Illinois Environmental Protection Agency · P.O. Box 19276, Springfield, IL 62794-9276

January 14, 1991

EPA Region 5 Records Ctr.
298409

Alan Altur
Program Support Unit
Pre-Remedial Unit
U.S. Environmental Protection Agency
230 South Dearborn
Chicago, Illinois 60604

Dear Mr. Altur:

Enclosed is a copy of the Preliminary Assessment performed on the Arlington Heights Municipal Landfill (ILD984781526), as requested. You will also find a copy of the Preliminary Assessment for Empire Industries (ILD to be assigned), which was recently completed.

Should you have any questions or comments concerning the enclosed documents, please feel free to contact me at 217/782-6760.

Sincerely,

Judy J. Triller

Judy J. Triller
Pre-Remedial Program
Remedial Project Management Section
Division of Land Pollution Control

PRINTED ON RECYCLED PAPER

0310090001-Cook Co.
Arlington Heights Municipal Landfill
ILD984781526 Route 68
SF/HRS

Filed-Kfu
7/9/91

SE0301-A0/02

CERCLA

Preliminary Assessment Report

Illinois Environmental Protection Agency
P.O. Box 19276,
Springfield, IL 62794-9276

Confidential Material May be Enclosed

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D984781526

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Arlington Heights Municipal Landfill	Dt. 83 and S. Kennicott Ave

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Arlington Heights	IL	60005	Cook	031	10

09 COORDINATES LATITUDE	LONGITUDE	
42 08 46.__	088 59 46.__	Wheeling

10 DIRECTIONS TO SITE (Starting from nearest public road)

From State Route 68 follow Kennicott Ave. north approximately 1/4 mile. The landfill is on the west side of Kennicott.

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)
Village of Arlington Heights	Municipal Bldg. 33 S. Arlington Hts. Road

03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER
Arlington Heights	IL	60005	(708) 253-2340

07 OPERATOR (If known and different from owner)	08 STREET (Business, mailing, residential)
Same as above	

09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER
			( )

13 TYPE OF OWNERSHIP (Check one)

☐ A. PRIVATE ☐ B. FEDERAL: _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ■ E. MUNICIPAL

☐ F. OTHER: _____ (Specify) ☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)

☐ A. RCRA 3001 DATE RECEIVED: __/__/__ (MONTH DAY YEAR) ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: __/__/__ (MONTH DAY YEAR) ☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION

■ YES DATE 8 / 7 / 90 (MONTH DAY YEAR)
☐ NO

BY (Check all that apply)

☐ A. EPA ☐ B. EPA CONTRACTOR ■ C. STATE ☐ D. OTHER CONTRACTOR
☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____ (Specify)

CONTRACTOR NAME(S): _____

02 SITE STATUS (Check one)	03 YEARS OF OPERATION
☐ A. ACTIVE ■ B. INACTIVE ☐ C. UNKNOWN	between 1969 - 1968 (BEGINNING YEAR) 1974 (ENDING YEAR) ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

Heavy Metals (toxic/persistant)
Other Organics (toxic/persistant/volatile)
Oil Waste (soluble/flammable)

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

Groundwater (Population/Environment)
Surface Water (Population/Environment)

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)

☐ A. HIGH (Inspection required promptly) ☐ B. MEDIUM (Inspection required) ☐ C. LOW (Inspect on time available basis) ☐ D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NUMBER
Judy J. Triller	IEPA / DLPC	(217) 782-6760

04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
Judy J. Triller	IEPA	DLPC/RPMS	(217) 782-6760	9 / 7 / 90 (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D984781526

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

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

02 WASTE QUANTITY AT SITE

Measures of waste quantities must be of compatible units

TONS unknown

CUBIC YARDS unknown

NO OF DRUMS unknown

03 WASTE CHARACTERISTICS (Check all that apply)

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

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE	unknown		Water-soluble cutting oils from
SOL	SOLVENTS			Honeywell
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS	unknown		
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	unknown		

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

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
OCC	trichloroethylene	79-01-6	LF Found in 57341	124	ppb
OCC	1,1,1-trichloroethane	25323-89-1	LF "	600	ppb
SOL	carbon tetrachloride	56-23-5	LF "	600	ppb
SOL	1,2-cis-dichloroethylene	156-60-5	LF "	1700	ppb
SOL	benzene	71-43-2	LF "	22.2	ppb
OCC	benzo(a) anthracene	56-55-3	LF Found in S6	16000	ppb
OCC	benzo(a) pyrene	50-32-8	LF " S6	1800	ppb
MES	arsenic	7440-38-2	LF " S2	19	ppm
MES	chromium	7440-47-3	LF " S1	45	ppm
MES	nickel	7440-02-0	LF " S6	74	ppm
OCC	phenanthrene	85-01-8	LF " S6	2100	ppb
OCC	fluoranthene	206-44-0	LF " S6	4400	ppb
MES	copper	7440-50-8	LF " S2	43	ppm
MES	lead	7439-92-1	LF " S2	37	ppm
OCC	pyrene	129-00-0	LF " S6	3100	ppb
OCC	chrysene	218-01-9	LF " S6	16000	ppb

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)

Illinois EPA DLPC Files (including microfiche)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D 984781526

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ■ A GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE ___) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED 155,564 — 04 NARRATIVE DESCRIPTION

Two aquifers are used in the area - sandstone at a depth of approx. 912 ft. and dolomite/limestone at a depth of approx. 140 to 190 ft. The landfill has no liner.

01 ■ B SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE ___) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED unknown — 04 NARRATIVE DESCRIPTION

Small possibility of Buffalo Creek receiving contaminated surface runoff - landfill has adequate cover.

01 ☐ C CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE ___) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED ___ — 04 NARRATIVE DESCRIPTION

None documented or observed.

01 ☐ D FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE ___) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED ___ — 04 NARRATIVE DESCRIPTION

None documented or observed.

01 ☐ E DIRECT CONTACT — 02 ☐ OBSERVED (DATE ___) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED ___ — 04 NARRATIVE DESCRIPTION

None documented or observed.
Landfill has adequate cover.

01 ■ F CONTAMINATION OF SOIL — 02 ■ OBSERVED (DATE 10-1-87) POTENTIAL ALLEGED
03 AREA POTENTIALLY AFFECTED ___ (Acres) — 04 NARRATIVE DESCRIPTION

Soil samples have indicated the presence of contaminants on-site.

01 ■ G DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE ___) ■ POTENTIAL ALLEGED
03 POPULATION POTENTIALLY AFFECTED 154,564 — 04 NARRATIVE DESCRIPTION

See "A" above. Although potentially 15,,56 residents are affected, many of these would use the groundwater supply only in an emergency. Approximately 3285 people rely on groundwater as their only water source.

01 ☐ H WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE ___) ☐ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: ___ — 04 NARRATIVE DESCRIPTION

None documented or observed.

01 ☐ I POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE ___) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: ___ — 04 NARRATIVE DESCRIPTION

None documented or observed.

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D984781526

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ■ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Slopes and top of fill have little or no vegitation, but dirt moving activities have been occurring.

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include numbers of species)
None documented or observed.

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
None documented or observed.

01 ■ M. UNSTABLE CONTAINMENT OF WASTES (Spills, runoff, standing liquids, leaking drums) — 02 ☐ OBSERVED (DATE: _____) — ■ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: unknown — 04 NARRATIVE DESCRIPTION
Landfill is not lined. In the past leaking barrells discovered at the site, and leachate seeps noted.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
None documented or observed.

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

01 ■ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ■ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
The site never received an operating permit.

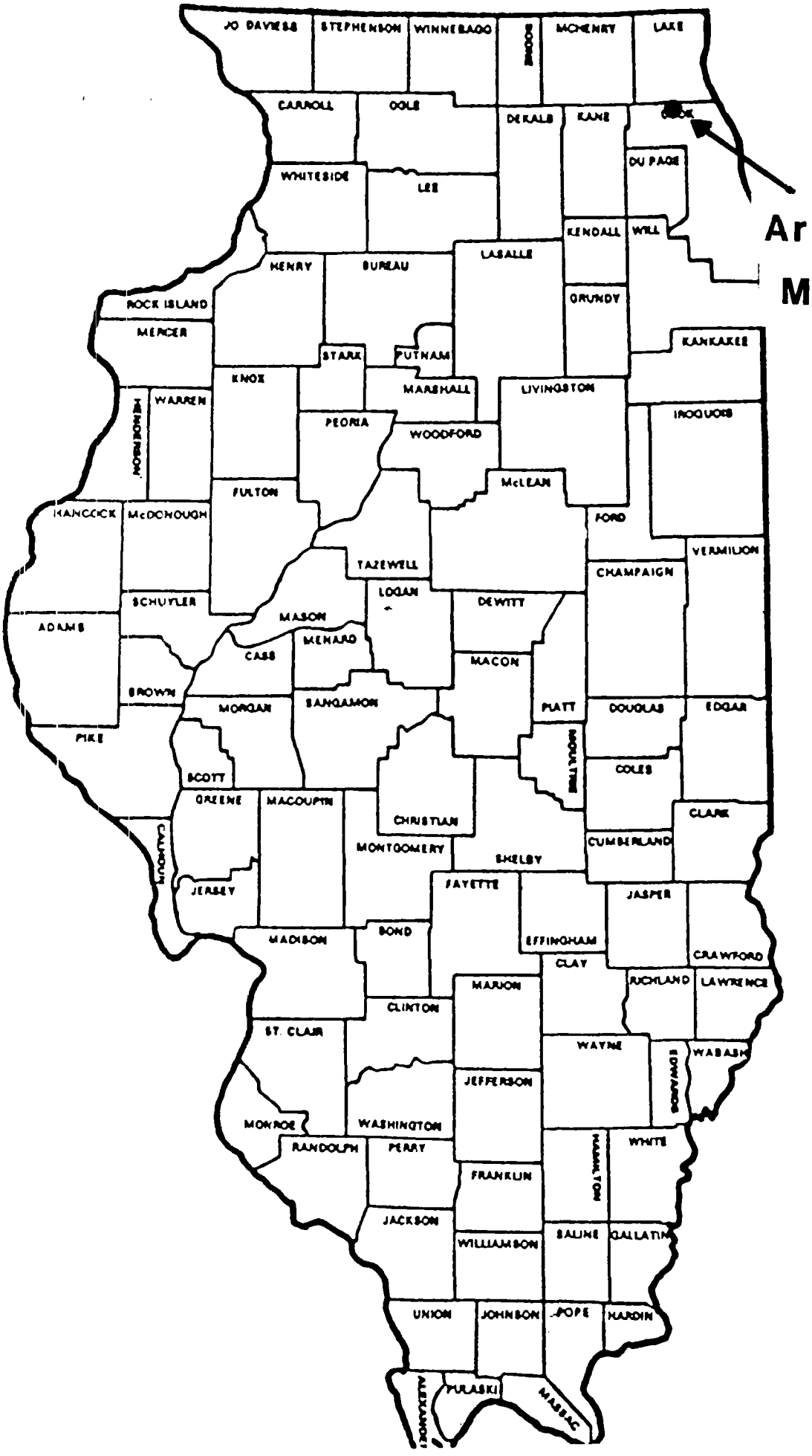
05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
Landfill gas was encountered during the drilling of monitor wells in southeast portion of site. (Drilling done during investigation by HARZA Environmental Services, Inc.)

