: Water ✓ Soil ____ Sludge ____ Other ____

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

1.	Aluminum	70U		P	13.	Magnesium	62800		P
2.	Antimony	5U	S	FZ	14.	Manganese	10		P
3.	Arsenic	5U	S	FZ	15.	Mercury	0.2U		CV
4.	Barium	91		P	16.	Nickel	17U		P
5.	Beryllium	2U		P	17.	Potassium	4440		P
6.	Cadmium	0.5U	S	F	18.	Selenium	2U	S	FZ
7.	Calcium	119000		P	19.	Silver	5U		P
8.	Chromium	7U		P	20.	Sodium	24900		P
9.	Cobalt	10U		P	21.	Thallium	2U	+	F
10.	Copper	8U		P	22.	Vanadium	9U		P
11.	Iron	887		P	23.	Zinc	[13]		P
12.	Lead	2U	S	F		Precent Solids (%)	—		
	Cyanide	10U		Color					

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 [signature]

000011

IFB Amend. One

7261-05-06

Form I

SAS #2938E-05-05

U.S. EPA Contract Laboratory Program
Sample Management Office
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703/557-2490 FTS: 8-557-2490

EPA Sample No. mEM239

Date 5-18-87

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INORGANIC ANALYSIS DATA SHEET

LAB NAME SPECTRIX

CASE NO. 7261

SOW NO. 785

Lab Receipt Date 5-13-87

LAB SAMPLE ID. NO. 8705043-06A,06B

QC REPORT NO. 108

Elements Identified and Measured

Concentration: Low ✓ Medium ____

Matrix: Water ✓ Soil ____ Sludge ____ Other ____

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

1.	Aluminum	70u		P	13.	Magnesium	98900		P
2.	Antimony	5u	S	FZ	14.	Manganese	74		P
3.	Arsenic	5u	S	FZ	15.	Mercury	0.2u		CV
4.	Barium	[32]		P	16.	Nickel	17u		P
5.	Beryllium	2u		P	17.	Potassium	6770		P
6.	Cadmium	0.5u	S	F	18.	Selenium	2u	S	FZ
7.	Calcium	228000		P	19.	Silver	5u		P
8.	Chromium	7u		P	20.	Sodium	26400		P
9.	Cobalt	10u		P	21.	Thallium	2u	+	F
10.	Copper	8u		P	22.	Vanadium	9u		P
11.	Iron	418		P	23.	Zinc	12u		P
12.	Lead	2u	S	F		Precent Solids (%)	—		
	Cyanide	10u		Color					

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 Ken U Eng

7261-05-06

Form I

SAS #2938E-05-05

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. MEM240

Date 5-18-87

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INORGANIC ANALYSIS DATA SHEET

LAB NAME SPECTRIX

CASE NO. 7261

SOW NO. 785

Lab Receipt Date 5-13-87

LAB SAMPLE ID. NO. 8705043-07A,07B

QC REPORT NO. 108

Elements Identified and Measured

Concentration: Low ✓ Medium ____

Matrix: Water ✓ Soil ____ Sludge ____ Other ____

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

1.	Aluminum	70U		P	13.	Magnesium	105000		P
2.	Antimony	5U	S	FZ	14.	Manganese	185		P
3.	Arsenic	5U	S	FZ	15.	Mercury	0.2U		CV
4.	Barium	73		P	16.	Nickel	17U		P
5.	Beryllium	2U		P	17.	Potassium	5380		P
6.	Cadmium	0.5U	S	F	18.	Selenium	2U	S	FZ
7.	Calcium	270000		P	19.	Silver	5U		P
8.	Chromium	7U		P	20.	Sodium	21800		P
9.	Cobalt	10U		P	21.	Thallium	2U	+	F
10.	Copper	COF ~~8U~~	93	P	22.	Vanadium	9U		P
11.	Iron	2920		P	23.	Zinc	3290		P
12.	Lead	8.5	S	F		Precent Solids (%)	—		
	Cyanide	10U		Color					

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 [signature]

ISM Amend. One

AS #2938E-05-05

7261-05-06

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Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
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703/557-2490 FTS: 8-557-2490

EPA Sample No. mEM 244

Date 5-18-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME SPECTRIX

CASE NO. 7261

SOW NO. 785

Lab Receipt Date 5-13-87

LAB SAMPLE ID. NO. 8705043-05A,05B

QC REPORT NO. 108

Elements Identified and Measured

Concentration: Low ✓ Medium ____

Matrix: Water ✓ Soil ____ Sludge ____ Other ____

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

1.	Aluminum	70U		P	13.	Magnesium	290U		P
2.	Antimony	5U	S	FZ	14.	Manganese	4U		P
3.	Arsenic	5U	S	FZ	15.	Mercury	0.2U		CV
4.	Barium	16U		P	16.	Nickel	17U		P
5.	Beryllium	2U		P	17.	Potassium	350U		P
6.	Cadmium	0.5U	S	F	18.	Selenium	2U	S	FZ
7.	Calcium	240U		P	19.	Silver	5U		P
8.	Chromium	7U		P	20.	Sodium	190U		P
9.	Cobalt	10U		P	21.	Thallium	2U	S	F
10.	Copper	8U		P	22.	Vanadium	9U		P
11.	Iron	65U		P	23.	Zinc	[13]		P
12.	Lead	~~5U~~ 24S		F		Precent Solids (%)	—		
	Cyanide	10U		Color					

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 Ken U. [illegible]

ISM Amend. One

JAS #2938E-05-05

7261-05-06

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
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EPA Sample No. MEM 245

Date 5-18-87

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INORGANIC ANALYSIS DATA SHEET

LAB NAME SPECTRIX

CASE NO. 7261

SOW NO. 785

Lab Receipt Date 5-13-87

LAB SAMPLE ID. NO. 8705043-09A,09B

QC REPORT NO. 108

Elements Identified and Measured

Concentration: Low ✓ Medium ____

Matrix: Water ✓ Soil ____ Sludge ____ Other ____

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

1.	Aluminum	70U		P	13.	Magnesium	106000		P
2.	Antimony	5U	S	FZ	14.	Manganese	191		P
3.	Arsenic	5U	S	FZ	15.	Mercury	0.2U		CV
4.	Barium	77		P	16.	Nickel	17U		P
5.	Beryllium	2U		P	17.	Potassium	5200		P
6.	Cadmium	0.5U	S	F	18.	Selenium	2U	S	FZ
7.	Calcium	278000		P	19.	Silver	5U		P
8.	Chromium	7U		P	20.	Sodium	21600		P
9.	Cobalt	10U		P	21.	Thallium	2U	+	F
10.	Copper	17		P	22.	Vanadium	9U		P
11.	Iron	2900		P	23.	Zinc	3380		P
12.	Lead	2.0	S	F		Precent Solids (%)	—		
	Cyanide	10U		Color					

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 Ken U. [illegible]

IFB Amend. One

SAS #2938E-05-05

Form III

Q. C. Report No. 108 7261-05-05

BLANKS

LAB NAME SPECTRIX CASE NO. 7261

DATE 5-18-87 UNITS ug/L

Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank Matrix: Water 1	Matrix: 2
Metals:							
1. Aluminum	70U	70U	70U	70U	70U	70U	
2. Antimony	4U	4U	4U	4U	—	4U	
3. Arsenic	2U	2U	2U	—	—	NR	
4. Barium	16U	16U	16U	16U	16U	16U	
5. Beryllium	2U	2U	2U	2U	—	2U	
6. Cadmium	0.25U	0.25U	0.25U	—	—	NR	
7. Calcium	240U	240U	240U	240U	240U	240U	
8. Chromium	7U	7U	7U	7U	—	7U	
9. Cobalt	10U	10U	10U	10U	—	10U	
10. Copper	8U	8U	8U	8U	—	8U	
11. Iron	65U	65U	65U	65U	65U	65U	
12. Lead	1U	1U	1U	1U	1U	NR	
13. Magnesium	290U	290U	290U	290U	290U	290U	
14. Manganese	4U	4U	4U	4U	—	4U	
15. Mercury	0.12U	0.12U	—	—	—	0.12U	
16. Nickel	17U	17U	17U	17U	—	17U	
17. Potassium	350U	350U	350U	350U	—	350U	
18. Selenium	2U	2U	2U	—	—	NR	
19. Silver	5U	5U	5U	5U	5U	5U	
20. Sodium	190U	190U	190U	190U	—	190U	
21. Thallium	2U	2U	2U	2U	—	NR	
22. Vanadium	9U	9U	9U	9U	—	9U	
23. Zinc	12U	12U	12U	12U	—	12U	
Other:							
Cyanide	10U	10U	10U	—	—	10U	

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

Form III B

SAS #2938E-05-05

Q. C. Report No. 108

7261-05-05

BLANKS

RECEIVED JUN 16 1987

LAB NAME SPECTRIX

CASE NO. 7261

DATE 6-18-87

UNITS µg/L

Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank Matrix: 1	Matrix: 2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic							
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead		1u	—	—	—		
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium							
21. Thallium							
22. Vanadium							
23. Zinc							
Other:							
Cyanide							

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

IFB Amend. One

Form V

Q. C. Report No. 108

SPIKE SAMPLE RECOVERY

SAS #2938E-05-05

7261-05-05

LAB NAME SPECTRIX

DATE 5-18-87

CASE NO. 7261

EPA Sample No. MEM238

Lab Sample ID No. 8705043-05A,05B

Units µg/L

Matrix Water

Compound	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spiked Added (SA)	%R[1]
Metals:					
1. Aluminum	75-125	1910	70U	2000	95.5
2. Antimony	-	55.5	5U	50	111
3. Arsenic	-	NR	NR	NR	NR
4. Barium	-	2200	91	2000	105
5. Beryllium	-	49	2U	50	98.0
6. Cadmium	-	NR	NR	NR	NR
7. Calcium	-	165000	119000	50000	92.0
8. Chromium	-	188	7U	200	94.0
9. Cobalt	-	463	10U	500	92.6
10. Copper	-	229	8U	250	91.6
11. Iron	-	1830	887	1000	94.3
12. Lead	-	NR	NR	NR	NR
13. Magnesium	- CDF	84600	62800	25000 ~~X~~ CDF	87.2
14. Manganese	-	199	10	200	94.5
15. Mercury	-	0.776	0.2U	1.0	77.6
16. Nickel	-	368	17U	400	92.0
17. Potassium	-	24100	4440	20000	98.3
18. Selenium	-	NR	NR	NR	NR
19. Silver	-	45	5U	50	90.0
20. Sodium	-	71200	24900	50000	92.6
21. Thallium	-	NR	NR	NR	NR
22. Vanadium	-	484	9U	500	96.8
23. Zinc	-	196	13	200	91.5
Other:					
Cyanide	-	108	10U	100	108

[1] %R = [(SSR - SR)/SA] x 100

"N" - out of control

"NR" - Not required

Comments:

000022

SAS #2938E-05-05

Form VI

Q. C. Report No. 108 7261-05-05

DUPLICATES

LAB NAME SPECTRIX

DATE 5-18-87

CASE NO. 7261

EPA Sample No. MEM235

Lab Sample ID No. 8705043-04A,04B

Units µg/L

Matrix Water

Compound	Control Limit[1]	Sample(S)	Duplicate(D)	RPD[2]
Metals:				
1. Aluminum		70u	70u	NC
2. Antimony		5u	5u	NC
3. Arsenic		5u	5u	NC
4. Barium		91	90	1.10
5. Beryllium		2u	2u	NC
6. Cadmium		0.5u	0.5u	NC
7. Calcium		119000	119000	0
8. Chromium		7u	7u	NC
9. Cobalt		10u	10u	NC
10. Copper		8u	8u	NC
11. Iron		887	876	1.25
12. Lead		2u	2u	NC
13. Magnesium		62800	62800	0
14. Manganese		10	10	0
15. Mercury		0.2u	0.2u	NC
16. Nickel		17u	17u	NC
17. Potassium		4440	4520	1.79
18. Selenium		2u *QDF	2u *QDF	NC
19. Silver		5u	5u	NC
20. Sodium		24900	25800	3.55
21. Thallium		2u+	2u+	NC
22. Vanadium		9u	9u	NC
23. Zinc		[13]	12u	NC
Other:				
Cyanide		10u	10u	NC

* Out of Control

[1] To be added at a later date.