III. TOTAL POPULATION POTENTIALLY AFFECTED: 155,567

IV. COMMENTS

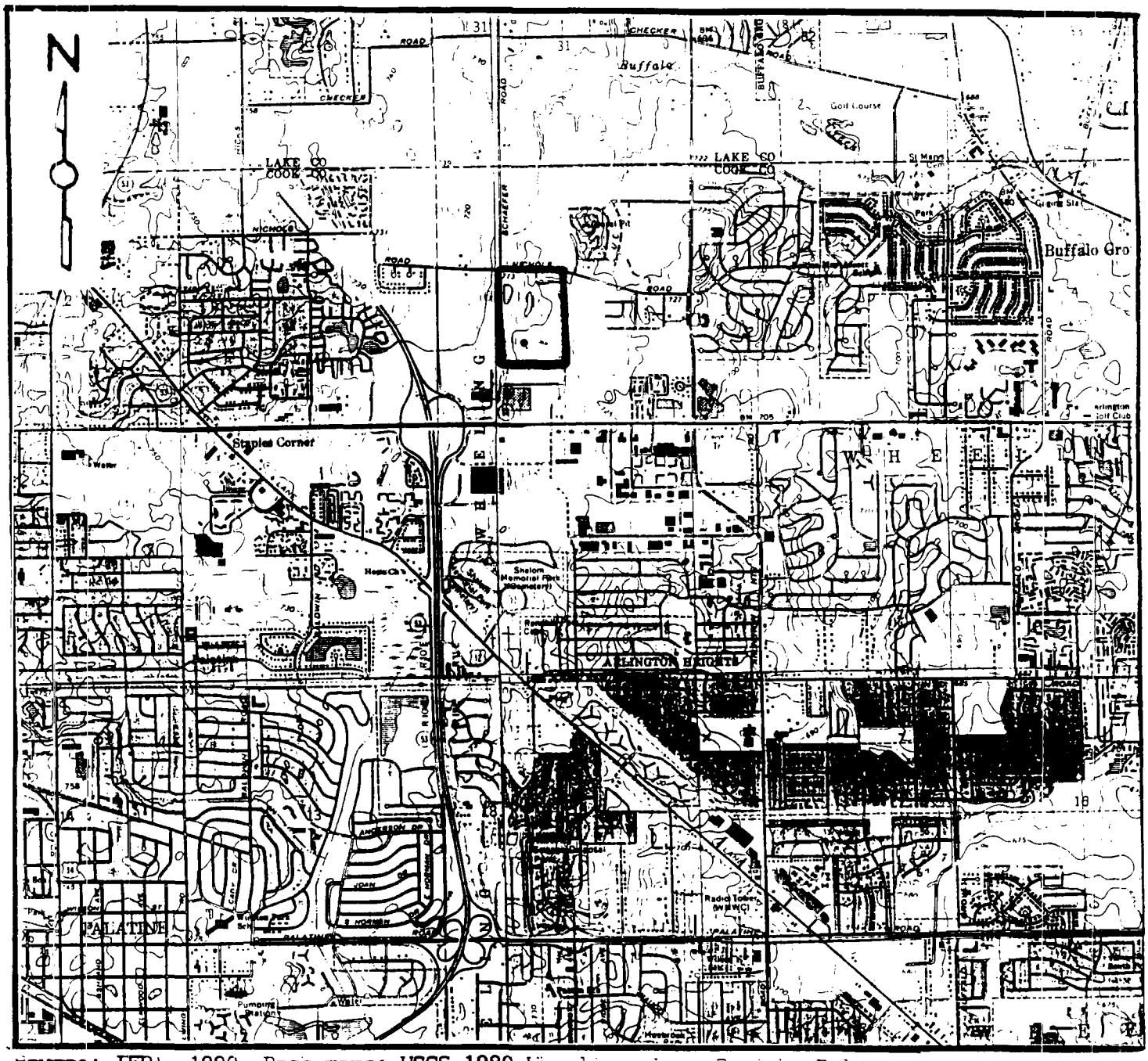
V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)
IEPA DLPC Files including PWS microfiche.
Area well logs
Field observations (8-7-90)

EPA FORM 2070-12 (7-81)



Arlington Heights Municipal Landfill

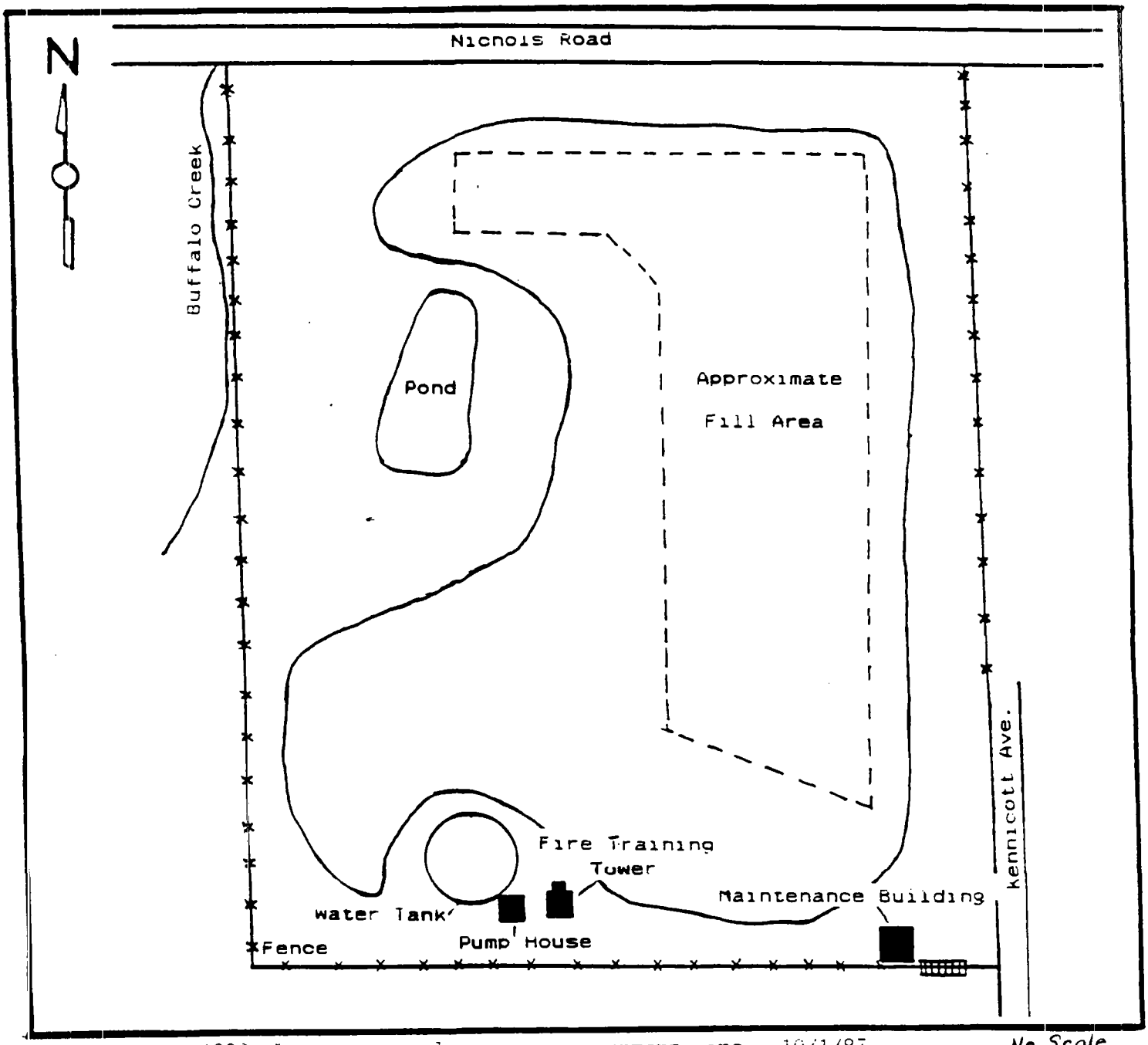
SITE LOCATION



Source: IEPA, 1990. Base maps: USGS 1980 Wheeling, Lake Zurich, Palatine and Arlington Hts. 7.5 minute quadrangles.

1 inch = 4000 feet

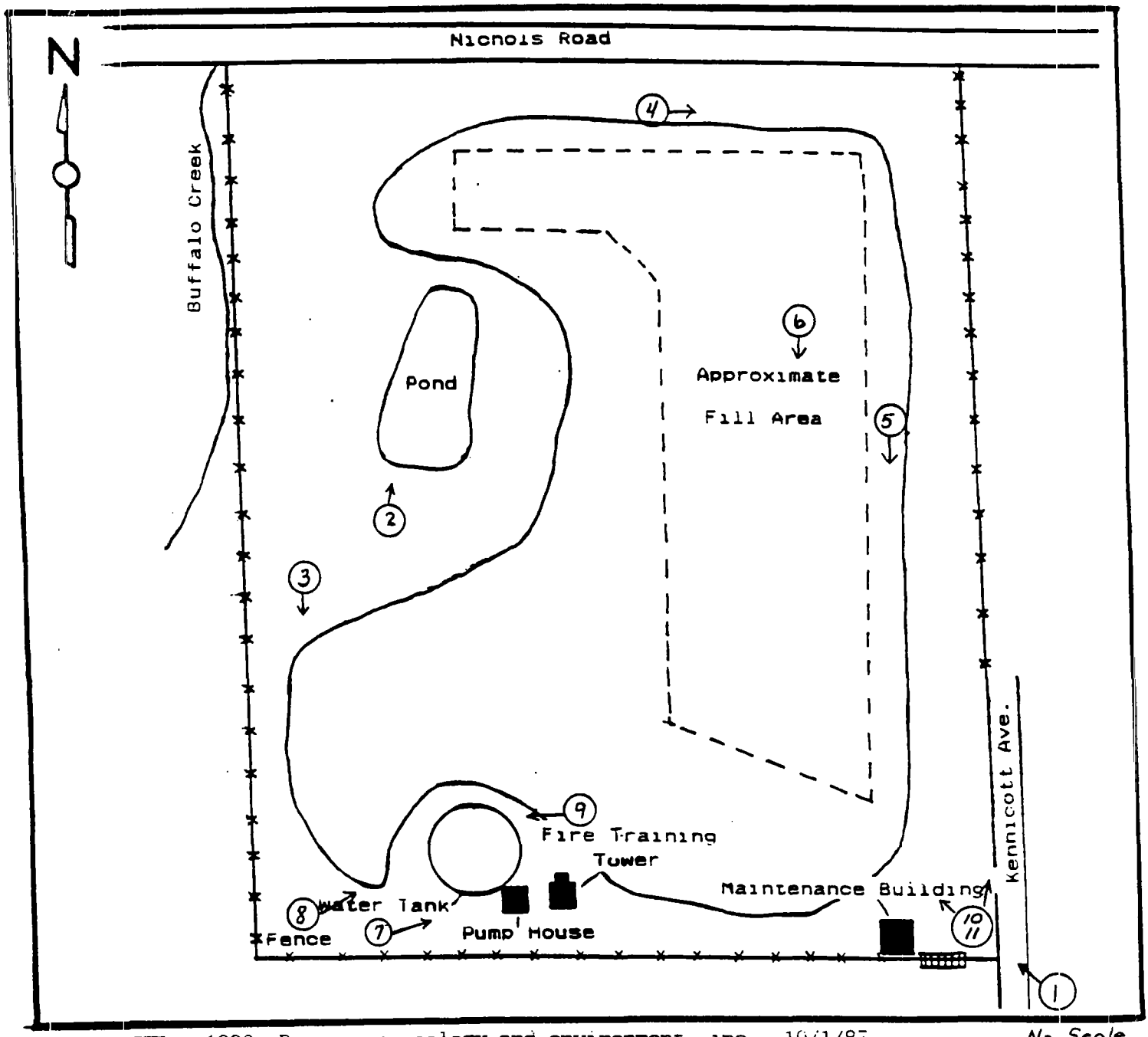
Vicinity Map



Source: IEPA, 1990. Base map: ecology and environment, inc. 10/1/87.

No Scale

Site Map



Source: IEPA, 1990. Base map: ecology and environment, inc. 10/1/87.

No Scale

Photo Location Map

EXECUTIVE SUMMARY

Arlington Heights Municipal Landfill was added to CERCLIS (Comprehensive Environmental Response, Compensation and Liability Information System) in February of 1990 as a result of a request by the Illinois Environmental Protection Agency. This request was made as a result of the detection of contaminated liquid in an Illinois Bell Telephone Company vault, which is located on the site.

The facility is located at the northern municipal boundary of Arlington Heights in Cook County Illinois (near the center of Section 6, Township 42 North, Range 11 East). It is situated on a site that covers approximately 54 acres. The facility is currently bordered to the north and east by residential areas and to the south and west by commercial and industrial areas.

According to a 1988 report prepared by an environmental consulting company, before its purchase by the Village of Arlington Heights, a portion of the site was used for agricultural purposes while the remainder of the site was operated as a gravel pit. The Village of Arlington Heights acquired this property between 1964 and 1968 for use as a municipal landfill. The Arlington Heights Municipal Landfill accepted municipal waste until 1974 and continued to accept construction debris until the late 1980's. (Illinois Environmental Protection Agency files indicate that the

landfill never received an operating permit.) It is possible that the landfill accepted hazardous waste sometime during its operation. The south portion of the site is currently used for fire safety training and water storage.

The Illinois Environmental Protection Agency began its initial investigation of this site in 1971 when a portion of the landfill was in the process of receiving final cover. In the summer of 1984, during a routine inspection by personnel of the Illinois Environmental Protection Agency, a leachate seep was discovered at the site. Samples of the leachate were collected and analyzed by agency representatives. The analysis revealed the presence of several organic contaminants. The table below summarizes sample data.

Parameter	Concentration(ppb)
benzene	22.2
carbon tetrachloride	600
1,2-dichloroethane	7.5
1,1,1-trichloroethane	600
1,1-dichloroethane	700
1,2-trans-dichloroethylene	20.7
toluene	270
trichloroethylene	124
1,2-cis-dichloroethylene	1700

In February of 1989 personnel from the Illinois Environmental Protection Agency visited the site as a result of a complaint by representatives of the Illinois Bell Telephone Company.

The complainants reported that an Illinois Bell Telephone vault (manhole) located on the site had accumulated approximately six feet of liquid that they believed to be leachate from the landfill. During this inspection, representatives of the agency collected and analyzed liquid from the vault. The sample analysis determined the presence of the following contaminants:

Parameter	Concentration(ppb)
vinyl chloride	360
methylene chloride	26
1,1-dichloroehtane	31
cis-1,2-dichlorethylene	3000
1,2-dichloropropane	41
trichloroethylene	220
benzene	39
tetrachloroethylene	43
toluene	240
xylene	5.2

On August 7, 1990 as part of the CERCLA preliminary assessment, a site reconnaissance was conducted by Ms. Judy Triller and Ms. Sheila Murphy of the Illinois Environmental Protection Agency. During this visit, the site was found to be closed and no longer accepting municipal or construction waste. However, several trucks were observed entering the site to unload dirt, and a bulldozer was in the process of moving dirt. According to Dennis Bowe of the Village of Arlington Heights, the village is in the process of preparing the site for some future use, perhaps as a nine-hole golf course. Currently there is a water storage tank on-site, as well as three buildings - a maintenance building, a fire

training tower, and a pump house. A pond is located in the western portion of the site. (A second pond has been filled in.)

According to an environmental assessment report prepared by HARZA Environmental Services, Inc. the site is underlain by glacial deposits, approximately 150 feet thick. This glacial drift is composed primarily of clayey till interbedded with sand and gravel lenses. Underlying the glacial deposits is Silurian dolomite bedrock.

According to the water operators representing the villages in the vicinity of the site, a majority of the population in the area utilizes public water systems, which obtain water from Lake Michigan. Some of these public water systems (Arlington Heights, Wheeling, Buffalo Grove, and Palatine), however, maintain several wells for use in emergencies. These wells draw water from the dolomite aquifer at approximately 118 feet and from the sandstone aquifer at approximately 1355 feet.

There are also a significant number of residents in the vicinity who rely on groundwater as their only water source. Specifically, all residents of Long Grove (north of the site) and Kildeer (northwest of the site) rely on water from the limestone formation at an approximate depth of 150 feet. Other private residents scattered throughout the site area

also use the limestone aquifer formation.

Within three miles of the site there are approximately 154,564 residents who utilize the aquifer of concern. There are 11 municipal wells, which are used as a backup source. When used, these wells serve approximately 153,283 residents. There is one full-time operational public well drawing water from the aquifer of concern in the three mile radius, which serves approximately 350 residents. According to information provided by the water operators in the area together with information taken from USGS topographic maps of the area, there are approximately 931 private wells located within a three mile radius of the site, serving an estimated 2705 residents. The nearest documented well drawing from the aquifer of concern (limestone/dolomite) is located approximately 3000 feet north of the site.

Although the landfill has received more than an adequate amount of cover material (varying from 3.5 feet to 9.5 feet), this site possess some potential for surface water contamination. Lack of vegetation on the slopes makes them prone to erosion that could possibly allow contamination of surface water runoff. Surface water runoff from the north and west sides of the site are likely to enter Buffalo Creek located approximately 1250 feet west of the site. (Runoff from some parts of the western slope could enter the on-site pond.) Buffalo creek flows north and then east for

approximately six miles where it enters the Des Plaines River. There are no documented surface water intakes within a three mile downgradient path of the site.

Due to the facts that this landfill has no liner, dangerous contaminants have been identified in soil samples, and a large population could potentially be affected by contaminated groundwater, the author has assigned a medium priority to this site, and recommends that the U.S. Environmental Protection Agency task this site for a CERCLA screening site inspection.

Photo. 1

DATE: 8-7-90

TIME: 5:05 p.m.

Photograph by:

Judy J. Triller

Location: L0310090001

Arlington Hts. Municipal Landfill ILD 984781526

Comments: Picture taken toward the northwest Maintenance building at entrance of landfill (along Kennicott Ave.)

Photo. 2

DATE: 8-7-90

TIME: 5:15 pm

Photograph by:

Judy J. Triller

Location: L0310090001

Arlington Hts. Municipal Landfill ILD 984781526

Comments: Picture taken toward the north. On-site pond

Photo. 3

DATE: 8-7-90

TIME: 5:20 pm

Photograph by:

Judy J. Triller

Location: L0310090001

Arlington Hts. Municipal Landfill ILD 984781526

Comments: Picture taken toward the south along western face of the slope

Photo. 4

DATE: 8-7-90

TIME: 5:25

Photograph by:

Judy J. Triller

Location: L0310090001

Arlington Hts. Municipal Landfill ILD 984781526

Comments: Picture taken toward the east along the northern face of the slope. Nichols Road and residential area in left of picture.

Photo. 5

DATE: 8-7-90

TIME: 5:30 pm

Photograph by:

Judy J. Triller

Location: L0310090001

Arlington Hts. Municipal Landfill ILD 984781526

Comments: Picture taken toward the south along the western face of slope.

Photo. 6

DATE: 8-7-90

TIME: 5:35 pm

Photograph by:

Judy J. Triller

Location: L0310090001

Arlington Hts. Municipal Landfill ILD 984781526

Comments: Picture taken toward the south. Top of landfill, showing dirtmoving activity

Photo. 7

DATE: 8-7-90

TIME: 5:45 pm

Photograph by:

Judy J. Triller

Location: L0310090001

Arlington Hts. Municipal Landfill ILD 984781526

Comments: Picture taken toward the east, at southend of site showing water tank, pumphouse and fire training tower

Photo. 8

DATE: 8-7-90

TIME: 5:50

Photograph by:

Judy J. Triller

Location: L0310090001

Arlington Hts. Municipal Landfill ILD 984781526

Comments: Picture taken toward the northeast, showing the relatively new build-up of land around the water tank at south end of site.

Photo. 9

DATE: 8-7-90

TIME: 5:55

Photograph by:

Judy J. Triller

Location: L0310090001

Arlington Hts. Municipal Landfill ILD 984781526

Comments: Picture taken toward the west showing the relatively new build-up of land around the water tank at the south end of site.

DATE:

TIME:

Photograph by:

Location:

Comments: Picture taken toward

Photos: 10, 11.

DATE: 8-7-90

TIME: 6:00 pm

Photograph by:

Judy J Triller

Location: L031009000l

Arlington Hts. Municipal Landfill ILD 984781526

Comments: Picture taken toward the north west Entrance to landfill with dead-end Kennicott Ave. (to right.)

DATE:

TIME:

Photograph by:

Location:

Comments: Picture taken toward

Supporting

Documentation

Reference 5

ENVIRONMENTAL ASSESSMENT REPORT

ARLINGTON HEIGHTS LANDFILL
Arlington Heights, Illinois

February 1989

formed by NET-Midwest of Bartlett, Illinois. Laboratory reports are presented in Appendix C.

REGIONAL GEOLOGY AND GROUNDWATER USE

The site area is underlain by thick glacial drift deposits resting on Silurian dolomite bedrock. The glacial drift is approximately 150 feet thick and consists primarily of clayey soils (till) deposited by the glaciers. The tills contain intermittent seams and interbeds of sand and gravel. The drift, collectively, is of Wisconsin age and is assigned to the Woodfordian Substage. A number of sand pits are located on and near the site, suggesting the presence of shallow sand deposits in the site area.

Groundwater is an important resource in northern Illinois. There are three major groundwater aquifers commonly used for water supply. These are:

- Cambrian-Ordovician aquifers;
- Silurian dolomite aquifer; and
- Glacial drift aquifers.

The Cambrian-Ordovician aquifers are sandstone bedrock units which occur at depths of 500 to 2,000 feet below the surface. These can provide large quantities of groundwater to wells and often are used for municipal or industrial water supply. Yields often are 1,000 gallons per minute or more. There are two wells in this aquifer within about a half mile of the site. However, because of their depth, these aquifers have little bearing on the site investigation.

The Silurian dolomite is a major bedrock aquifer in most of northern Illinois and, depending on its local properties, can provide sufficient groundwater for municipal and industrial supply. In the site area, it is more commonly used for domestic supply at yields generally between 10 and 25 gallons per minute. There are at least 7 dolomite wells within about one-half mile of the site, including a well owned by the Village within the site. The top of the dolomite is estimated to occur at depths in excess of 150 feet based on the well records In the area, and the piezometric surface typically occurs at depths between about 75 and 100 feet. Regionally, groundwater flow in the dolomite is controlled by major surface drainages and areas of concentrated pumping withdrawal. In the site area flow in the dolomite is estimated to be generally eastward, toward the DesPlaines River.