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

NC - Non calculable RPD due to value(s) less than CRDL

SAS #2938E-05-05

7261-05-05

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Form VII A

Q.C. Report No. 108

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME SPECTRIX CASE NO. 7261 DATE 5-18-87

LCS NO. WP016-2

Compound	Required Detection Limits (CRDL)-ug/l	Instrument Detection Limits (IDL)-ug/l ICP/AA ID#	Instrument Detection Limits (IDL)-ug/l Furnace ID#	Lab Control Sample (ug/L) mg/kg (circle one) True	Found	%R
Metals:						
1. Aluminum	~~200~~ 100	70		700	647	92.4
2. Antimony	~~60~~ 5		4 Z	101.5	95.6	94.2
3. Arsenic	~~10~~ 10		2 Z	NR	NR	NR
4. Barium	~~200~~ 50	16		462	513	111
5. Beryllium	5	2		661	674	102
6. Cadmium	~~5~~ 0.5		0.25	NR	NR	NR
7. Calcium	~~5000~~ 1000	240		40600	42700	105
8. Chromium	10	7		686	739	108
9. Cobalt	~~50~~ 10	10		210	208	99.0
10. Copper	~~25~~ 10	8		749	736	98.3
11. Iron	100	65		633	697	110
12. Lead	~~5~~ 2			NR	NR	NR
13. Magnesium	~~5000~~ 1000	290		8400	8740	104
14. Manganese	~~15~~ 10	4		150	153	102
15. Mercury	0.2 CV		0.12 CV	50.0	45.2	90.4
16. Nickel	~~40~~ 20	17		911	1010	111
17. Potassium	~~5000~~ 2000	350		9800	9300	94.8
18. Selenium	~~5~~ 2		2 Z	NR	NR	NR
19. Silver	~~10~~ 5	5		46	42	91.3
20. Sodium	~~5000~~ 1000	190		46500	44500	95.7
21. Thallium	~~10~~ 2		2	NR	NR	NR
22. Vanadium	~~50~~ 10	9		650	664	102
23. Zinc	20	12		893	945	106
Other:						
Cyanide	10	NR	NR	500	462	92.4

NR - Not required

Z - denotes analysis & IDL performed by PE 3030 Zeeman

00002

SAS #2938E-05205

7261-05-05

Form VII B

Q.C. Report No. 108

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME SPECTRIX CASE NO. 7261 DATE 5-18-87

LCS NO. WP 016-2

Compound	Required Detection Limits (CRDL)-ug/l	Instrument Detection Limits (IDL)-ug/l ICP/AA ID#	Instrument Detection Limits (IDL)-ug/l Furnace ID#	Lab Control Sample ug/L mg/kg (circle one) True	Found	%R
Metals:						
1. Aluminum	~~200~~ 100	70		700	648	92.6
2. Antimony	~~60~~ 5		4 Z	101.5	102	100
3. Arsenic	~~10~~ 5		2 Z	NR	NR	NR
4. Barium	~~200~~ 50	16		462	526	114
5. Beryllium	5	2		661	690	104
6. Cadmium	~~5~~ 0.5		0.25	NR	NR	NR
7. Calcium	~~5000~~ 1000	240		40600	42200	104
8. Chromium	10	7		686	650	106
9. Cobalt	~~50~~ 10	10		210	228	109
10. Copper	~~25~~ 10	8		749	742	99.1
11. Iron	100	65		633	707	112
12. Lead	~~5~~ 2			NR	NR	NR
13. Magnesium	~~5000~~ 1000	290		8400	8890	106
14. Manganese	~~15~~ 10	4		150	161	107
15. Mercury	0.2 CV		0.12	50.0	40.5	81.0
16. Nickel	~~40~~ 20	17		911	1040	114
17. Potassium	~~5000~~ 2000	350		9800	9730	99.3
18. Selenium	~~5~~ 2		2 Z	NR	NR	NR
19. Silver	~~10~~ 5	5		46	40	87.0
20. Sodium	~~5000~~ 1000	190		46500	45700	98.3
21. Thallium	~~10~~ 2		2	NR	NR	NR
22. Vanadium	~~50~~ 10	9		650	686	106
23. Zinc	20	12		893	971	109
Other:						
Cyanide	10	NR	NR	500	526	105

NR - Not required

(Z) denotes IDL obtained from PE 3030 Zeeman

000025

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

Date Received for Review 6/18 Date Review Completed 6/19

To: Phil Smith

From: Zena Gold-Kaufman

Subject: Alco Springs

PAN: IL0493 Case # 7261 SAS 29388

Sample Description:

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

Project Data Status _____ Completed!!

_____ Incomplete, awaiting: _____

FIT Data Review Findings:

Lab's detection limits are listed.

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

Book No. 6 Page No. 100 sampled 5/12

recycled paper

ecology and environment, inc.
CHICAGO, ILLINOIS

CHEMICAL EVALUATION FORM

SITE NAME: Alco Sprinks PAN# 120493 DATE: 6/19

CASE # 7262 UNITS- µg/l REVIEWER: ZGK

TOX/ PERS	COMPOUND	LAB DL ~~CRDL~~	3-5xCRDL	EL 636	EL 638	EL 642	EL 643			
	Phenol	.2	.6-1.0	1.2	0.6	2.2	0.6			
	4-methyl-2-pentanone	1.5	4.5-7.5			1.6				
	Toluene	0.9	2.7-4.5			0.9				
	Total xylenes	0.6	1.8-3.0			2.0				

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 6/17/87

SUBJECT: Review of Region V CLP Data
Received for Review on 6/8/87

FROM: Curtis Ross, Director (5SCRL) Patricia J. Cunilla
Central Regional Laboratory

TO: Data User: Fit

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

SITE NAME: Alco Spring Industries SMO case No. 726/5A52938E

EPA Data Set No. 5F4015 No. of Samples: 5 D.U./Activity Numbers Y905 / C72100

CRL No. 87F506581 - 87F506083

SMO Traffic No. EL636 - EL643

CLP Laboratory: IOWA Hrs. Required for Review: 7

Following are our findings:

1. HOLDING TIMES ARE ACCEPTABLE
2. BLANKS WERE GOOD WITH ONLY SMALL AMOUNTS OF METHYLENE CHLORIDE AND 2-BUTANONE BEING PRESENT.
3. PESTICIDE SURROGATE RECOVERY FOR EL637MSD AND EL643 WAS LOW. PESTICIDES ARE BIASED LOW FOR THESE SAMPLES.
4. 4,4'-DDT DID NOT MEET LINEARITY REQUIREMENTS. THIS DOES NOT AFFECT THE DATA BECAUSE NO DDT ISOMERS WERE DETECTED.
5. CALIBRATION OUTLIERS ARE GIVEN ON THE FOLLOWING PAGES.

Patricia J. Cunilla
6-17-87

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

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

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

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

CASE# SA529386 CONTRACTOR IOWA

RECEIVED JUN 18 1987

	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	5-18-87			5-19-87/11:01											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane															
Bromomethane															
Vinyl Chloride															
Chloroethane															
Methylene Chloride															
Acetone															
Carbon Disulfide															
1,1-Dichloroethane															
1,1-Dichloroethene															
Trans-1,2-Dichloroethene															
Chloroform															
2-Butanone	.009		R	.009		R									
1,2-Dichloroethane					26	J									
1,1,1-Trichloroethane															
Carbon Tetrachloride															
Vinyl Acetate															
Bromodichloromethane															
1,2-Dichloropropane															
Trans-1,3-Dichloropropene															
Trichloroethene															
Dibromochloromethane															
1,1,2-Trichloroethane															
Benzene															
cis-1,3-Dichloropropene															
2-Chloroethylvinylether		33	J												
Bromoform					34	J									
4-Methyl-2-Pentanone															
2-Hexanone															
Tetrachloroethene															
1,1,2,2-Tetrachloroethane															
Toluene															
Chlorobenzene															
Ethylbenzene															
Styrene															
m-Xylene															
o/p-Xylene															

AFFECTED SAMPLES:

All Samples	All Samples				

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

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

CASE# SAS 2938E CONTRACTOR IOWA

RECEIVED JUN 18 1987

	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	5-15-87			5-16-87/15:30			5-17-87/11:39								
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Phenol															
bis(-2-Chloroethyl)Ether															
2-Chlorophenol															
1,3-Dichlorobenzene															
1,4-Dichlorobenzene															
Benzyl Alcohol															
1,2-Dichlorobenzene															
2-Methylphenol															
bis(2-chloroisopropyl)Ether															
4-Methylphenol															
N-Nitroso-Di-n-Propylamine															
Hexachloroethane															
Nitrobenzene															
Isophorone															
2-Nitrophenol															
2,4-Dimethylphenol															
Benzoic Acid		53.4	J					45.3	J						
bis(2-Chloroethoxy)Methane															
2,4-Dichlorophenol															
1,2,4-Trichlorobenzene															
Naphthalene															
4-Chloroaniline		35.2	J		26.7	J									
Hexachlorobutadiene															
4-Chloro-3-Methylphenol															
2-Methylnaphthalene															
Hexachlorocyclopentadiene															
2,4,6-Trichlorophenol															
2,4,5-Trichlorophenol															
2-Chloronaphthalene															
2-Nitroaniline															
Dimethyl Phthalate															
Acenaphthylene															
3-Nitroaniline	.008		R	.008		R	.014		R						
Acenaphthene															
2,4-Dinitrophenol		57.4	J					28.4	J						
4-Nitrophenol															
Dibenzofuran															

AFFECTED SAMPLES:

EL636 ACID	EL636 ACID	EL637 ACID		
EL638 ACID	EL636 BN	EL637 BN		
EL637 ACID	EL638 ACID	EL642 ACID		
EL642 ACID	EL638 BN	EL642 BN		
EL643 ACID		EL643 ACID		
EL636 BN		EL643 BN		
EL638 BN				
EL637 BN				
EL642 BN				
EL643 BN				

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

RECEIVED JUN 18 1987

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

CASE# SAS 2938E CONTRACTOR IOWA

	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	5-15-87			5-16-87 / 15:30			5-17-87 / 11:39								
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene															
2,6-Dinitrotoluene															
Diethylphthalate															
4-Chlorophenyl-phenylether															
Fluorene															
4-Nitroaniline	.021		R	.022		R	.026		R						
4,6-Dinitro-2-Methylphenol		31.0	J												
N-Nitrosodiphenylamine															
4-Bromophenyl-phenylether					29.0	J									
Hexachlorobenzene															
Pentachlorophenol					27.3	J									
Phenanthrene															
Anthracene															
Di-n-Butylphthalate															
Fluoranthene															
Pyrene															
Butylbenzylphthalate															
Benzo(a)Anthracene															
bis(2-Ethylhexyl)Phthalate															
Chrysene															
Di-n-Octyl Phthalate															
Benzo(b)Fluoranthene															
Benzo(k)Fluoranthene															
Benzo(a)Pyrene															
Indeno(1,2,3-cd)Pyrene								43.3	J						
Dibenz(a,h)Anthracene					28.3	J		43.1	J						
Benzo(g,h,i) Perylene					29.9	J		29.5	J						

SEE PAGE 1 FOR AFFECTED SAMPLES.