The glacial drift is a variable, but important, groundwater resource in northern Illinois, although it is not used near the site. The clayey till which comprises most of the drift in northern Illinois generally contains little free groundwater and is not a significant resource. However, sand and gravel units in the till can contain substantial groundwater and, if continuous and extensive, can supply water to domestic and, locally, municipal or industrial wells. The most productive sands and gravels frequent-

because of the relatively complex flow pattern. Calculated gradients range from about 0.003 ft/ft to 0.012 ft/ft in different areas. Using Darcy's Law in the form of $v = ki/n$, where "v" the average groundwater flow velocity in the sand, "k" is the average hydraulic conductivity (0.04 feet/min from the field tests), "i" is the hydraulic gradient (described above), and "n" is the effective porosity (estimated at 30 percent), groundwater flow velocities in different site areas are estimated to range between about 0.6 and 2.3 feet/day.

The shallow groundwater zone at the site probably is hydraulically connected to surface water in the pond in the northwest part of the site. This connection results in recharge of the groundwater by infiltration from the pond which further distorts local groundwater flow patterns. Data are not sufficient to define this connection in detail.

Groundwater Quality. Results of analysis of groundwater samples are summarized in Table 3. Maximum, minimum and average analytical results for the groundwater samples are compared to results from the on-site pond in Table 4.

The parameters analyzed were selected to characterize overall groundwater chemistry and as indicators of possible groundwater contamination. In the present study, they were not intended to identify specific contaminants.

The analyses indicate that concentrations of most constituents are within the range of values expected for shallow groundwater in the region. Generally, wells MW-1, MW-3, and MW-8 have the highest concentrations of indicator parameters TOC, TOX, and specific conductance. Of these, MW-3 is clearly upgradient and unaffected by the landfill, while MW-1 and MW-8 are located such that impacts are possible, although not clearly defined. Evaluation of the analytical and groundwater data, however, suggests no pattern indicative of groundwater contamination due to the landfill.

Landfill Cap

Borings SB-1 through SB-4 were drilled to evaluate the thickness and properties of the existing landfill cap. Borings SB-1 and SB-2 indicate that the cap in the north part of the landfill is 3 to 3.5 feet thick while borings SB-3 and SB-4 indicate that the cap in the east part of the landfill is 11 and 9.5 feet thick, respectively. Field classifications and laboratory tests on samples from the borings indicate that the cap materials are organic and inorganic clays (OL, OH and CL in the Unified Soil Classification System) with dry densities ranging from 84.8 to 118.8 lbs/cubic ft. Further results of physical properties tests on the cap material are presented in Appendix B.

Landfill Gas

Landfill gas was encountered during drilling of wells MW-1 and MW-6 along the southeast site perimeter based on results of air monitoring and field observations. The upper part of the shallow sand zone is not saturated in this local area, providing a potential gas migration pathway in the unsaturated zone. In other site monitoring wells, the sand is fully saturated, not providing a pathway for gas migration. Landfill gas also was detected in landfill cap borings SB-3 and SB-4, indicating that some gas is being generated, but is generally contained by the present cap. The site inspection did not indicate evidence of vegetative stress which often is an indicator of landfill gas. Evaluation of all data indicates that, although landfill gas is being generated to some degree, the natural clayey soils and saturated sands control lateral migration except at MW-1 and MW-6, and that the existing cap effectively controls upward migration. Landfill gas does not appear to represent a major problem for off-site migration, although provision for gas observation may be required in the closure plan.

IBT Vaults

In October 1987, IBT representatives met with Village personnel and notified the Village that inspection of a conduit system they had installed along the east site boundary was contaminated by various volatile organic compounds. IBT had observed possibly contaminated liquids in four vaults along the conduit system which are accessed by manholes. The vaults are shown approximately on Exhibit 2. Vault 1 is located south of the site entrance gate on Kennicott Avenue and vaults 2, 3, and 4 along the east site boundary.

IBT collected samples of the water in the vaults which were analyzed by MetPath-Teterboro Laboratory of New Jersey for various heavy metals and organic compounds. Results indicated variable concentrations of several compounds of potential environmental concern, summarized in Table 5. In August of 1984, IEPA also sampled and analyzed leachate from the seep identified and repaired at that time. For comparison, these results also are shown.

Except for benzene and toluene, the contaminants detected in the vaults and the leachate sample are chlorinated organic compounds used as solvents, cleaning or degreasing fluids, refrigerants, and in chemicals and plastics manufacturing, among other uses. They include several compounds of potential concern from environmental and human health viewpoints. For example, chlorinated organic chemicals tend to persist in the environment and are not readily biodegraded. Further, chloroform, chloromethane, 1,2-dichloroethane, methylene chloride, tetrachloroethene, trichloroethene, vinyl chloride and benzene are known or suspected human carcinogens.

On October 1, 1987, an Ecology and Environment, Inc., Field Investigation Team (E&E-FIT) conducted a site inspection at the Municipal Landfill site that included an interview with site representatives. In accordance with work plan directives, five soil samples (four on-site and one background) were collected during the inspection. Samples were not split with site representatives.

Dumping at the site has created a large hill with a slope of approximately 50%. There are terraces and berms on the landfill formation. The landfill is densely vegetated, but evidence of surface water runoff was observed. The western slope of the landfill is the steepest slope at the site. At the base of the western slope is an on-site lake that is approximately 1 acre in area. Another lake is located in the northeast corner of the site and is also approximately 1 acre in area. A maintenance building, water tank, pump house, and fire department training tower are located on the southern portion of the site. The municipality of Arlington Heights utilizes the southern portion of the site.

A fencing contractor was observed on-site and was preparing to install fencing at the site. The installation of the fencing on-site has been documented since the site inspection. A lockable gate was observed in the southeast corner of the site. Residential subdivisions are located to the immediate north and east of the site. Industrial facilities are located south and west of the site. Commercial and densely residential areas are located farther south and west of the site.

The landfill is unlined and landfilling has been conducted in direct contact to the water table. The on-site lakes are indicative of the depth of the water table. The site has been covered, but leachate seeps have occurred at the site. An additional clay covering has been added where the leachate seeps had occurred. The final cover consists of clay and silt and is approximately 6 feet thick.

Town Arlington Heights Township Wheeling
Company Peter Snelten & Sons No.
Farm Adler, John N. No.
Authority Peter Snelten & Sons
Elevation 722 T.M.
Collector
Confidential
Date Drilled Sept. 1940

Map No. 3
R. 11E
T. 42 N
Sec. 7

200' N line, 1400' E line

No.	Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	200' S. of Dundee Rd., ½ mi. W. of State Rd.				
	Clay, yellow	13		13	
	Clay, blue	12		25	
	Hardpan	13		38	
	Gravel	3		41	
	Sand and gravel	13		54	
	Sand clay	21		75	
	Clay, blue	36		111	
	Sand and gravel	4		115	
	Clay, blue	13		127	
	Sand	7		134	
	Gravel	5		139	
	Sand	17		156	
	Sand and gravel	4		160	
	Rock	26		186	
	Cased with 6" to 160'				
	Water level from surface 35'				
	Capacity 20 g.p.m.				
	Water lowered to 35' in 1 hr.				
	Total length to test run 1 hr.				

NO ENVELOPE

INDEX NO. 0307

COUNTY Cook
DRILL RECORD
7-42N-11E

(A32137—20M) ILLINOIS GEOLOGICAL SURVEY, URBANA (10-40)

0 0 0 8 9 9 0

Reference 7

GEOLOGICAL WATER SURVEYS WATER WELL RECORD

Completed 12-30-71

10. Dept. Mines and Minerals permit No. 11866 Year 71
11. Property owner Vil. Arlington Heights Well No. 13
Address 33 S. Arl. Hts. Rd. Arl. Hts. Ill
Driller Egerer-Galloway Drill Corp. License No. 92-289
12. Water from sandstone (Formation) 13. County Cook
at depth 912 to 1795 ft.
14. Screen: Diam. - in.
Length: - ft. Slot -
Sec. 6
Twp. 42N
Rng. 11E
Elev.

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
26	Steel 3/8" A-53	+2	182
22	" " "	0	490
18	" " "	892	1046

SHOW LOCATION IN SECTION PLAT
1019' NL, 1194' EL, NE SW (Permit)

16. Size Hole below casing: 17 in.
17. Static level 563 ft. below casing top which is 2 ft. above ground level. Pumping level 653 ft. when pumping at 1100 gpm for 24 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Glacial Drift	180	180
Limestone	170	350
Shale	115	465
Dolomite	290	755
Sandstone	157	912
Dolomite with shale & sandstone	239	1151
Sandstone (some shale 1309-1422)	644	1795
(CONTINUE ON SEPARATE SHEET IF NECESSARY)		

7 Municipal public supply

SIGNED Wm G. Ullman DATE 1/28/72

[illegible] 1459 S.S. #57860

COOK 6-42N-11E

White Copy – Ill. Dept. of Public Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, ROOM 616, STATE OFFICE BUILDING, SPRINGFIELD, ILLINOIS, 62706. DO NOT DETACH GEOLOGICAL / WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug____. Bored____. Hole Diam.____in. Depth____ft.
   Curb material _____. Buried Slab: Yes____ No____
   b. Driven ✓. Drive Pipe Diam. 5 in. Depth 270 ft.
   c. Drilled ✓. Finished in Drift____. In Rock ✓.
   Tubular____. Gravel Packed____.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:
   Building 40 Ft. Seepage Tile Field 110
   Cess Pool____ Sewer (non Cast iron)____
   Privy____ Sewer (Cast iron)____
   Septic Tank 90 Barnyard____
   Leaching Pit____ Manure Pile____
3. Is water from this well to be used for human consumption?
   Yes ✓ No____
4. Date well completed 7-18-1973
5. Permanent Pump Installed? Yes ✓ No____
   Manufacturer Red Jacket Type Subm
   Capacity 10 gpm. Depth of setting 255 ft.
6. Well Top Sealed? Yes ✓ No____
7. Pitless Adaptor Installed? Yes ✓ No____
8. Well Disinfected? Yes ✓ No____
9. Water Sample Submitted? Yes____ No ✓

REMARKS: 2 GPM Flow Valve Installed in Well on Pump

IDPH 4.065
10/68

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Fred Hildebrandt Well No.____
    Address Arlington Hts 1 Mile Rd, Arlington Hts
    Driller Terry Pilgard License No. 93-372
11. Permit No. 23523 Date June 7 1973
12. Water from Shale (Formation) ____ 13. County Cook
    at depth 270 to ____ft.
14. Screen: Diam.____in.
    Length:____ft. Slot____

Sec. 6 Twp. 42N Rge. 11E Elev.____

SHOW LOCATION IN SECTION PLAT
NE NE SE

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5	Galv. - 15 lbs	0	178

16. Size Hole below casing: 5 in.
17. Static level 30 ft. below casing top which is 1 ft. above ground level. Pumping level 230 ft. when pumping at 3 gpm for 3 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Top Soil	5	5
Clay + Sand + Gravel	65	70
Sand	5	75
Sand + Clay	65	140
Clay + Gravel	28	168
Sand + Gravel + Clay	10	178
Limestone	72	250
Shale	20	270

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED N. R. Pilgard DATE 9-12-73

White Copy – Ill. Dept. of Public Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, ROOM 616, STATE OFFICE BUILDING, SPRINGFIELD, ILLINOIS, 62706. DO NOT DETACH GEOLOGICAL / WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug ____. Bored ____. Hole Diam. 5 in. Depth 204 ft.
   Curb material ____. Buried Slab: Yes ____ No ____
   b. Driven ____. Drive Pipe Diam. 5 in. Depth ____ ft.
   c. Drilled X. Finished in Drift ____. In Rock X.
   Tubular ____. Gravel Packed ____.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:
   Building ____ Ft. Seepage Tile Field ____
   Cess Pool ____ Sewer (non Cast iron) ____
   Privy ____ Sewer (Cast iron) ____
   Septic Tank ____ Barnyard ____
   Leaching Pit ____ Manure Pile ____
3. Is water from this well to be used for human consumption?
   Yes X No ____
4. Date well completed 5/8/80
5. Permanent Pump Installed? Yes X No ____
   Manufacturer RED JACKET Type SUBMERSIBLE
   Capacity 10 gpm. Depth of setting 120 ft.
6. Well Top Sealed? Yes X No ____
7. Pitless Adaptor Installed? Yes X No ____
8. Well Disinfected? Yes X No ____
9. Water Sample Submitted? Yes X No ____

REMARKS:

IDPH 4.065
10/68

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner SPERO ECONOMOU Well No. ____
    Address 1204 N ROHO ARLINGTON HTS
    Driller RICHARD SNELTEN License No. 92-237
11. Permit No. 93727 Date 5/6/80
12. Water from Limestone (Formation) 13. County COOK
    at depth ____ to ____ ft.
    Sec. 7.6b
    Twp. 42N
    Rge. 11E
    Elev. ____
14. Screen: Diam. ____ in.
    Length: ____ ft. Slot ____

SHOW LOCATION IN SECTION PLAT
NW SE (a)

15. Casing and Liner Pipe

Diam. (In.)	Kind and Weight	From (Ft.)	To (Ft.)
5	STEEL #15		

16. Size Hole below casing: 5 in.
17. Static level 78 ft. below casing top which is 1 ft. above ground level. Pumping level 106 ft. when pumping at 10 gpm for 4 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
BROWN CLAY	0	10
BLUE "	10	43
GRAVEL	43	45
CLAY	45	125
GRAVEL	125	126
CLAY	126	145
CLAY + GRAVEL	145	202
LIMESTONE	202	204

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Richard Snelten DATE 6/10/80

White & Pink Copies:
Ill. D . of Public Health
Yellow Copy: Well Contractor
Golden Copy: Well Owner

Well Construction Report

RECEIVED
MAY 22 1989
DIVISION OF ENVIRONMENTAL HEALTH

THIS FORM MUST BE COMPLETED WITHIN 30 DAYS
OF WELL COMPLETION AND SENT TO
THE ILLINOIS DEPARTMENT OF PUBLIC HEALTH
DIVISION OF ENVIRONMENTAL HEALTH
525 WEST JEFFERSON STREET
SPRINGFIELD, ILLINOIS 62761

GEOLOGICAL AND WATER SURVEYS WELL RECORD

9. Drillers Name: Wm F. Huemann License No. 102-001027
10. Well Site Address: 3312 Schaeffer Rd. Long Grove
11. Property Owner: Brittany Blds. Well No.
12. Permit No. 394 Date Issued 3-1-88
13. Location: County Lake
Lot 23, Edge Brook Downs Sec. 31 Twp. 43N Rge. 11E

Show location in section plat

1. Type of Well
   a. Bored____ Hole Diam. 27/8 in. Depth 217 ft
   Buried Slab: Yes___ No___
   b. Driven____ Drive Pipe Diam. 5 in. Depth 193 ft
   c. Drilled ✓ Finished in Drift____ In Rock ✓
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)
DRILLING		
MUD	0	190

2. Well furnishes water for human consumption? Yes X No___
3. Date well drilled 5-31-88
4. Permanent pump installed? Yes X Date 6/6/88 No___
   Manufacturer Red Jacket Type Sub
   Location
   Capacity 10 gpm. Depth of setting 160 ft.
5. Well top sealed? Yes X No___ Type Cap
6. Pitless adapter installed? Yes X No___
   Manufacturer BAKER Model No. SNAPPY
   How attached to casing? U CLAMP
7. Well disinfected? Yes X No___
8. Pump and equipment disinfected Yes X No___

14. Water from LIMESTONE at depth 193 ft to 217 ft

15. Casing and Liner Pipe

Diam.(in)	Kind and Weight	From (ft)	To (ft)
5	200 LB PVC	0	193

16. Screen: Diam. — in, Length — in, Slot Size —
17. Size hole below casing 47/8 in. 18. Ground Elev.____ ft msl.
19. Static level 12 ft below casing top which is 1 ft. above ground level. Pumping level 145 ft, pumping gpm for 6 hours.

20. Earth Materials Passed Through

	Depth of Top	Depth of Bottom
Clay	0	167
gravel & clay	167	173
clay	173	190
broken limestone	190	193
Limestone	193	217

Continue on separate sheet if necessary.

Signed [signature] Date 5-22-89

IMPORTANT NOTICE

This State Agency is requesting disclosure of information that is necessary to accomplish the statutory purpose as outlined under Public Act 85-0863. Disclosure of this information is mandatory. This form has been approved by the Forms Management Center.

PRESS FIRMLY WITH BLACK PEN OR TYPE
Do Not Use Felt Pen

IL482-0126

White Copy – Ill. Dept. of Public Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug____. Bored____. Hole Diam. 5 in. Depth 171 ft.
   Curb material _____. Buried Slab: Yes____ No____
   b. Driven _____. Drive Pipe Diam. ____in. Depth ____ft.
   c. Drilled X. Finished in Drift _____. In Rock X.
   Tubular _____. Gravel Packed _____.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:
   Building _____ Ft. Seepage Tile Field _____
   Cess Pool _____ Sewer (non Cast iron) _____
   Privy _____ Sewer (Cast iron) _____
   Septic Tank _____ Barnyard _____
   Leaching Pit _____ Manure Pile _____
3. Well furnishes water for human consumption? Yes X No____
4. Date well completed 6/22/78
5. Permanent Pump Installed? Yes X Date 11/2/78 No____
   Manufacturer Red Jacket Type subm. Location _____
   Capacity 10 gpm. Depth of Setting 126 Ft.
6. Well Top Sealed? Yes X No____ Type _____
7. Pitless Adapter Installed? Yes X No____
   Manufacturer Williams Model Number _____
   How attached to casing? clamp
8. Well Disinfected? Yes X No____
9. Pump and Equipment Disinfected? Yes X No____
10. Pressure Tank Size 82 gal. Type Well-X-Trol
    Location _____
11. Water Sample Submitted? Yes X No____

REMARKS:

GEOLOGICAL AND WATER SURVEYS WELL RECORD

LaSavanne

10. Property owner THE KENNEDY CO. Well No. Lot 34
    Address 1821 Hicks Rd., Rolling Meadows, IL.
    Driller GEORGE E. GAFFKE License No. 102-234
11. Permit No. 74942 Date 5/31/78
12. Water from Limestone (Formation) 13. County Lake
    at depth 155 to 171 ft.
14. Screen: Diam. _____ in.
    Length: _____ ft. Slot _____
    Sec. 31 16
    Twp. 43N
    Rge. 11E
    Elev. _____

SHOW LOCATION IN SECTION PLAT
Lot 34 LaSavanne Subd
100'S, 100'E, NW/c NE NE SE

15. Casing and Liner Pipe

Diam. (In.)	Kind and Weight	From (Ft.)	To (Ft.)
5	PVC	grade	145
5	Black Steel	145	166

16. Size Hole below casing: 5 in.
17. Static level 98 ft. below casing top which is 1 ft. above ground level. Pumping level _____ ft. when pumping at 10 gpm for _____ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Top Soil	2	2
Yellow Clay	7	9
Blue Clay	25	34
Soft Blue Clay	16	50
Blue Clay	76	126
Hard Pan	13	139
Blue Clay	10	149
Gravel	6	155
Limestone	16	171

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED George E. Gaffke DATE 11/27/78

IDPH 4.065
1/74 – KNB-1

White Copy – Ill. Dept. of Public Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug____. Bored____. Hole Diam.____in. Depth____ft.
   Curb material____. Buried Slab: Yes____No____
   b. Driven____. Drive Pipe Diam. 5 in. Depth 279 ft.
   c. Drilled ✓. Finished in Drift____. In Rock ✓.
   Tubular____. Gravel Packed____.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:
   Building 20 Ft. Seepage Tile Field 90
   Cess Pool____ Sewer (non Cast iron)____
   Privy____ Sewer (Cast iron)____
   Septic Tank 80 Barnyard____
   Leaching Pit____ Manure Pile____
3. Well furnishes water for human consumption? Yes ✓ No____
4. Date well completed 11/26/84
5. Permanent Pump Installed? Yes ✓ Date 12/13/84 No____
   Manufacturer RED JACK Type SUB Location Well
   Capacity 18 gpm. Depth of Setting 160 Ft.
6. Well Top Sealed? Yes ✓ No____ Type LP-5
7. Pitless Adapter Installed? Yes ✓ No____
   Manufacturer MARTINSON Model Number SP-20
   How attached to casing? Under Pressure
8. Well Disinfected? Yes ✓ No____
9. Pump and Equipment Disinfected? Yes ✓ No____
10. Pressure Tank Size 82 gal. Type Well X TROL
    Location GARAGE
11. Water Sample Submitted? Yes____ No ✓
REMARKS: Rock Dry until 270'

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Ed KVETCO Well No.____
    Address 233 CHICKAMAUGA, LONG GROVE
    Driller FILGARD-DEM License No. 102-94
11. Permit No. 115468 Date 10/22/84
12. Water from LIMESTONE (Formation) 13. County LAKE
    at depth 177 to 277 ft.
    Sec. 31
    Twp. 43N
    Rge. 11E
    Elev.____
14. Screen: Diam.____in.
    Length:____ft. Slot____

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5	GALV' 15#	0	177
	75'		

SHOW LOCATION IN SECTION PLAT
Lot #233 Country Club Estates (Just to locate in NW)

16. Size Hole below casing: 5 in.
17. Static level 108 ft. below casing top which is 1 ft. above ground level. Pumping level 160 ft. when pumping at 20 gpm for 72 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
TOP SOIL	4	4
CLAY	149	153
BOULDER	1	154
GRAVEL & PASTE	23	177
LIMESTONE	100	277
RED SHALE	2	279

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Norm Filgard DATE 12/21/84

IDPH 4.065
1/74 – KNB-1

White Copy – Ill. Dept. of Public Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

INSTRUCTIONS TO DRILL

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug____. Bored____. Hole Diam. 5 in. Depth 170 ft.
   Curb material _____. Buried Slab: Yes____ No____
   b. Driven _____. Drive Pipe Diam. ____in. Depth ____ft.
   c. Drilled X. Finished in Drift _____. In Rock X.
   Tubular _____. Gravel Packed _____.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:
   Building _____ Ft. Seepage Tile Field _____
   Cess Pool _____ Sewer (non Cast iron) _____
   Privy _____ Sewer (Cast iron) _____
   Septic Tank _____ Barnyard _____
   Leaching Pit _____ Manure Pile _____
3. Well furnishes water for human consumption? Yes X No____
4. Date well completed 12/28/78
5. Permanent Pump Installed? Yes X Date 1/31/79 No____
   Manufacturer Red Jacket Type subm. Location _____
   Capacity 10 gpm. Depth of Setting 120 Ft.
6. Well Top Sealed? Yes X No____ Type _____
7. Pitless Adapter Installed? Yes X No____
   Manufacturer Williams Model Number _____
   How attached to casing? clamp
8. Well Disinfected? Yes X No____
9. Pump and Equipment Disinfected? Yes X No____
10. Pressure Tank Size 82 gal. Type Well-X-Trol
    Location _____
11. Water Sample Submitted? Yes X No____