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

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

CASE# SAS 2938E CONTRACTOR IOWA

RECEIVED JUL 18 1987

	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	5-18-87			5-19-87/1:17											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Phenol															
bis(-2-Chloroethyl)Ether															
2-Chlorophenol															
1,3-Dichlorobenzene															
1,4-Dichlorobenzene															
Benzyl Alcohol															
1,2-Dichlorobenzene															
2-Methylphenol															
bis(2-chloroisopropyl)Ether															
4-Methylphenol															
N-Nitroso-Di-n-Propylamine															
Hexachloroethane															
Nitrobenzene															
Isophorone															
2-Nitrophenol															
2,4-Dimethylphenol															
Benzoic Acid		32.6	J												
bis(2-Chloroethoxy)Methane															
2,4-Dichlorophenol															
1,2,4-Trichlorobenzene															
Naphthalene															
4-Chloroaniline		117	J	.025		R									
Hexachlorobutadiene															
4-Chloro-3-Methylphenol															
2-Methylnaphthalene															
Hexachlorocyclopentadiene															
2,4,6-Trichlorophenol															
2,4,5-Trichlorophenol															
2-Chloronaphthalene															
2-Nitroaniline															
Dimethyl Phthalate															
Acenaphthylene															
3-Nitroaniline	.004		R	.001		R									
Acenaphthene															
2,4-Dinitrophenol		48.6	J		38.4	J									
4-Nitrophenol															
Dibenzofuran															

AFFECTED SAMPLES:

EL637 MS	EL637 MS				
EL637MSD	EL637MSD				

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

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
Page 2

RECEIVED JUN 18 1987

CASE# SAS 2938E CONTRACTOR IOWA

	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	5-18-87			5-19-87 /11:17											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene															
2,6-Dinitrotoluene															
Diethylphthalate															
4-Chlorophenyl-phenylether															
Fluorene															
4-Nitroaniline	.010		R	.011		R									
4,6-Dinitro-2-Methylphenol															
N-Nitrosodiphenylamine															
4-Bromophenyl-phenylether															
Hexachlorobenzene															
Pentachlorophenol															
Phenanthrene															
Anthracene															
Di-n-Butylphthalate															
Fluoranthene															
Pyrene															
Butylbenzylphthalate															
Benzo(a)Anthracene															
bis(2-Ethylhexyl)Phthalate															
Chrysene															
Di-n-Octyl Phthalate															
Benzo(b)Fluoranthene															
Benzo(k)Fluoranthene															
Benzo(a)Pyrene															
Indeno(1,2,3-cd)Pyrene															
Dibenz(a,h)Anthracene															
Benzo(g,h,i) Perylene															

SEE PAGE 1 FOR AFFECTED SAMPLES.

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

Case Narrative

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MAY 28 1987
U.S. EPA, CLINT...
536 S. CLARK STREET
CHICAGO, ILLINOIS 60605

Region V
Sample EL636, EL637, EL638, EL642, EL643
Case Narrative: CLP-SAS Case #7261/2938-E

Volatiles:

1) Measures to increase sensitivity of volatiles analysis included increasing the electron multiplier voltage and increasing the sample size to 20 ml. Three analyses of the 5 ug/L standard were used to calculate method detection limits by the 3 X Std. Dev. method. Because the third 5 ug/L standard analyzed on 5/18/87 had abnormally low response for the internal standards, a 5 ug/L standard from 5/19/87 was used for the third MDL standard. MDL data are on pp. 304, 309-344 of this case.

2) Although the calculated MDLs for several compounds were above the contract required limits, analysis of a 1.5 ug/L standard demonstrated that the instrument was sufficiently sensitive to produce recognizable spectra for all compounds requiring detection limits less than 3 ug/L. The RIC for this analysis is on pp. 307-308 of this case.

3) RFs for 2-butanone and bromoform were less than 0.05 for all standards. This is probably because of poorer purging efficiency from the larger sample volume. Also, it is not unusual for the 2-butanone RF to be < 0.05.

4) Data for the additional compounds, acrolein and acrylonitrile, are added to the bottom of the appropriate forms.

Semivolatiles:

1) Improvements in sensitivity for the semivolatile analysis were accomplished by increasing the electron multiplier voltage, reducing extract volume to 0.5 ml before analysis, and analyzing the Acid and Base/Neutral fractions separately. The latter two measures resulted in a factor of 4 reduction from the MDLs calculated by the 3 X SD method from 3-20 ng standard analyses and listed on p. 305. Detection limits reported on the Form I's for the samples are adjusted accordingly. The data for the MDL calculations are on pp. 345-354 of this case.

2) The RIC from the analysis of a 10 ng standard (5/19/87) is included on pp. 355-356 to demonstrate the instrument sensitivity at that level. A problem with both the RF and MDL was noted for n-nitroaniline and 4-nitroaniline standards. The standards were newly prepared from Chem Service stock solutions, and the inlet liner and column were new prior to these analyses. Thus, a problem with the stock standard was indicated. New standards have been ordered but were not available for this case.

3) A TIC, 5-methyl-2-hexanone, was found in both A and B/N fractions in some samples, and scan #s for both fractions are listed on Form IB. the estimated concentrations are reported as the sum of both fractions, for surrogate standard and matrix spike recoveries, only the recovery from the appropriate fractions are reported although some carryover of the B/N compounds into the acid fractions was noted.

4) Data for the additional compounds, aniline and 1,2-diphenylhydrazine, are listed at the bottom of the appropriate forms.

5) As stated in #1 the acid and base/neutral fraction of the above referenced samples were run separately and are listed on the appropriate form V's in chronological order. The sample data can be found, however, with the appropriate sample in the order that follows. For the acid fraction - RIC, quantitation report, spectra and TIC closest hits spectra, where applicable, then for the base/neutral fraction - RIC, quantitation report, spectra and TIC closest hits spectra, where applicable.

Pesticide:

1) The linearity for DDT on the Mixed Packed column was outside of contract limits. Since no DDT was seen to quantitate in the samples, no further action was taken.

2) Endosulfan sulfate response factor repeatability (Form 9) for the capillary confirmation column was outside limits. Since this occurred on the last standard and no samples would have had to be rerun, no action was taken.

3) The long delay between the end of the initial calibration and the start of sample analysis on the primary run was caused by a computer malfunction due to an electrical storm. Samples were reloaded and the run resumed in the morning.

4) The lower detection limits called for in the SAS contract were easily reached or exceeded merely by concentrating the extract to 2mL. As often happens, many small interfering peaks show up at this level of concentration. Many hits are seen on the reports but close examination will show that no analytes scored hits on both columns within the Retention Time Windows. The windows in the computer matching algorithm are larger than the true RTW to prevent false negatives.

5) The data for the MDL calculations are on pp. 306, 357-360z.

George M. Breuer

George M. Breuer, Ph.D.

7261

4000

WATER SURROGATE PERCENT RECOVERY SUMMARY

Case No. 7261 Contract Laboratory Univ. Hygienic Lab Contract No. 68-01-7101

	VOLATILE			SEMI-VOLATILE								PESTICIDE
SMO TRAFFIC NO.	TOLUENE-D8 (88-110)	BFB (86-115)	1,2 DICHLORO-ETHANE-D4 (76-114)	NITRO-BENZENE-D5 (35-114)	2-FLUORO-BIPHENYL (43-116)	TERPHENYL-D14 (33-141)			PHENOL-D6 (10-94)	2-FLUORO-PHENOL (21-100)	2,4,6 TRIBROMO PHENOL (10-123)	** DIBUTYL-CHLORENDATE (24-154)
Method Blank	98	101	96									
EL636	96	103	102									
EL637	101	101	96									
EL638	99	99	97									
EL642	97	101	97									
EL643	101	101	96									
EL637MS	101	105	95									
EL637MSD	107	96	98									

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

** ADVISORY LIMITS ONLY

Volatiles: 0 out of 24 ; outside of QC limits

Semi-Volatiles: ____ out of ____ ; outside of QC limits

Pesticides: ____ out of ____ ; outside of QC limits

Comments:

RECEIVED JUN 1 8 1987

7261

FORM II

7/85

7261

5

WATER SURROGATE PERCENT RECOVERY SUMMARY

Case No. 7261 Contract Laboratory Univ. Hygienic Lab Contract No. 68-01-7101

SMO Traffic No.	VOLATILE: Toluene-D8 (88-110)	VOLATILE: BFB (86-115)	VOLATILE: 1,2 Dichloro-Ethane-D4 (76-114)	SEMI-VOLATILE: Nitro-Benzene-D5 (35-114)	SEMI-VOLATILE: 2-Fluoro-Biphenyl (43-116)	SEMI-VOLATILE: Terphenyl-D14 (33-141)	SEMI-VOLATILE:	SEMI-VOLATILE:	SEMI-VOLATILE: Phenol-D5 (10-94)	SEMI-VOLATILE: 2-Fluoro-Phenol (21-100)	SEMI-VOLATILE: 2,4,6 Tribromo Phenol (10-123)	PESTICIDE: ** Dibutyl Chlorendate (24-154)
EL638				67	66	73			29	31	62	
Method Blank				54	51	56			27	39	60	
EL636				64	62	65			39	41	91	
EL637				51	46	42			32	33	62	
EL642				60	54	56			37	38	59	
EL643				61	56	51			26	28	69	
EL637MS				56	51	41			28	29	44	
EL637MSD				54	53	38			33	33	46	

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

**ADVISORY LIMITS ONLY

Volatiles: _____ out of _____ ; outside of QC limits

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

Pesticides: _____ out of _____ ; outside of QC limits

Comments:

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FORM II

7/85

7261

6

WATER SURROGATE PERCENT RECOVERY SUMMARY

Case No. 7261 Contract Laboratory UHL Contract No. 68-01-7101

7261

	VOLATILE			SEMI-VOLATILE								PESTICIDE**
	Toluene-D8 (88-110)	BFB (86-115)	1,2 Dichloro-ethane-D4 (76-114)	Nitro-benzene-D5 (35-114)	2-Fluoro-biphenyl (43-116)	Terphenyl-D14 (33-141)			Phenol-D5 (10-94)	2-Fluoro-phenol (21-100)	2,4,6 Tribromo-phenol (10-123)	Dibutyl chlorendate (24-154)
PWB0514												82
EL637												72
EL637MS												87
EL637MSD												8*
EL636												91
EL638												84
EL642												89
EL643												13*

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

** ADVISORY LIMITS ONLY

Volatiles: _____ out of _____ ; outside of QC limits
Semi-Volatiles: _____ out of _____ ; outside of QC limits
Pesticides: 2 out of 8 ; outside of QC limits

Comments: Values quantitated on DB-5 capillary column

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7/85

FORM II

7

WATER MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. 7261 Contractor Univ. Hygienic Lab Contract No. 68-01-7101

FRACTION	COMPOUND	CONC. SPIKE ADDED (ug/L)	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS* RPD	QC LIMITS* RECOVERY
VOA SMO SAMPLE NO. E2637	1,1-Dichloroethene	13.8	0	10.3	74*	11.3	81	9	14	~~61-145~~ 80-120
	Trichloroethene	14.5	0	12.8	89	12.5	86	3	14	~~71-120~~
	Chlorobenzene	11.0	0	11.1	101	10.4	95	6	13	~~75-130~~
	Toluene	10.7	0	10.2	95	10.1	94	1	13	~~76-125~~
	Benzene	10.8	0	10.1	94	9.49	88	7	11	~~76-127~~
B/N SMO SAMPLE NO.	1,2,4-Trichlorobenzene								28	39-98
	Acenaphthene								31	46-118
	2,4 Dinitrotoluene								38	24-96
	Pyrene								31	26-127
	N-Nitroso-Di-n-Propylamine								38	41-116
	1,4-Dichlorobenzene								28	36-97
ACID SMO SAMPLE NO.	Pentachlorophenol								50	9-103
	Phenol								42	12-89
	2-Chlorophenol								40	27-123
	4-Chloro-3-Methylphenol								42	23-97
	4-Nitrophenol								50	10-80
PEST SMO SAMPLE NO.	Lindane								15	56-123
	Heptachlor								20	40-131
	Aldrin								22	40-120
	Dieldrin								18	52-126
	Endrin								21	56-121
	4,4'-DDT								27	38-127

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

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

RECOVERY: VOAs 1 out of 10 : outside QC limits
B/N ____ out of ____ : outside QC limits
ACID ____ out of ____ : outside QC limits
PEST ____ out of ____ : outside QC limits

Comments:

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FORM III

7261

WATER MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. 7261 Contractor Univ. Hygienic Lab Contract No. 68-01-7101

MS/MSD

FRACTION	COMPOUND	CONC. SPIKE ADDED (ug/L)	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS* RPD	QC LIMITS* RECOVERY
VOA SMO SAMPLE NO.	1,1-Dichloroethene								14	61-145
	Trichloroethene								14	71-120
	Chlorobenzene								13	75-130
	Toluene								13	76-125
____	Benzene								11	76-127
B/N SMO SAMPLE NO. EL637	1,2,4-Trichlorobenzene	20.73/20.83	0	10.5	51	11.9	57	11	28	39-98
	Acenaphthene	20.73/20.83	0	10.3	50	10.6	51	2	31	46-118
	2,4 Dinitrotoluene	20.73/20.83	0	7.89	38	7.24	35	9	38	24-96
	Pyrene	20.73/20.83	0	9.86	48	11.0	53	10	31	26-127
	N-Nitroso-Di-n-Propylamine	20.73/20.83	0	10.1	49	10.3	49	0	38	41-116
	1,4-Dichlorobenzene	20.73/20.83	0	8.77	42	9.66	46	9	28	36-97
ACID SMO SAMPLE NO. EL637	Pentachlorophenol	41.46/41.66	0	37.0	89	36.9	89	0	50	9-103
	Phenol	41.46/41.66	0	12.2	29	10.8	26	11	42	12-89
	2-Chlorophenol	41.46/41.66	0	19.5	47	20.9	50	6	40	27-123
	4-Chloro-3-Methylphenol	41.46/41.66	0	17.7	43	19.3	46	7	42	23-97
	4-Nitrophenol	41.46/41.66	0	7.98	19	9.48	23	19	50	10-80
PEST SMO SAMPLE NO.	Lindane								15	56-123
	Heptachlor								20	40-131
	Aldrin								22	40-120
	Dieldrin								18	52-126
	Endrin								21	56-121
____	4,4'-DDT								27	38-127

* ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

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

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

Comments: Two concentrations are listed for the conc. spike added because different volumes of sample were used for the MS and MSD.

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FORM III

7261

WATER MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. 7261 Contractor UHL Contract No. 68-01-7101

FRACTION	COMPOUND	CONC. SPIKE ADDED (ug/L)	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS* RPD	QC LIMITS* RECOVERY
VOA SMO SAMPLE NO.	1,1-Dichloroethene								14	61-145
	Trichloroethene								14	71-120
	Chlorobenzene								13	75-130
	Toluene								13	76-125
	Benzene								11	76-127
B/N SMO SAMPLE NO.	1,2,4-Trichlorobenzene								28	39-98
	Acenaphthene								31	46-118
	2,4 Dinitrotoluene								38	24-96
	Pyrene								31	26-127
	N-Nitroso-Di-n-Propylamine								38	41-116
	1,4-Dichlorobenzene								28	36-97
ACID SMO SAMPLE NO.	Pentachlorophenol								50	9-103
	Phenol								42	12-89
	2-Chlorophenol								40	27-123
	4-Chloro-3-Methylphenol								42	23-97
	4-Nitrophenol								50	10-80
PEST SMO SAMPLE NO.	Lindane	0.04	0	0.033	82	0.028	69	17*	15	56-123
	Heptachlor	0.04	0	0.027	67	0.026	64	4	20	40-131
	Aldrin	0.04	0	0.044	109	0.026	64	52*	22	40-120
	Dieldrin	0.10	0	0.078	77	0.012	12*	146*	18	52-126
	Endrin	0.10	0	0.107	106	0.089	88	19	21	56-121
EL637	4,4'-DDT	0.10	0	0.128	127	0.099	98	26	27	38-127

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

RPD: VOAs ____ out of ____ : outside QC limits
B/N ____ out of ____ : outside QC limits
ACID ____ out of ____ : outside QC limits
PEST 3 out of 6 : outside QC limits

RECOVERY: VOAs ____ out of ____ : outside QC limits
B/N ____ out of ____ : outside QC limits
ACID ____ out of ____ : outside QC limits
PEST 1 out of 12 : outside QC limits

Comments:

7/85

FORM III

METHOD BLANK SUMMARY

4000

Case No. 7261 Region V Contractor Univ. Hygienic Lab Contract No. 68-01-7101

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	CONC. LEVEL	INST. ID	CAS NUMBER	COMPOUND (INCL. TIC OR UNKNOWN)	CONC.	UNITS	CRDL
OFW19	5/19/87	VOA	Water	L	4000	75-09-2	Methylene Chloride	0.4	ug/L	1.
↓	↓	↓	↓	↓	↓	67-64-1	Acrylonitrile	2.6		50.
↓	↓	↓	↓	↓	↓	78-93-3	2-Butanone	2.6		10.

Comments:

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METHOD BLANK SUMMARY

1000

Case No. 7261 Region V Contractor Univ. Hygienic Lab Contract No. 68-01-7101

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	CONC. LEVEL	INST. ID	CAS NUMBER	COMPOUND (NBS, TIC OR UNKNOWN)	CONC.	UNITS	CRDL
>55A04	5/14/87	BNA	Water	L	1000	110123	5-methyl-2-hexanone	3	ug/L	

Comments:

FORM IV

7/85

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7261

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7261

METHOD BLANK SUMMARY

Case No. 7261 Region V Contractor UHL Contract No. 68-01-7101

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	CONC. LEVEL	INST. ID	CAS NUMBER	COMPOUND (NBS, TIC OR UNKNOWN)	CONC.	UNITS	CRDL
PWB0514	5/18/87	pest	water	low	HP5890					

Comments: No pesticides/PCB detected and confirmed at or above detection limit

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FORM IV 7/85

Sample Number
EL636

4000

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Univ Hygienic Lab
Case No: 7261
Lab Sample ID No: 8704200
QC Report No:
Sample Matrix: WATER
Contract No: 68-01-7101
Data Release Authorized By: George Beaver
Date Sample Received: 5/13/87

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 5/19/87

Date Analyzed: 5/19/87

Conc/Dil Factor: 1 pH -

Percent Moisture: (Not Decanted) -

CAS Number		ug/l or ug/Kg (Circle One)		CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	1.4U		78-87-5	1, 2-Dichloropropane	1.2U
74-83-9	Bromomethane	0.6U		10061-02-6	Trans-1 3-Dichloropropene	0.6U
75-01-4	Vinyl Chloride	1.4U		79-01-6	Trichloroethene	0.5U
75-00-3	Chloroethane	1.7U		124-48-1	Dibromochloromethane	3.5U
75-09-2	Methylene Chloride	2.3 ~~FB~~ 4J		79-00-5	1 1, 2-Trichloroethane	4.8U
67-64-1	Acetone	2.7U		71-43-2	Benzene	1.4U
75-15-0	Carbon Disulfide	1.2U		10061-01-5	cis-1, 3-Dichloropropene	0.4U
75-35-4	1, 1-Dichloroethene	1.9U		110-75-8	2-Chloroethylvinylether	1.0U
75-34-3	1, 1-Dichloroethane	1.7U		75-25-2	Bromoform	5.6U
156-60-5	Trans-1, 2-Dichloroethene	1.0U		591-78-6	4-Methyl-2-Pentanone	1.5U
67-66-3	Chloroform	1.5U		108-10-1	2-Hexanone	1.4U
107-06-2	1, 2-Dichloroethane	2.2U		127-18-4	Tetrachloroethene	0.6U
78-93-3	2-Butanone	2.4 ~~B~~ 4J		79-34-5	1, 1, 2 2-Tetrachloroethane	1.0U
71-55-6	1, 1, 1-Trichloroethane	1.1U		108-88-3	Toluene	0.9U
56-23-5	Carbon Tetrachloride	0.3U		108-90-7	Chlorobenzene	0.4U
108-05-4	Vinyl Acetate	1.3U		100-41-4	Ethylbenzene	0.8U
75-27-4	Bromodichloromethane	1.1U		100-42-5	Styrene	0.1U
107-02-8	Acrolein	75U			Total Xylenes	0.6U
67-64-1	Acrylonitrile	81U				

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 definitions attached to the data summary report.