REMARKS:

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner THE KENNEDY CO. Well No. Lot 24 Long Grove
    Address 1821 Hicks Rd., Rolling Meadows, IL.
    Driller GEORGE E. GAFFKE License No. 102-234
11. Permit No. 77877 Date 8/7/78
12. Water from Limestone (Formation) 13. County Lake
    at depth 160 to 170 ft. Sec. 31 1e
    Twp. 43N
14. Screen: Diam. _____ in. Rge. 11E
    Length: _____ ft. Slot _____ Elev. _____

SHOW LOCATION IN SECTION PLAT

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5	PVC	grade	140
5	Black Steel	140	161

16. Size Hole below casing: 5 in.
17. Static level 90 ft. below casing top which is 1 ft. above ground level. Pumping level _____ ft. when pumping at 10 gpm for _____ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Top Soil	4	4
Yellow Clay	12	16
Blue Clay	131	147
Clay - Gravel	11	158
Gravel Shelf	2	160
Limestone	10	170

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED _____ DATE 6/18/79

IDPH 4.005
1/74 – KNB-1

White Copy – Ill. Dept. of Public Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, ROOM 616, STATE OFFICE BUILDING, SPRINGFIELD, ILLINOIS, 62706. DO NOT DETACH GEOLOGICAL / WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug ____. Bored ____. Hole Diam. ____ in. Depth ____ ft.
   Curb material ____. Buried Slab: Yes ____ No ____
   b. Driven ____. Drive Pipe Diam. ____ in. Depth ____ ft.
   c. Drilled X. Finished in Drift ____. In Rock X.
   Tubular ____. Gravel Packed ____.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:
   Building ____ Ft. Seepage Tile Field ____
   Cess Pool ____ Sewer (non Cast iron) ____
   Privy ____ Sewer (Cast iron) ____
   Septic Tank ____ Barnyard ____
   Leaching Pit ____ Manure Pile ____
3. Is water from this well to be used for human consumption?
   Yes X No ____
4. Date well completed April 19, 1971
5. Permanent Pump Installed? Yes X No ____
   Manufacturer Red Jacket Type Submersible
   Capacity 10 gpm. Depth of setting ____ ft.
6. Well Top Sealed? Yes ____ No ____
7. Pitless Adaptor Installed? Yes X No ____
8. Well Disinfected? Yes X No ____
9. Water Sample Submitted? Yes ____ No X

REMARKS:

IDPH 1015
10/68

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Storgaard Construct. Co. Well No. ____
    Address 4844 W. Lamon Avenue, Chicago, Ill.
    Driller Henry Boysen Company License No. X2337 92-480
11. Permit No. 12371 Date April 23, 1971
12. Water from Rock (Formation) 13. County Cook
    ct depth ____ to ____ ft.
    Sec. 1, 4a
    Twp. 42N
    Rge. 10E
    Elev. ____
14. Screen: Diam. ____ in.
    Length: ____ ft. Slot ____

SHOW LOCATION IN SECTION PLAT

15. Casing and Liner Pipe

Diam. (In.)	Kind and Weight	From (Ft.)	To (Ft.)
5	Galvanized	Grade	176

16. Size Hole below casing: 5 in.
17. Static level 33 ft. below casing top which is 1 ft. above ground level. Pumping level 33 ft. when pumping at 75-100 gpm for - hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Till	0	4
Clay	4	150
Sand, gravel, etc.	150	176
Limestone	176	195

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED ____ DATE July 1, 1971

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Bacher, Ed Well No. _____
Address 3240 Hillen Dr. Arlington Heights IL
Driller Snelten, Arthur C. License No. 92-2260
11. Permit No. 90034 Date 10/05/79
12. Water from limestone 13. County Cook
at depth _____ to _____ ft.
14. Screen: Diam. _____ in.
Length: _____ ft. Slot _____

Sec. 9
Twp. 42 N
Rge. 11 E
Elev. _____

NE SW NW

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	GALV 15#	0	162

16. Size hole below casing: 5 in.
17. Static level 90 ft. below casing top which is 2 ft. above ground level. Pumping level 90 ft. when pumping at 10 gpm for 2 hours.

18. Formations passed through	Thickness	Bottom
yellow clay	19	19
blue clay	64	83
sand	14	97
clay	43	140
sand & gravel	22	162
limestone	18	180

Cook 12-031-29636-00 09-42N-11E

White Copy – Ill. Dept. of Public Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, ROOM 616, STATE OFFICE BUILDING, SPRINGFIELD, ~~ILLINOIS, 62706. DO NOT DETACH GEOLOGICAL~~ / WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug ____. Bored ____. Hole Diam. ____ in. Depth ____ ft.
   Curb material ____. Buried Slab: Yes ____ No ____
   b. Driven ____. Drive Pipe Diam. ____ in. Depth ____ ft.
   c. Drilled X. Finished in Drift ____. In Rock X.
   Tubuldr ____. Gravel Packed ____.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:
   Building ____ Ft. Seepage Tile Field ____
   Cess Pool ____ Sewer (non Cast iron) ____
   Privy ____ Sewer (Cast iron) ____
   Septic Tank ____ Barnyard ____
   Leaching Pit ____ Manure Pile ____
3. Is water from this well to be used for human consumption?
   Yes X No ____
4. Date well completed April 19, 1971
5. Permanent Pump Installed? Yes X No ____
   Manufacturer Red Jacket Type Submersible
   Capacity 10 gpm. Depth of setting ____ ft.
6. Well Top Sealed? Yes ____ No ____
7. Pitless Adaptor Installed? Yes X No ____
8. Well Disinfected? Yes X No ____
9. Water Sample Submitted? Yes ____ No X

REMARKS:

IDPH 4.005
10/68

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Storgaard Construct. Co. Well No. ____
    Address 4044 W. Lamon Avenue, Chicago, Ill.
    Driller Henry Boysen Company License No. X2XXX 92-480
11. Permit No. 12371 Date April 23, 1971
12. Water from Rock (Formation) 13. County Cook
    ct depth ____ to ____ ft.
14. Screen: Diam. ____ in.
    Length: ____ ft. Slot ____

Sec. 1, 4a
Twp. 42N
Rge. 10E
Elev. ____

SHOW LOCATION IN SECTION PLAT
250'N 2400'W
SE/c

15. Casing and Liner Pipe

Diam. (In.)	Kind and Weight	From (Ft.)	To (Ft.)
5	Galvanized	Grade	176

16. Size Hole below casing: 5 in.
17. Static level 33 ft. below casing top which is 1 ft. above ground level. Pumping level 33 ft. when pumping at 75-100 gpm for – hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Till	0	4
Clay	4	150
Sand, gravel, etc.	150	176
Limestone	176	195

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED [signature] DATE July 1, 1971

REFERENCES

Reference

1. August 28, 1984 leachate sample analysis report from the Village of Arlington Heights.

2. Sample analysis report from Illinois Bell Telephone vault samples taken 2/24/89.

3. Sample analysis summary and data regarding soil samples taken during a site inspection conducted by ecology and environment, inc. on 10/1/87.

4. February 18, 1976 telephone conversation record discussing the presence of cutting oil waste on the site.

5. Excerpts (pages 6,9,and 11) from the February 1989 Environmental Assessment Report prepared by Harza Environmental Services, Inc. discussing regional geology, landfill cap, and landfill gas.

6. Excerpt from January 1988 Site Investigation Report prepared by ecology and environment, inc. discussing lining of the landfill.

7. Well logs from the area.

Reference 1

THE CITY OF GOOD NEIGHBORS

Cook Co - LPC 0310690101
Arlington Hts. (Municipal

Village of Arlington Heights

MUNICIPAL BUILDING • 33 S. ARLINGTON HEIGHTS ROAD 60005
Area 312/253-2340

August 28, 1984

RECEIVED
AUG 30 1984
ILL. E.P.A. – D.L.P.C.
STATE OF ILLINOIS

Mr. Brad Benning
Environmental Protection Specialist
Field Operations Section
Division of Land Pollution Control
1701 South First Avenue
Maywood, IL 60153

Dear Brad:

Enclosed is a copy of the lab analysis report I received for the landfill leachate sample submitted to Aqualab, Inc. on July 5, 1984.

If you have any questions or further comments about this report, please call me at 253-2340 ext. 555.

Thank you for your time and assistance in this matter.

Sincerely,

Robert M. Livingston

Robert M. Livingston
Environmental Health Officer
Health Services Department

ss

pc: file

RECEIVED
SEP 10 1984
IEPA-DLPC

Bucaro Inc.

17 August 1984

analytical report

sample no. 57341-341 A

RECEIVED
AUG 30 1984
ILL. E.P.A. – D.L.P.C.
STATE OF ILLINOIS

Mr. Bob Livingston
VILLAGE OF ARLINGTON HEIGHTS
33 S. Arlington Hts. Rd.
Arlington Heights IL 60005

SAMPLE DESCRIPTION: Leachate Sample

Date received 7/5/84

Chloride	1140.	mg/L
COD	4590.	mg/L
Iron, total	1330.	mg/L
pH	5.79	mg/L
Phenol	1.82	mg/L

E.P. Toxicity RCRA:

Arsenic	0.010	mg/L
Barium	1.10	mg/L
Cadmium	0.034	mg/L
Chromium, total	0.091	mg/L
Lead	0.38	mg/L
Mercury	<0.0001	mg/L
Selenium	<0.01	mg/L
Silver	0.031	mg/L

RECEIVED
SEP 10 1984
IEPA-DLPC

Robert N. Bucaro
Robert N. Bucaro

aqualab inc.
[illegible] 20 [illegible] Avenue
[illegible] 60[illegible]
312 283-3100

17 August 1984

analytical report

sample no. 57341

Mr. Bob Livingston
VILLAGE OF ARLINGTON HEIGHTS
33 S. Arlington Hts. Rd.
Arlington Hts., IL 60005

RECEIVED
AUG 30 1984
ILL. E.P.A. – D.L.P.C.
STATE OF ILLINOIS

SAMPLE DESCRIPTION: Leachate Sample

VOLATILE COMPOUNDS

ug/L	Compound	ug/L	Compound
<100	Acrolein (2V)	20.7	1,2-Trans-Dichloroethylene (30V)
<100	Acrylonitrile (3V)	<5	1,2-Dichloropropane (32V)
22.2	Benzene (4V)	<5	1,3-Dichloropropylene (33V)
600	Carbon Tetrachloride (6V)	<5 T	Ethylbenzene (38V)
<5	Chlorobenzene (7V)	<10	Methylene Chloride (44V)
7.5	1,2-Dichloroethane (10V)	<20	Methyl Chloride (45V)
600	1,1,1-Trichloroethane (11V)	<20	Methyl Bromide (46V)
700	1,1-Dichloroethane (13V)	<10	Bromoform (47V)
<10T	1,1,2-Trichloroethane (14V)	<5	Dichlorobromomethane (48V)
<10	1,1,2,2-Tetrachloroethane (15V)	<10	Chlorodibromomethane (51V)
<20	Chloroethane (16V)	<5 T	Tetrachloroethylene (85V)
<50	2-Chloroethylvinyl Ether (19V)	270	Toluene (86V)
<5 T	Chloroform (23V)	124	Trichloroethylene (87V)
<5	1,1-Dichloroethylene (29V)	<20	Vinyl Chloride (88V)
		1700	1,2-Cis-Dichloroethylene

T - Trace

RECEIVED
SEP 10 1984
IEPA-DLPC

Robert N. Bucaro
Robert N. Bucaro

ORGANIC

3071407 Reference 2

Time Collected: 9:40 AM

Lab #

SPECIAL ANALYSIS FORM

Date Collected: 02-24-88

Date Received FEB 28 1989

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
L 201 COOK	ARLINGTON HTS. / Arlington Hts. Landfill	0310090001

SOURCE OF SAMPLE: (Exact Location) IRT VAULT #3

PHYSICAL OBSERVATIONS, REMARKS: CLEAR, NO ODOR

TESTS REQUESTED: VOCs, ORGANIC SCAN

COLLECTED BY: GBITE

TRANSPORTED BY: GBITE

LABORATORY

RECEIVED BY:

DATE COMPLETED:

DATE FORWARDED: 5-15-8

RECEIVED
MAY 16 1989
IEPA/DLPC

LPC-8A 4/77

(NOT FOR DATA PROCESSING)

3071407

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

SAMPLE NUMBER : 0971407
SAMPLING POINT DESC. : ARLINGTON HTS/AR HTS LANDFILL/L201

SUBMITTING SOURCE : SITE # : 0310090001
DATE COLLECTED : 890224 TIME COLLECTED : 0940 SAMPLING PROGRAM :

COLLECTED BY : S B/T E DELIVERED BY : CMS
COMMENTS : VOC'S/ORGANIC SCAN
FUNDING CODE : LP41 AGENCY ROUTING : -- UNIT CODE :
SAM TYPE CODE : SAMPLE PURPOSE CODE : - REPORTING INDICATOR :

DATE RECEIVED : 890225 TIME RECEIVED : 1000 RECEIVED BY : D V
CHB OBSERVATIONS : 1 GAL 2 VOC TRIP BL SAM# : 0971408
SUPERVISORS INITIALS : JTH NOTE : K = LESS THAN VALUE

P39340	GAMMA-BHC (LINDANE)	UG/L	: .05K
P39410	HEPTACHLOR	UG/L	: .05K
P39330	ALDRIN	UG/L	: .05K
P39420	HEPTACHLOR EPOXIDE	UG/L	: .05K
P39340	ALPHA-CHLORDANE	UG/L	: .05K
P39510	GAMMA-CHLORDANE	UG/L	: .05K
P39360	DIELDRIN	UG/L	: .05K
P39390	ENDRIN	UG/L	: .05K
P39480	METHOXYCHLOR	UG/L	: .25K
P39327	O,P'-DDE	UG/L	: .05K
P39320	P,P'-DDE	UG/L	: .05K
P39315	O,P'-DDD	UG/L	: .05K
P39310	P,P'-DDD	UG/L	: .05K
P39305	O,P'-DDT	UG/L	: .05K
P39300	P,P'-DDT	UG/L	: .05K
P39516	TOTAL PCBS	UG/L	: 0.5K
P34694	PHENOL	UG/L	: 5.0K
P34273	BIS(2-CHLOROETHYL)ETHER	UG/L	: 5.0K
P34586	2-CHLOROPHENOL	UG/L	: 5.0K
P34566	1,3-DICHLOROBENZENE	UG/L	: 5.0K
P34571	1,4-DICHLOROBENZENE	UG/L	: 9.0 B
P77147	BENZYL ALCOHOL	UG/L	: 5.0K
P34536	1,2-DICHLOROBENZENE	UG/L	: 5.0K
A00000	2-METHYLPHENOL	UG/L	: 5.0K
P34283	BIS(2-CHLOROISOPROPYL)ETHER	UG/L	: 5.0K
A00000	4-METHYLPHENOL	UG/L	: 5.0K
P34428	N-NITROSO-DI-N-PROPYLAMINE	UG/L	: 5.0K
P34396	HEXACHLOROETHANE	UG/L	: 5.0K
P34447	NITROBENZENE	UG/L	: 5.0K

SAMPLE NUMBER : 3971207

P34400	ISOPHORONE	UG/L	: 5.0K
P34571	2-NITROPHENOL	UG/L	: 5.0K
P34606	2,4-DIMETHYLPHENOL	UG/L	: 5.0K
P77147	BENZOIC ACID	UG/L	: 50K
P34278	BIS(2-CHLOROETHOXY)METHANE	UG/L	: 5.0K
P34601	2,4-DICHLOROPHENOL	UG/L	: 5.0K
P34551	1,2,4-TRICHLOROBENZENE	UG/L	: 5.0K
P34696	NAPHTHALENE	UG/L	: 5.0K
A00000	4-CHLOROANILINE	UG/L	: 5.0K
P34571	HEXACHLOROBUTADIENE	UG/L	: 5.0K
P34452	4-CHLORO-3-METHYLPHENOL	UG/L	: 5.0K
P77416	2-METHYLNAPHTHALENE	UG/L	: 5.0K
P34555	HEXACHLOROCYCLOPENTADIENE	UG/L	: 5.0K
P34621	2,4,6-TRICHLOROPHENOL	UG/L	: 5.0K
P77337	2,4,5-TRICHLOROPHENOL	UG/L	: 5.0K
P34551	2-CHLORONAPHTHALENE	UG/L	: 5.0K
A00000	2-NITROANILINE	UG/L	: 10K
P34341	DIMETHYLPHTHALATE	UG/L	: 5.0K
P34203	ACENAPHTHYLENE	UG/L	: 5.0K
P34626	2,6-DINITROTOLUENE	UG/L	: 5.0K
P76300	3-NITROANILINE	UG/L	: 10K
P34203	ACENAPHTHENE	UG/L	: 5.0K
P34616	2,4-DINITROPHENOL	UG/L	: 10K
P34646	4-NITROPHENOL	UG/L	: 10K
P51302	DIBENZOFURAN	UG/L	: 5.0K
P34611	2,4-DINITROTOLUENE	UG/L	: 5.0K
P34336	DIETHYLPHTHALATE	UG/L	: 5.0K
P34641	4-CHLOROPHENYL PHENYL ETHER	UG/L	: 5.0K
P34301	FLUORENE	UG/L	: 5.0K
A00000	4-NITROANILINE	UG/L	: 10K
A00000	4,6-DINITRO-2-METHYLPHENOL	UG/L	: 10K
P34636	4-BROMOPHENYL PHENYL ETHER	UG/L	: 5.0K
P39700	HEXACHLOROBENZENE	UG/L	: 5.0K
P39032	PENTACHLOROPHENOL	UG/L	: 10K
P34461	PHENANTHRENE	UG/L	: 5.0K
P34220	ANTHRACENE	UG/L	: 5.0K
P39110	DI-N-BUTYLPHTHLATE	UG/L	: 5.0K
P34376	FLUORANTHENE	UG/L	: 5.0K
P34469	PYRENE	UG/L	: 5.0K
P34292	BUTYL BENZYL PHTHALATE	UG/L	: 5.0K
P34631	3,3'-DICHLOROBENZIDINE	UG/L	: 10K
P34526	BENZO(A)ANTHRACENE	UG/L	: 5.0K
P34320	CHRYSENE	UG/L	: 5.0K

SAMPLE NUMBER : 3971427

P39100	BIS(2-ETHYLHEXYL)PHTHALATE	UG/L	: 5.0K
P34596	DI-N-OCTYLPHTHALATE	UG/L	: 5.0K
P34230	BENZO(B)FLUORANTHENE	UG/L	: 5.0K
P34242	BENZO(K)FLUORANTHENE	UG/L	: 5.0K
P34247	BENZO(A)PYRENE	UG/L	: 5.0K
P34403	INDENO(1,2,3-CD)PYRENE	UG/L	: 5.0K
P34556	DIBENZO(AH)ANTHRACENE	UG/L	: 5.0K
P34521	BENZO(GHI)PERYLENE	UG/L	: 5.0K
P34413	CHLOROMETHANE	UG/L	: 10K
P34413	BROMOMETHANE	UG/L	: 10K
P39175	VINYL CHLORIDE	UG/L	: 360 15
P34311	CHLOROETHANE	UG/L	: 10K
P34423	METHYLENE CHLORIDE	UG/L	: 25 12
P81552	ACETONE	UG/L	: 19
P34488	TRICHLOROFLUOROMETHANE	UG/L	: 5.0K
P77277	BROMOCHLOROMETHANE	UG/L	: 5.0K
P77041	CARBON DISULFIDE	UG/L	: 5.0K
P34501	1,1-DICHLOROETHYLENE	UG/L	: 5.0K
P34496	1,1-DICHLOROETHANE	UG/L	: 31
P34546	TRANS-1,2-DICHLOROETHYLENE	UG/L	: 49
P77093	CIS-1,2-DICHLOROETHYLENE	UG/L	: 3000 12
P32106	CHLOROFORM	UG/L	: 5.0K
P34331	1,2-DICHLOROETHANE	UG/L	: 5.0K
P81595	2-BUTANONE(MEK)	UG/L	: 10K
P34506	1,1,1-TRICHLOROETHANE	UG/L	: 5.0K
P32102	CARBON TETRACHLORIDE	UG/L	: 5.0K
P77057	VINYL ACETATE	UG/L	: 10K
P32101	DICHLOROBROMOMETHANE	UG/L	: 5.0K
P34541	1,2-DICHLOROPROPANE	UG/L	: 41
P34704	CIS-1,3-DICHLOROPROPENE	UG/L	: 5.0K
P39160	TRICHLOROETHYLENE	UG/L	: 220
P32105	CHLORODIBROMOMETHANE	UG/L	: 5.0K
P34511	1,1,2-TRICHLOROETHANE	UG/L	: 5.0K
P78124	BENZENE	UG/L	: 39 12
P34699	TRANS-1,3-DICHLOROPROPENE	UG/L	: 5.0K
P34576	2-CHLOROETHYLVINYL ETHER	UG/L	: 5.0K
P32104	BROMOFORM	UG/L	: 5.0K
P78133	4-METHYL-2-PENTANONE(MIBK)	UG/L	: 10K
P77103	2-HEXANONE(MEK)	UG/L	: 10K
P34475	TETRACHLOROETHYLENE	UG/L	: 43
P34516	1,1,2,2-TETRACHLOROETHANE	UG/L	: 5.0K
P78131	TOLUENE	UG/L	: 240 9

SAMPLE NUMBER : 3971407

P34301	CHLOROBENZENE	UG/L	: 5.0K
P[illegible]110	ETHYLBENZENE	UG/L	: 5.0K
P77128	STYRENE	UG/L	: 5.0K
P81551	XYLENE	UG/L	: 5.2
P72019	DEPTH TO WATER FT		: --
P71993	ELEV.OF GR SURFACE FT		: --
P72008	WELL DEPTH,TOTAL FT		: --
P00401	ALKALINITY,TOTAL MG/L		: --
P00090	REDOX POTEN.-FIELD MV		: --
P00400	PH,FIELD UNITS		: --
P00094	COND.(EC)FIELD UM/CM		: --
P00010	TEMPERATURE,WATER DEG.C		: --

: THE FOLLOWING QUANTITATIONS ARE APPROXIMATE
: 1,4-DICHLOROBENZENE UG/L; 5.0
: OTHER ORGANIC COMPOUNDS UGL; 05

INORGANICS

C900600

Time Collected: 9.40 AM

Lab #

SPECIAL ANALYSIS FORM

Date Collected: 02-24-89

Date Received 2-24-89

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE READING:	FILE NUMBER:
201 COOK	ARLINGTON HTS./ARLINGTON HTS. IF	0310090001