7261

Form I

7/85

Laboratory Name University Hygienic Lab

Case No 7261

Sample Number EL636

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Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 5/14/87

Date Analyzed 5/16/87

Conc/Dil Factor: 1

Percent Moisture (Decanted) -

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	~~0.2U~~ 1.2
111-44-4	bis(-2-Chloroethyl)Ether	0.3U
95-57-8	2-Chlorophenol	0.1U
541-73-1	1, 3-Dichlorobenzene	0.1U
106-46-7	1, 4-Dichlorobenzene	0.1U
100-51-6	Benzyl Alcohol	0.3U
95-50-1	1, 2-Dichlorobenzene	0.1U
95-48-7	2-Methylphenol	0.1U
39638-32-9	bis(2-chloroisopropyl)Ether	0.3U
106-44-5	4-Methylphenol	0.2U
621-64-7	N-Nitroso-Di-n-Propylamine	0.3U
67-72-1	Hexachloroethane	0.2U
98-95-3	Nitrobenzene	0.2U
78-59-1	Isophorone	0.1U
88-75-5	2-Nitrophenol	0.5U
105-67-9	2, 4-Dimethylphenol	0.1U
65-85-0	Benzoic Acid	2.1U
111-91-1	bis(-2-Chloroethoxy)Methane	0.2U
120-83-2	2, 4-Dichlorophenol	0.2U
120-82-1	1, 2, 4-Trichlorobenzene	0.1U
91-20-3	Naphthalene	0.1U
106-47-8	4-Chloroaniline	0.8U
87-68-3	Hexachlorobutadiene	0.2U
59-50-7	4-Chloro-3-Methylphenol	0.3U
91-57-6	2-Methylnaphthalene	0.2U
77-47-4	Hexachlorocyclopentadiene	0.8U
88-06-2	2, 4, 6-Trichlorophenol	0.4U
95-95-4	2, 4, 5-Trichlorophenol	0.4U
91-58-7	2-Chloronaphthalene	0.2U
88-74-4	2-Nitroaniline	0.5U
131-11-3	Dimethyl Phthalate	0.1U
208-96-8	Acenaphthylene	0.1U
99-09-2	3-Nitroaniline	20.U
62-53-3	Aniline	0.4U
122-66-7	1,2-Diphenylhydrazine	0.3U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	0.1U
51-28-5	2, 4-Dinitrophenol	2.0U
100-02-7	4-Nitrophenol	1.7U
132-64-9	Dibenzofuran	0.2U
121-14-2	2, 4-Dinitrotoluene	0.6U
606-20-2	2, 6-Dinitrotoluene	0.4U
84-66-2	Diethylphthalate	0.2U
7005-72-3	4-Chlorophenyl-phenylether	0.2U
86-73-7	Fluorene	0.2U
100-01-6	4-Nitroaniline	4.4U
534-52-1	4, 6-Dinitro-2-Methylphenol	1.5U
86-30-6	N-Nitrosodiphenylamine (1)	0.3U
101-55-3	4-Bromophenyl-phenylether	0.2U
118-74-1	Hexachlorobenzene	0.6U
87-86-5	Pentachlorophenol	2.6U
85-01-8	Phenanthrene	0.1U
120-12-7	Anthracene	0.3U
84-74-2	Di-n-Butylphthalate	0.3U
206-44-0	Fluoranthene	1.5U
129-00-0	Pyrene	1.7U
85-68-7	Butylbenzylphthalate	0.2U
91-94-1	3, 3'-Dichlorobenzidine	0.9U
56-55-3	Benzo(a)Anthracene	0.2U
117-81-7	bis(2-Ethylhexyl)Phthalate	~~0.4~~ 0.5
218-01-9	Chrysene	0.2U
117-84-0	Di-n-Octyl Phthalate	1.8U
205-99-2	Benzo(b)Fluoranthene	0.5U
207-08-9	Benzo(k)Fluoranthene	0.8U
50-32-8	Benzo(a)Pyrene	0.2U
193-39-5	Indeno(1, 2, 3-cd)Pyrene	1.3U
53-70-3	Dibenz(a, h)Anthracene	0.7U
191-24-2	Benzo(g, h, i)Perylene	0.7U

(1) Cannot be separated from diphenylamine

Form I

7/85

Laboratory Name University Hygienic Lab

Case No 7261

Sample Number EH 636

8704000

JUN 12 1987

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 5/14/87

Date Analyzed: 5/19/87

Conc/Dil Factor: 1/5

Percent Moisture (decanted) —

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.006 U
319-85-7	Beta-BHC	0.004 U
319-86-8	Delta-BHC	0.004 U
58-89-9	Gamma-BHC (Lindane)	0.003 U
76-44-8	Heptachlor	0.003 U
309-00-2	Aldrin	0.003 U
1024-57-3	Heptachlor Epoxide	0.002 U
959-98-8	Endosulfan I	0.005 U
60-57-1	Dieldrin	0.006 U
72-55-9	4,4'-DDE	0.002 U
72-20-8	Endrin	0.005 U
33213-65-9	Endosulfan II	0.006 U
72-54-8	4,4'-DDD	0.013 U
1031-07-8	Endosulfan Sulfate	0.031 U
50-29-3	4,4'-DDT	0.006 U
72-43-5	Methoxychlor	0.013 U
53494-70-5	Endrin Ketone	0.030 U
57-74-9	Chlordane	0.013 U
8001-35-2	Toxaphene	0.23 U
12674-11-2	Aroclor-1016	0.071 U
11104-28-2	Aroclor-1221	0.19 U
11141-16-5	Aroclor-1232	0.17 U
53469-21-9	Aroclor-1242	0.092 U
12672-29-6	Aroclor-1248	0.073 U
11097-69-1	Aroclor-1254	0.092 U
11096-82-5	Aroclor-1260	0.097 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s 930 or W_s _____ V_t 2000 V_i 2

U.- COMPOUND ANALYZED FOR BUT NOT DETECTED. NUMBER IS THE MINIMUM ATTAINABLE DETECTION LIMIT FOR THE SAMPLE.

Form 1 7/85

7261

Laboratory Name Univ. of Iowa Hygienic Lab

Case No 7261

Sample Number EL639

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Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. 149735	trimethoxymethane	VOA	355	1.9
2.	unknown	↓	723	3.3
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
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22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

7261

Laboratory Name UNIVERSITY HYGIENIC LABORATORY

Case No 7261

Sample Number EL636

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Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number Acid BN	Estimated Concentration (ug/l or ug/kg)
1. 110123	5-methyl-2-hexanone	BNA	198/197	5
2. 78400	phosphoric acid, triethyl ester	B/N	825	1
3.				
4.				
5.				
6.				
7.				
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13.				
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25.				
26.				
27.				
28.				
29.				
30.				

7261

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Sample Number
EL637

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Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Univ Hygienic Lab
Case No: 7261
Lab Sample ID No: 8704201
QC Report No:
Sample Matrix: WATER
Contract No: 68-01-7101
Data Release Authorized By: George Brewer
Date Sample Received: 5/13/87

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 5/19/87

Date Analyzed: 5/19/87

Conc/Dil Factor: 1 pH -

Percent Moisture: (Not Decanted) -

CAS Number		ug/L or ug/Kg (Circle One)	
74-87-3	Chloromethane	1.4U	
74-83-9	Bromomethane	0.6U	
75-01-4	Vinyl Chloride	1.4U	
75-00-3	Chloroethane	1.7U	
75-09-2	Methylene Chloride	1.5 ~~FB~~	UJ
67-64-1	Acetone	2.7U	
75-15-0	Carbon Disulfide	1.2U	
75-35-4	1, 1-Dichloroethene	1.4U	
75-34-3	1, 1-Dichloroethane	1.7U	
156-60-5	Trans-1, 2-Dichloroethene	1.0U	
67-66-3	Chloroform	1.5U	
107-06-2	1, 2-Dichloroethane	2.2U	
78-93-3	2-Butanone	2.4	UJ
71-55-6	1, 1, 1-Trichloroethane	1.1U	
56-23-5	Carbon Tetrachloride	0.3U	
108-05-4	Vinyl Acetate	1.3U	
75-27-4	Bromodichloromethane	1.1U	
107-02-8	Acrolein	75U	
67-64-1	Acrylonitrile	81U	

CAS Number		ug/L or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	1.2U
10061-02-6	Trans-1, 3-Dichloropropene	0.6U
79-01-6	Trichloroethene	0.5U
124-48-1	Dibromochloromethane	3.5U
79-00-5	1, 1, 2-Trichloroethane	4.8U
71-43-2	Benzene	1.4U
10061-01-5	cis-1, 3-Dichloropropene	0.4U
110-75-8	2-Chloroethylvinylether	1.0U
75-25-2	Bromoform	5.6U
591-78-6	4-Methyl-2-Pentanone	1.5U
108-10-1	2-Hexanone	1.4U
127-18-4	Tetrachloroethene	0.6U
79-34-5	1, 1, 2, 2-Tetrachloroethane	1.0U
108-88-3	Toluene	0.9U
108-90-7	Chlorobenzene	0.4U
100-41-4	Ethylbenzene	0.8U
100-42-5	Styrene	0.1U
	Total Xylenes	0.6U

Data Reporting Qualifiers

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

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

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

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

Form I

7/85

7261

Laboratory Name University Hygienic Lab

Case No 7261

Sample Number EL637

RECEIVED JUN 18 1987

1000

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared 5/14/87

Date Analyzed 5/17/87

Conc/Dil Factor: 1

Percent Moisture (Decanted) -

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		(ug/l or ug/Kg) (Circle One)
108-95-2	Phenol	0.2 U
111-44-4	bis(-2-Chloroethyl)Ether	0.3 U
95-57-8	2-Chlorophenol	0.1 U
541-73-1	1 3-Dichlorobenzene	0.1 U
106-46-7	1. 4-Dichlorobenzene	0.1 U
100-51-6	Benzyl Alcohol	0.3 U
95-50-1	1. 2-Dichlorobenzene	0.1 U
95-48-7	2-Methylphenol	0.1 U
39638-32-9	bis(2-chloroisopropyl)Ether	0.3 U
106-44-5	4-Methylphenol	0.2 U
621-64-7	N-Nitroso-Di-n-Propylamine	0.3 U
67-72-1	Hexachloroethane	0.2 U
98-95-3	Nitrobenzene	0.2 U
78-59-1	Isophorone	0.1 U
88-75-5	2-Nitrophenol	0.5 U
105-67-9	2. 4-Dimethylphenol	0.1 U
65-85-0	Benzoic Acid	2.1 U
111-91-1	bis(-2-Chloroethoxy)Methane	0.2 U
120-83-2	2. 4-Dichlorophenol	0.2 U
120-82-1	1. 2. 4-Trichlorobenzene	0.1 U
91-20-3	Naphthalene	0.1 U
106-47-8	4-Chloroaniline	0.8 U
87-68-3	Hexachlorobutadiene	0.2 U
59-50-7	4-Chloro-3-Methylphenol	0.3 U
91-57-6	2-Methylnaphthalene	0.2 U
77-47-4	Hexachlorocyclopentadiene	0.8 U
88-06-2	2. 4. 6-Trichlorophenol	0.4 U
95-95-4	2. 4. 5-Trichlorophenol	0.4 U
91-58-7	2-Chloronaphthalene	0.2 U
88-74-4	2-Nitroaniline	0.5 U
131-11-3	Dimethyl Phthalate	0.1 U
208-96-8	Acenaphthylene	0.1 U
99-09-2	3-Nitroaniline	20. U
62-53-3	Aniline	0.4 U
122-66-7	1, 2-Diphenylhydrazine	0.3 U

CAS Number		(ug/l or ug/Kg) (Circle One)
83-32-9	Acenaphthene	0.1 U
51-28-5	2. 4-Dinitrophenol	2.0 U
100-02-7	4-Nitrophenol	1.7 U
132-64-9	Dibenzofuran	0.2 U
121-14-2	2 4-Dinitrotoluene	0.6 U
606-20-2	2. 6-Dinitrotoluene	0.4 U
84-66-2	Diethylphthalate	0.2 U
7005-72-3	4-Chlorophenyl-phenylether	0.2 U
86-73-7	Fluorene	0.2 U
100-01-6	4-Nitroaniline	4.4 U
534-52-1	4. 6-Dinitro-2-Methylphenol	1.5 U
86-30-6	N-Nitrosodiphenylamine (1)	0.3 U
101-55-3	4-Bromophenyl-phenylether	0.2 U
118-74-1	Hexachlorobenzene	0.6 U
87-86-5	Pentachlorophenol	2.6 U
85-01-8	Phenanthrene	0.1 U
120-12-7	Anthracene	0.3 U
84-74-2	Di-n-Butylphthalate	0.3 U
206-44-0	Fluoranthene	1.5 U
129-00-0	Pyrene	1.7 U
85-68-7	Butylbenzylphthalate	0.2 U
91-94-1	3. 3'-Dichlorobenzidine	0.9 U
56-55-3	Benzo(a)Anthracene	0.2 U
117-81-7	bis(2-Ethylhexyl)Phthalate	0.4 U
218-01-9	Chrysene	0.2 U
117-84-0	Di-n-Octyl Phthalate	1.8 U
205-99-2	Benzo(b)Fluoranthene	0.5 U
207-08-9	Benzo(k)Fluoranthene	0.8 U
50-32-8	Benzo(a)Pyrene	0.2 U
193-39-5	Indeno(1. 2. 3-cd)Pyrene	1.3 U
53-70-3	Dibenz(a. h)Anthracene	0.3 U
191-24-2	Benzo(g. h. i)Perylene	0.7 U

(1)-Cannot be separated from diphenylamine

Form I 7/85

7261

Laboratory Name University Hygienic Lab

Case No 7261

Sample Number
EL637
870420

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 5/14/87

Date Analyzed: 5/19/87

Conc/Dil Factor: 1/5

Percent Moisture (decanted) _____

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/L or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.006 U
319-85-7	Beta-BHC	0.004 U
319-86-8	Delta-BHC	0.004 U
58-89-9	Gamma-BHC (Lindane)	0.003 U
76-44-8	Heptachlor	0.002 U
309-00-2	Aldrin	0.002 U
1024-57-3	Heptachlor Epoxide	0.012 U
959-98-8	Endosulfan I	0.005 U
60-57-1	Dieldrin	0.005 U
72-55-9	4,4'-DDE	0.002 U
72-20-8	Endrin	0.005 U
33213-65-9	Endosulfan II	0.006 U
72-54-8	4,4'-DDD	0.012 U
1031-07-8	Endosulfan Sulfate	0.029 U
50-29-3	4,4'-DDT	0.005 U
72-43-5	Methoxychlor	0.012 U
53494-70-5	Endrin Ketone	0.030 U
57-74-9	Chlordane	0.012 U
8001-35-2	Toxaphene	0.21 U
12674-11-2	Aroclor-1016	0.066 U
11104-28-2	Aroclor-1221	0.17 U
11141-16-5	Aroclor-1232	0.16 U
53469-21-9	Aroclor-1242	0.086 U
12672-29-6	Aroclor-1248	0.068 U
11097-69-1	Aroclor-1254	0.085 U
11096-82-5	Aroclor-1260	0.090 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s 1000 or W_s _____ V_t 2000 V_i 2

U.- COMPOUND ANALYZED FOR BUT NOT DETECTED. NUMBER IS THE MINIMUM ATTAINABLE DETECTION LIMIT FOR THE SAMPLE.

Form 1

7261

Laboratory Name UNIV. OF IOWA HYGIENIC LAB

Case No 7261

RECEIVED JUN 18 1987

Sample Number EL637

4000

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or ~~Scan~~ Number	Estimated Concentration (~~ug/l~~ or ug/kg)
1.	unknown	VOA	723	2.2
2.				
3.				
4.				
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1000

Laboratory Name UNIVERSITY HYGIENIC LABORATORY

Case No 7261

Sample Number EL637

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number Acid BN	Estimated Concentration (ug/l or ug/kg)
1. 110123	5-methyl-2-hexanone	BNA	199/199	4
2.	unknown - possibly $C_7H_{10}O_2$	↓	342	1
3.	unknown	↓	267	1
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7261

Sample Number
EL638

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Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Univ Hygienic Lab
Case No: 7261
Lab Sample ID No: 8704202
QC Report No: -
Sample Matrix: WATER
Contract No: 68-01-7101
Data Release Authorized By: George Brown
Date Sample Received: 5/13/87

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 5/19/87

Date Analyzed: 5/19/87

Conc/Dil Factor: 1 pH -

Percent Moisture: (Not Decanted) -

CAS Number		ug/l or ug/Kg (Circle One)		CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	1.4U		78-87-5	1, 2-Dichloropropane	1.2U
74-83-9	Bromomethane	0.6U		10061-02-6	Trans-1 3-Dichloropropene	0.6U
75-01-4	Vinyl Chloride	1.4U		79-01-6	Trichloroethene	0.5U
75-00-3	Chloroethane	1.7U		124-48-1	Dibromochloromethane	3.5U
75-09-2	Methylene Chloride	1.2~~3~~4 UJ		79-00-5	1 1, 2-Trichloroethane	4.8U
67-64-1	Acetone	2.7U		71-43-2	Benzene	1.4U
75-15-0	Carbon Disulfide	1.2U		10061-01-5	cis-1, 3-Dichloropropene	0.4U
75-35-4	1, 1-Dichloroethene	1.4U		110-75-8	2-Chloroethylvinylether	1.0U
75-34-3	1, 1-Dichloroethane	1.7U		75-25-2	Bromoform	5.6U
156-60-5	Trans-1, 2-Dichloroethene	1.0U		591-78-6	4-Methyl-2-Pentanone	7.5U
67-66-3	Chloroform	1.5U		108-10-1	2-Hexanone	1.4U
107-06-2	1, 2-Dichloroethane	2.2U		127-18-4	Tetrachloroethene	0.6U
78-93-3	2-Butanone	2.7 ~~5~~ UJ		79-34-5	1, 1, 2, 2-Tetrachloroethane	1.0U
71-55-6	1, 1, 1-Trichloroethane	1.1U		108-88-3	Toluene	0.9U
56-23-5	Carbon Tetrachloride	0.3U		108-90-7	Chlorobenzene	0.4U
108-05-4	Vinyl Acetate	1.3U		100-41-4	Ethylbenzene	0.8U
75-27-4	Bromodichloromethane	1.1U		100-42-5	Styrene	0.1U
107-02-8	Acrolein	75U			Total Xylenes	0.6U
67-64-1	Acrylonitrile	81U				

PJC 6-15-87

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 their meaning attached to the data summary report.

Laboratory Name University Hygienic Lab

Case No 7261

Sample Number EL638

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1000

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 5/14/87

Date Analyzed 5/16/87

Conc/Dil Factor: 1

Percent Moisture (Decanted) –

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	0.2 0.6
111-44-4	bis(-2-Chloroethyl)Ether	0.3U
95-57-8	2-Chlorophenol	0.1U
541-73-1	1, 3-Dichlorobenzene	0.1U
106-46-7	1, 4-Dichlorobenzene	0.1U
100-51-6	Benzyl Alcohol	0.3U
95-50-1	1, 2-Dichlorobenzene	0.1U
95-48-7	2-Methylphenol	0.1U
39638-32-9	bis(2-chloroisopropyl)Ether	0.3U
106-44-5	4-Methylphenol	0.2U
621-64-7	N-Nitroso-Di-n-Propylamine	0.3U
67-72-1	Hexachloroethane	0.2U
98-95-3	Nitrobenzene	0.2U
78-59-1	Isophorone	0.1U
88-75-5	2-Nitrophenol	0.5U
105-67-9	2, 4-Dimethylphenol	0.1U
65-85-0	Benzoic Acid	2.1U
111-91-1	bis(-2-Chloroethoxy)Methane	0.2U
120-83-2	2, 4-Dichlorophenol	0.2U
120-82-1	1, 2, 4-Trichlorobenzene	0.1U
91-20-3	Naphthalene	0.1U
106-47-8	4-Chloroaniline	0.8U
87-68-3	Hexachlorobutadiene	0.2U
59-50-7	4-Chloro-3-Methylphenol	0.3U
91-57-6	2-Methylnaphthalene	0.2U
77-47-4	Hexachlorocyclopentadiene	0.8U
88-06-2	2, 4, 6-Trichlorophenol	0.4U
95-95-4	2, 4, 5-Trichlorophenol	0.4U
91-58-7	2-Chloronaphthalene	0.2U
88-74-4	2-Nitroaniline	0.5U
131-11-3	Dimethyl Phthalate	0.1U
208-96-8	Acenaphthylene	0.1U
99-09-2	3-Nitroaniline	20.U
62-53-3	Aniline	0.4U
122-66-7	1,2-Diphenylhydrazine	0.3U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	0.1U
51-28-5	2, 4-Dinitrophenol	2.0U
100-02-7	4-Nitrophenol	1.7U
132-64-9	Dibenzofuran	0.2U
121-14-2	2, 4-Dinitrotoluene	0.6U
606-20-2	2, 6-Dinitrotoluene	0.4U
84-66-2	Diethylphthalate	0.2U
7005-72-3	4-Chlorophenyl-phenylether	0.2U
86-73-7	Fluorene	0.2U
100-01-6	4-Nitroaniline	4.4U
534-52-1	4, 6-Dinitro-2-Methylphenol	1.5U
86-30-6	N-Nitrosodiphenylamine (1)	0.3U
101-55-3	4-Bromophenyl-phenylether	0.2U
118-74-1	Hexachlorobenzene	0.6U
87-86-5	Pentachlorophenol	2.6U
85-01-8	Phenanthrene	0.1U
120-12-7	Anthracene	0.3U
84-74-2	Di-n-Butylphthalate	0.3U
206-44-0	Fluoranthene	1.5U
129-00-0	Pyrene	1.7U
85-68-7	Butylbenzylphthalate	0.2U
91-94-1	3, 3'-Dichlorobenzidine	0.9U
56-55-3	Benzo(a)Anthracene	0.2U
117-81-7	bis(2-Ethylhexyl)Phthalate	0.4U
218-01-9	Chrysene	0.2U
117-84-0	Di-n-Octyl Phthalate	1.8U
205-99-2	Benzo(b)Fluoranthene	0.5U
207-08-9	Benzo(k)Fluoranthene	0.8U
50-32-8	Benzo(a)Pyrene	0.2U
193-39-5	Indeno(1, 2, 3-cd)Pyrene	1.3U
53-70-3	Dibenz(a, h)Anthracene	0.3U
191-24-2	Benzo(g, h, i)Perylene	0.7U

(1)-Cannot be separated from diphenylamine

Form I

7/85

7261

Laboratory Name University Hygienic Lab

Case No 7261

Sample Number
EY 638
6704202

RECEIVED JUN 18 1987

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 5/14/87

Date Analyzed: 5/19/87

Conc/Dil Factor: 1/5

Percent Moisture (decanted) —

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.006 U
319-85-7	Beta-BHC	0.004 U
319-86-8	Delta-BHC	0.004 U
58-89-9	Gamma-BHC (Lindane)	0.003 U
76-44-8	Heptachlor	0.002 U
309-00-2	Aldrin	0.002 U
1024-57-3	Heptachlor Epoxide	0.002 U
959-98-8	Endosulfan I	0.005 U
60-57-1	Dieldrin	0.006 U
72-55-9	4,4'-DDE	0.002 U
72-20-8	Endrin	0.005 U
33213-65-9	Endosulfan II	0.006 U
72-54-8	4,4'-DDD	0.012 U
1031-07-8	Endosulfan Sulfate	0.029 U
50-29-3	4,4'-DDT	0.005 U
72-43-5	Methoxychlor	0.012 U
53494-70-5	Endrin Ketone	0.030 U
57-74-9	Chlordane	0.012 U
8001-35-2	Toxaphene	0.22 U
12674-11-2	Aroclor-1016	0.067 U
11104-28-2	Aroclor-1221	0.18 U
11141-16-5	Aroclor-1232	0.16 U
53469-21-9	Aroclor-1242	0.087 U
12672-29-6	Aroclor-1248	0.068 U
11097-69-1	Aroclor-1254	0.086 U
11096-82-5	Aroclor-1260	0.091 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s 990 or W_s _____ V_t 2000 V_i 2

U.- COMPOUND ANALYZED FOR BUT NOT DETECTED. NUMBER IS THE MINIMUM ATTAINABLE DETECTION LIMIT FOR THE SAMPLE.

Form 1

7/E

Laboratory Name UNIV. OF IOWA HYGIENIC LAB

Case No 7261

Sample Number EL638

4000

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	unknown	VOA	757	2.1
2.				
3.				
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Laboratory Name UNIVERSITY HYGIENIC LABORATORY

Case No 7261

Sample Number EL635

RECEIVED JUN 18 1987

1000

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number Acid / BN	Estimated Concentration (ug/l or ug/kg)
1. 110123	5-methyl-2-hexanone	BNA	197/197	5
2.				
3.				
4.				
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27.				
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Sample Number
ELL[illegible]

RECEIVED JUN 1 8 1987

4000

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Univ Hygienic Lab
Case No: 7261
Lab Sample ID No: 8704203
QC Report No: –
Sample Matrix: WATER
Contract No: 68-01-7101
Data Release Authorized By: George Brauer
Date Sample Received: 5/13/87

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 5/19/87
Date Analyzed: 5/19/87
Conc/Dil Factor: 1 pH –
Percent Moisture: (Not Decanted) –

CAS Number		ug/l or ug/Kg (Circle One) PJC 6-15-87	
74-87-3	Chloromethane	1.4U	
74-83-9	Bromomethane	0.6U	
75-01-4	Vinyl Chloride	1.4U	
75-00-3	Chloroethane	1.7U	
75-09-2	Methylene Chloride	1.4 ~~J~~ B	UJ
67-64-1	Acetone	11.2	
75-15-0	Carbon Disulfide	1.2U	
75-35-4	1, 1-Dichloroethene	1.4U	
75-34-3	1, 1-Dichloroethane	1.7U	
156-60-5	Trans-1, 2-Dichloroethene	1.0U	
67-66-3	Chloroform	TC ~~1.5U~~ 0.4J	
107-06-2	1, 2-Dichloroethane	2.2U	
78-93-3	2-Butanone	4.5 B	UJ
71-55-6	1, 1, 1-Trichloroethane	1.1U	
56-23-5	Carbon Tetrachloride	0.3U	
108-05-4	Vinyl Acetate	1.3U	
75-27-4	Bromodichloromethane	1.1U	
107-02-8	Acrolein	75U	
67-64-1	Acrylonitrile	81U	

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	1.2U
10061-02-6	Trans-1, 3-Dichloropropene	0.6U
79-01-6	Trichloroethene	0.5U
124-48-1	Dibromochloromethane	3.5U
79-00-5	1, 1, 2-Trichloroethane	4.8U
71-43-2	Benzene	1.4U
10061-01-5	cis-1, 3-Dichloropropene	0.4U
110-75-8	2-Chloroethylvinylether	1.0U
75-25-2	Bromoform	5.6U
591-78-6	4-Methyl-2-Pentanone	TC ~~1.5U~~ 1.6
108-10-1	2-Hexanone	1.4U
127-18-4	Tetrachloroethene	0.6U
79-34-5	1, 1, 2, 2-Tetrachloroethane	1.0U
108-88-3	Toluene	0.9
108-90-7	Chlorobenzene	0.4U
100-41-4	Ethylbenzene	0.6J
100-42-5	Styrene	0.1U
	Total Xylenes	2.0

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.

7261

Form 1 188

7/85

Laboratory Name: University Hygienic Lab

Case No: 7261

Sample Number: EL642

RECEIVED JUN 18 1987

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

1000

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 5/14/87

Date Analyzed: 5/17/87

Conc/Dil Factor: 1

Percent Moisture (Decanted): -

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/L or ug/Kg (Circle One)
108-95-2	Phenol	2.2 U rc
111-44-4	bis(-2-Chloroethyl)Ether	0.3U
95-57-8	2-Chlorophenol	0.1U
541-73-1	1, 3-Dichlorobenzene	0.1U
106-46-7	1, 4-Dichlorobenzene	0.1U
100-51-6	Benzyl Alcohol	0.3U
95-50-1	1, 2-Dichlorobenzene	0.1U
95-48-7	2-Methylphenol	0.1U
39638-32-9	bis(2-chloroisopropyl)Ether	0.3U
106-44-5	4-Methylphenol	0.2U
621-64-7	N-Nitroso-Di-n-Propylamine	0.3U
67-72-1	Hexachloroethane	0.2U
98-95-3	Nitrobenzene	0.2U
78-59-1	Isophorone	0.1U
88-75-5	2-Nitrophenol	0.5U
105-67-9	2, 4-Dimethylphenol	0.1U
65-85-0	Benzoic Acid	2.1U
111-91-1	bis(-2-Chloroethoxy)Methane	0.2U
120-83-2	2, 4-Dichlorophenol	0.2U
120-82-1	1, 2, 4-Trichlorobenzene	0.1U
91-20-3	Naphthalene	0.1U
106-47-8	4-Chloroaniline	0.8U
87-68-3	Hexachlorobutadiene	0.2U
59-50-7	4-Chloro-3-Methylphenol	0.3U
91-57-6	2-Methylnaphthalene	0.2U
77-47-4	Hexachlorocyclopentadiene	0.8U
88-06-2	2, 4, 6-Trichlorophenol	0.4U
95-95-4	2, 4, 5-Trichlorophenol	0.4U
91-58-7	2-Chloronaphthalene	0.2U
88-74-4	2-Nitroaniline	0.5U
131-11-3	Dimethyl Phthalate	0.1U
208-96-8	Acenaphthylene	0.1U
99-09-2	3-Nitroaniline	20.U
62-53-3	Aniline	0.4U
122-66-7	1,2-Diphenylhydrazine	0.3U

CAS Number		ug/L or ug/Kg (Circle One)
83-32-9	Acenaphthene	0.1U
51-28-5	2, 4-Dinitrophenol	2.0U
100-02-7	4-Nitrophenol	1.7U
132-64-9	Dibenzofuran	0.2U
121-14-2	2, 4-Dinitrotoluene	0.6U
606-20-2	2, 6-Dinitrotoluene	0.4U
84-66-2	Diethylphthalate	0.2U
7005-72-3	4-Chlorophenyl-phenylether	0.2U
86-73-7	Fluorene	0.2U
100-01-6	4-Nitroaniline	4.4U
534-52-1	4, 6-Dinitro-2-Methylphenol	1.5U
86-30-6	N-Nitrosodiphenylamine (1)	0.3U
101-55-3	4-Bromophenyl-phenylether	0.2U
118-74-1	Hexachlorobenzene	0.6U
87-86-5	Pentachlorophenol	2.6U
85-01-8	Phenanthrene	0.1U
120-12-7	Anthracene	0.3U
84-74-2	Di-n-Butylphthalate	0.3U
206-44-0	Fluoranthene	1.5U
129-00-0	Pyrene	1.7U
85-68-7	Butylbenzylphthalate	0.2U
91-94-1	3, 3'-Dichlorobenzidine	0.9U
56-55-3	Benzo(a)Anthracene	0.2U
117-81-7	bis(2-Ethylhexyl)Phthalate	0.4U
218-01-9	Chrysene	0.2U
117-84-0	Di-n-Octyl Phthalate	1.8U
205-99-2	Benzo(b)Fluoranthene	0.5U
207-08-9	Benzo(k)Fluoranthene	0.8U
50-32-8	Benzo(a)Pyrene	0.2U
193-39-5	Indeno(1, 2, 3-cd)Pyrene	1.3U
53-70-3	Dibenz(a, h)Anthracene	0.7U
191-24-2	Benzo(g, h, i)Perylene	0.7U

(1) Cannot be separated from diphenylamine

Laboratory Name University Hygienic Lab

Case No 7261

Sample Number EL542

8704203

RECEIVED JUN 18 1987

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 5/14/87

Date Analyzed: 5/19/87

Conc/Dil Factor: 1/5

Percent Moisture (decanted) ——

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/L or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.006 U
319-85-7	Beta-BHC	0.004 U
319-86-8	Delta-BHC	0.004 U
58-89-9	Gamma-BHC (Lindane)	0.003 U
76-44-8	Heptachlor	0.002 U
309-00-2	Aldrin	0.002 U
1024-57-3	Heptachlor Epoxide	0.002 U
959-98-8	Endosulfan I	0.005 U
60-57-1	Dieldrin	0.006 U
72-55-9	4, 4'-DDE	0.002 U
72-20-8	Endrin	0.005 U
33213-65-9	Endosulfan II	0.006 U
72-54-8	4, 4'-DDD	0.012 U
1031-07-8	Endosulfan Sulfate	0.030 U
50-29-3	4, 4'-DDT	0.006 U
72-43-5	Methoxychlor	0.012 U
53494-70-5	Endrin Ketone	0.030 U
57-74-9	Chlordane	0.013 U
8001-35-2	Toxaphene	0.22 U
12674-11-2	Aroclor-1016	0.069 U
11104-28-2	Aroclor-1221	0.18 U
11141-16-5	Aroclor-1232	0.16 U
53469-21-9	Aroclor-1242	0.090 U
12672-29-6	Aroclor-1248	0.070 U
11097-69-1	Aroclor-1254	0.089 U
11096-82-5	Aroclor-1260	0.094 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s 960 or W_s ——— V_t 2000 V_i 2

U.- COMPOUND ANALYZED FOR BUT NOT DETECTED. NUMBER IS THE MINIMUM ATTAINABLE DETECTION LIMIT FOR THE SAMPLE.

7261

Form 1

7/8

Laboratory Name UNIV. OF IOWA HYGIENIC LAB

Case No 7261

Sample Number ELEV 2

RECEIVED JUN 18 1987

4000

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. 75285	2-methylpropane	VOA	87	19.9
2.				
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7261

Laboratory Name UNIVERSITY HYGIENIC LABORATORY

Case No 7261

Sample Number EL642

RECEIVED

1000

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number BN	Estimated Concentration (ug/l or ug/kg)
1. 110123	5-methyl-2-hexanone	BNA	198	3
2. 128370	2,6-bis(1,1-dimethylethyl)-4-methylphenol	↓	1539	1
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7261

Sample Number
EL643

Organics Analysis Data Sheet
(Page 1)

RECEIVED JUN 18 1987

Laboratory Name: Univ Hygienic Lab
Case No: 7261
Lab Sample ID No: 8704204
QC Report No: -
Sample Matrix: WATER
Contract No: 68-01-7101
Data Release Authorized By: George Brown
Date Sample Received: 5/13/87

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 5/19/87

Date Analyzed: 5/19/87

Conc/Dil Factor: 1 pH -

Percent Moisture: (Not Decanted) -

CAS Number		ug/L or ug/Kg (Circle One)		CAS Number		ug/L or ug/Kg (Circle One)
74-87-3	Chloromethane	1.4U		78-87-5	1, 2-Dichloropropane	1.2U
74-83-9	Bromomethane	0.6U		10061-02-6	Trans-1 3-Dichloropropene	0.6U
75-01-4	Vinyl Chloride	1.4U		79-01-6	Trichloroethene	0.5U
75-00-3	Chloroethane	1.7U		124-48-1	Dibromochloromethane	3.5U
75-09-2	Methylene Chloride	1.4 ~~FB~~ UJ		79-00-5	1 1, 2-Trichloroethane	4.8U
67-64-1	Acetone	2.7U		71-43-2	Benzene	1.4U
75-15-0	Carbon Disulfide	1.2U		10061-01-5	cis-1, 3-Dichloropropene	0.4U
75-35-4	1, 1-Dichloroethene	1.4U		110-75-8	2-Chloroethylvinylether	1.0U
75-34-3	1, 1-Dichloroethane	1.7U		75-25-2	Bromoform	5.6U
156-60-5	Trans-1, 2-Dichloroethene	1.0U		591-78-6	4-Methyl-2-Pentanone	1.5U
67-66-3	Chloroform	1.5U		108-10-1	2-Hexanone	1.4U
107-06-2	1, 2-Dichloroethane	2.2U		127-18-4	Tetrachloroethene	0.6U
78-93-3	2-Butanone	2.4 ~~B~~ UJ		79-34-5	1, 1, 2, 2-Tetrachloroethane	1.0U
71-55-6	1, 1, 1-Trichloroethane	1.1U		108-88-3	Toluene	0.9U
56-23-5	Carbon Tetrachloride	0.3U		108-90-7	Chlorobenzene	0.4U
108-05-4	Vinyl Acetate	1.3U		100-41-4	Ethylbenzene	0.8U
75-27-4	Bromodichloromethane	1.1U		100-42-5	Styrene	0.1U
107-02-8	Acrolein	75U			Total Xylenes	0.6U
67-64-1	Acrylonitrile	81U				

PJC 6-15-87

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 documentation attached to the data summary report.

Form I

7/85

7261

Laboratory Name University Hygienic Lab

Case No 7261

Sample Number EL 6

RECEIVED JUN 18 1987

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

1000

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 5/14/87

Date Analyzed 5/17/87

Conc/Dil Factor: 1

Percent Moisture (Decanted) -

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	0.2U
111-44-4	bis(-2-Chloroethyl)Ether	0.3U
95-57-8	2-Chlorophenol	0.1U
541-73-1	1 3-Dichlorobenzene	0.1U
106-46-7	1, 4-Dichlorobenzene	0.1U
100-51-6	Benzyl Alcohol	0.3U
95-50-1	1, 2-Dichlorobenzene	0.1U
95-48-7	2-Methylphenol	0.1U
39638-32-9	bis(2-chloroisopropyl)Ether	0.3U
106-44-5	4-Methylphenol	0.2U
621-64-7	N-Nitroso-Di-n-Propylamine	0.3U
67-72-1	Hexachloroethane	0.2U
98-95-3	Nitrobenzene	0.2U
78-59-1	Isophorone	0.1U
88-75-5	2-Nitrophenol	0.5U
105-67-9	2, 4-Dimethylphenol	0.1U
65-85-0	Benzoic Acid	2.1U
111-91-1	bis(-2-Chloroethoxy)Methane	0.2U
120-83-2	2, 4-Dichlorophenol	0.2U
120-82-1	1, 2, 4-Trichlorobenzene	0.1U
91-20-3	Naphthalene	0.1U
106-47-8	4-Chloroaniline	0.8U
87-68-3	Hexachlorobutadiene	0.2U
59-50-7	4-Chloro-3-Methylphenol	0.3U
91-57-6	2-Methylnaphthalene	0.2U
77-47-4	Hexachlorocyclopentadiene	0.8U
88-06-2	2, 4, 6-Trichlorophenol	0.4U
95-95-4	2, 4, 5-Trichlorophenol	0.4U
91-58-7	2-Chloronaphthalene	0.2U
88-74-4	2-Nitroaniline	0.5U
131-11-3	Dimethyl Phthalate	0.1U
208-96-8	Acenaphthylene	0.1U
99-09-2	3-Nitroaniline	20.U
62-53-3	Aniline	0.4U
122-66-7	1,2-Diphenylhydrazine	0.3U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	0.1U
51-28-5	2, 4-Dinitrophenol	2.0U
100-02-7	4-Nitrophenol	1.7U
132-64-9	Dibenzofuran	0.2U
121-14-2	2 4-Dinitrotoluene	0.6U
606-20-2	2, 6-Dinitrotoluene	0.4U
84-66-2	Diethylphthalate	0.2U
7005-72-3	4-Chlorophenyl-phenylether	0.2U
86-73-7	Fluorene	0.2U
100-01-6	4-Nitroaniline	4.4U
534-52-1	4, 6-Dinitro-2-Methylphenol	1.5U
86-30-6	N-Nitrosodiphenylamine (1)	0.3U
101-55-3	4-Bromophenyl-phenylether	0.2U
118-74-1	Hexachlorobenzene	0.6U
87-86-5	Pentachlorophenol	2.6U
85-01-8	Phenanthrene	0.1U
120-12-7	Anthracene	0.3U
84-74-2	Di-n-Butylphthalate	0.3U
206-44-0	Fluoranthene	1.5U
129-00-0	Pyrene	1.7U
85-68-7	Butylbenzylphthalate	0.2U
91-94-1	3, 3'-Dichlorobenzidine	0.9U
56-55-3	Benzo(a)Anthracene	0.2U
117-81-7	bis(2-Ethylhexyl)Phthalate	0.4U
218-01-9	Chrysene	0.2U
117-84-0	Di-n-Octyl Phthalate	1.8U
205-99-2	Benzo(b)Fluoranthene	0.5U
207-08-9	Benzo(k)Fluoranthene	0.8U
50-32-8	Benzo(a)Pyrene	0.2U
193-39-5	Indeno(1, 2, 3-cd)Pyrene	1.3U
53-70-3	Dibenz(a, h)Anthracene	0.3U
191-24-2	Benzo(g, h, i)Perylene	0.7U

(1)-Cannot be separated from diphenylamine

Form I 7/85

7261

Laboratory Name University Hygienic Lab

Case No 7261

Sample Nu
EL64
870420

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 5/14/87

Date Analyzed: 5/19/87

Conc/Dil Factor: 1/5

Percent Moisture (decanted) —

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.006 U
319-85-7	Beta-BHC	0.004 U
319-86-8	Delta-BHC	0.004 U
58-89-9	Gamma-BHC (Lindane)	0.003 U
76-44-8	Heptachlor	0.002 U
309-00-2	Aldrin	0.002 U
1024-57-3	Heptachlor Epoxide	0.002 U
959-98-8	Endosulfan I	0.005 U
60-57-1	Dieldrin	0.006 U
72-55-9	4,4'-DDE	0.002 U
72-20-8	Endrin	0.005 U
33213-65-9	Endosulfan II	0.006 U
72-54-8	4,4'-DDD	0.012 U
1031-07-8	Endosulfan Sulfate	0.029 U
50-29-3	4,4'-DDT	0.005 U
72-43-5	Methoxychlor	0.012 U
53494-70-5	Endrin Ketone	0.030 U
57-74-9	Chlordane	0.012 U
8001-35-2	Toxaphene	0.22 U
12674-11-2	Aroclor-1016	0.067 U
11104-28-2	Aroclor-1221	0.18 U
11141-16-5	Aroclor-1232	0.16 U
53469-21-9	Aroclor-1242	0.087 U
12672-29-6	Aroclor-1248	0.068 U
11097-69-1	Aroclor-1254	0.086 U
11096-82-5	Aroclor-1260	0.091 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s 990 or W_s _____ V_t 2000 V_i 2

U.- COMPOUND ANALYZED FOR BUT NOT DETECTED. NUMBER IS THE MINIMUM ATTAINABLE DETECTION LIMIT FOR THE SAMPLE.

Form 1

7261

Laboratory Name Univ. of Iowa Hygienic Lab

Case No 7261

Sample Number EL643

RECEIVED JUL 18

4000

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	No Volatile Compounds Found	VOA		
2.				
3.				
4.				
5.				
6.				
7.				
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9.				
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30.				

Laboratory Name UNIVERSITY HYGIENIC LABORATORY

Case No 7261

Sample Number EL643

RECEIVED JUN 18 1988

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. 110123	5-methyl-2-hexanone	BNA	BN .198	3
2.				
3.				
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