SOURCE OF SAMPLE: (Exact Location) IRT VAULT #3

PHYSICAL OBSERVATIONS, REMARKS: CLEAR, NO ODOR

TESTS REQUESTED: METALS - TOT

COLLECTED BY: GRITE

TRANSPORTED BY: GRITE

LABORATORY

RECEIVED BY: H. Pond 12:25 PM

DATE COMPLETED:

DATE FORWARDED: MAR 31. 198

J Daugherty

RECEIVED
MAR - 3 1989
IEPA-DLPC

Environmental Protection Agency
Division of Laboratory Services
2121 W. Taylor Street
Chicago, Illinois 60612

C900600

LPC-8A 4/77

(NOT FOR DATA PROCESSING)

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

SAMPLE NUMBER : C900600
SAMPLING POINT DESC. : COOK CO-ARLINGTON HTS/ARLINGTON HTS L201

SUBMITTING SOURCE # : SITE # : 0310090001
DATE COLLECTED : 890224 TIME COLLECTED : 0940 SAMPLING PROGRAM :

COLLECTED BY : GB/TE DELIVERED BY : B/E
COMMENTS : IBT VAULT #3
FUNDING CODE : LP43 AGENCY ROUTING : 00 UNIT CODE :
SAM TYPE CODE : LPSP SAMPLE PURPOSE CODE : 0 REPORTING INDICATOR :

DATE RECEIVED : 890224 TIME RECEIVED : 1225 RECEIVED BY : KGP
LAB OBSERVATIONS : TRIP BL SAM# :
SUPERVISORS INITIALS : JWD NOTE : K = LESS THAN VALUE

A14400	ARSENIC, SW846 MET	UG/L	: 10K	A15500	SELENIUM, SW846 MET	UG/L	: 10K
P01059	THALLIUM, T, AA-FUR	UG/L	: 1K	P00916	CALCIUM, TOTAL	MG/L	: 198
P00927	MAGNESIUM, TOTAL	MG/L	: 31	P00929	SODIUM, TOTAL	MG/L	: 29
P00937	POTASSIUM, TOTAL	MG/L	: 6.4	P01105	ALUMINUM, TOTAL	UG/L	: 1058
P01007	BARIUM, TOTAL	UG/L	: 95	P01022	BORON, TOTAL	UG/L	: 63
P01012	BERYLLIUM, TOTAL	UG/L	: 0.5K	P01027	CADMIUM, TOTAL	UG/L	: 3K
P01034	CHROMIUM, TOTAL	UG/L	: 5K	P01042	COPPER, TOTAL	UG/L	: 5K
P01037	COBALT, TOTAL	UG/L	: 5	P01045	IRON, TOTAL	UG/L	: 687
P01051	LEAD, TOTAL	UG/L	: 50K	P01055	MANGANESE, TOTAL	UG/L	: 613
P01067	NICKEL, TOTAL	UG/L	: 14	P01077	SILVER, TOTAL	UG/L	: 3K
P01082	STRONTIUM, TOTAL	UG/L	: 387	P01087	VANADIUM, TOTAL	UG/L	: 5K
P01092	ZINC, TOTAL	UG/L	: 100K	P01097	ANTIMONY, T AA-FUR	UG/L	: 3.9

FOLLOWING TABLES. ONLY DETECTABLE CONCENTRATIONS ARE REPORTED, HOWEVER, IF THE COMPOUND HAS A FOOTNOTE CONTAINING THE VALUE, CONSULT THE DEFINITION OF THE FOOTNOTE PROVIDED BELOW. ADDITIONAL QA/QC INFORMATION IS PROVIDED IN THE ATTACHED DATA SHEETS.

Reference 3

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 (D.L.) is estimated because of a Quality Control (QC) protocol. D.L. 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 D.L. 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
s	Analysis by Method of Standard Additions (Look for a "+" Footnote)	Value is quantative
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 semiquantitative
*	Duplicate value outside QC protocols which indicates a possible matrix problem	Value is semiquantitative
+	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 D.L. and below CRDL	Value may be quantitative or semiquantitative
UJ	D.L. is estimated because of a QC protocol. D.L. 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 semiquantitative

COMPOUND											
ITC	MEP767	768	769	770	772						
OTC	EN545	546	547	548	550						
SAMPLE	S1	S2	S3	S4	S6						
pentachlorophenol											
phenanthrene	56J	63J			2100						
anthracene					420						
di-n-butylphthalate											
fluoranthene	110J	100J		13J	4400						
benzidine											
pyrene	83J	75J	4J	13J	3100						
butylbenzylphthalate											
3,3'-dichlorobenzidine											
benzo(a)anthracene					1600						
bis(2-ethylhexyl)phthalate											
chrysene		50J			1600						
di-n-octylphthalate											
benzo(b&k)fluoranthene	75J	62J			3500						
benzo(a)pyrene					1800						
indeno(1,2,3-cd)pyrene					1400J						
dibenzo(a,h)anthracene											
benzo(g,h,i)perylene					1100						
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											
toxaphene											

toxaphene											
Aroclor-1016											
Aroclor-1221											
Aroclor-1232											
Aroclor-1242											
Aroclor-1248											
Aroclor-1254											
Aroclor-1260											
ELEMENT											
aluminum											
antimony											
arsenic	7.8	19	7.4	6.4	6.9						
barium											
beryllium	0.2	0.3	0.6	0.8	1.0						
cadmium				1.3							
calcium											
chromium	45	12	21	30	12.3						
cobalt	6.2	8.6	8.6	6.7	13						
copper	25	43	38	30	35						
iron											
lead	19	37	23	20	30						
magnesium											
manganese											
mercury											
nickel	38	30	29	25	74						
potassium											
selenium											
silver											
sodium											
thallium											
tin											
vanadium	19	20	33	46	50						
zinc											
cyanide CHECK IF ANALYZED ( )											
TENTATIVELY IDENTIFIED ORGANICS											
2-Propanol, 1,1,1-Trichloro-2-methyl	340		400	220							
Undecane, 4,7-Dimethyl	240	260									
Tridecane, 6-Methyl	320										
Tetradecane, 2,6-Dimethyl	500	280									
Iron tricarbonyl, benzenamine-N-N	200	250		250							
Nonadecane	290	320			2800						
1,2-Benzenedicarboxylic Acid	310		400	360	200						
Sulfur	4300	7500			610						
Hexanedioic Acid	430										
Octadecane	280										
Pentane	29	20	11		12						
Hexane	7				6						

STATE Illinois SITE Arlington Heights Municipal Landfill TDD F05-8708-001 PAGE 2 OF 2, SET # ____

3

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

Document Control No. _____
Page 1 of 1
Date 11-14-87

COVER PAGE
INORGANIC ANALYSES DATA PACKAGE

Lab Name CSMRI-Analytica, Inc.

Case No. 8142

SOW No. 785

Q. C. Report No. 3546

Sample Numbers

EPA No.	Lab ID No.	EPA No.	Lab ID No.
MEP 767			
MEP 768			
MEP 769			
MEP 770			
MEP 772			

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NOV 16 1987
U.S. EPA CENTRAL REGIONAL LAB

Comments: FIVE (5) LOW SOIL SAMPLES FOR AL METAL AND CYANIDE ANALYSES. Fe on Ag IEC OBSERVED & ECESSARY. IEC SHOWN ON RAW DATA AS FOLLOWS:
(0.000471) (Fe value > 21 ppm) + (uncor. fed Ag value) = Ag true value

Added Footnote: NA - Not Applicable

ICP interelement and background corrections applied? Yes X No _____.

If yes, corrections applied before X 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 detection limit but less than the contract-required detection limit, report the value in brackets (i.e. [10]). Indicate the analytical method used 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, F for Furnace, and CV for Cold Vapor AA.

IFB Amend. One

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Document Control No._____
Page 1 of 5

Form I

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

EPA Sample No: MEP 767

Date 11-14-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME CSMRI-Analytica, Inc.

CASE NO. 8142

SOW NO. 785

Lab Receipt Date 10-2-87

LAB SAMPLE ID. NO. 3546-MEP 767

QC REPORT NO. 3546

Elements Identified and Measured

Concentration: Low X Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

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

1. Aluminum	9120	*	P	13. Magnesium	47500	*	P
2. Antimony	15U ~~12.6U~~ MPC	N	F	14. Manganese	468		P
3. Arsenic	7.8 ~~6.2~~ MPC	N	F	15. Mercury	0.12 U		CV
4. Barium	[32] MPC		P	16. Nickel	38		P
5. Beryllium	[0.2]		P	17. Potassium	2920		P
6. Cadmium	1.2U ~~6.2U~~ MPC		P	18. Selenium	12U		F
7. Calcium	95000		P	19. Silver	2.5U	N	MPC P
8. Chromium	45		P	20. Sodium	1290		P
9. Cobalt	[6.2]		P	21. Thallium	2.5U		F
10. Copper	25		P	22. Vanadium	19		P
11. Iron	21500		P	23. Zinc	115	*	P
12. Lead	14		F	Percent Solids (%)	~~80.8~~ MPC 80.0 MPC		

Cyanide 0.6U N

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: SAMPLE DESCRIPTION: SOIL, MEDIUM + FINE, BROWN, ROOTS

Lab Manager [signature]

IFB Amend. One

Document Control No. _____
Page 2 of 5

Form I

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

EPA Sample No.
MEP 768

Date 11-14-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME CSMRI-Analytica, Inc.
CASE NO. 8142
SOW NO. 785
Lab Receipt Date 10-2-87
LAB SAMPLE ID. NO. —
QC REPORT NO. 3546

Elements Identified and Measured

Concentration: Low X Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

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

1. Aluminum	6670	*	P	13. Magnesium	54000	*	P
2. Antimony	19U ~~12U~~ MPC	N	F	14. Manganese	613		P
3. Arsenic	19 ~~12~~ MPC	N S	F	15. Mercury	0.16U		CV
4. Barium	[24]		P	16. Nickel	30		P
5. Beryllium	[0.3]		P	17. Potassium	2230		P
6. Cadmium	1.6U		P	18. Selenium	1.6U		F
7. Calcium	117000		P	19. Silver	3.2U	N	P
8. Chromium	12		P	20. Sodium	[502]		P
9. Cobalt	[8.6]		P	21. Thallium	3.2U		F
10. Copper	43		P	22. Vanadium	20		P
11. Iron	29700		P	23. Zinc	237	*	P
12. Lead	37 ~~22~~ MPC ~~20~~ MPC		S F	Percent Solids (%)	63		

Cyanide 0.8U N

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: SAMPLE DESCRIPTION: SOIL, FINE, MEDIUM, ~~BROWN WITH ROOTS~~ MPC COARSE, DARK BROWN, WITH ROOTS

Lab Manager [signature]

IFB Amend. One

Document Control No._____
Page 3 of 5

Form I

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

EPA Sample No.
MEP -769

Date 11-14-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME CSMRI-Analytica, Inc.

CASE NO. 8142

SOW NO. 785

Lab Receipt Date 10-2-87

LAB SAMPLE ID. NO. 3546-MEP 769

QC REPORT NO. 3546

Elements Identified and Measured

Concentration: Low x Medium_____

Matrix: Water_____ Soil x Sludge_____ Other_____

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

1. Aluminum	13700	*	P	13. Potassium	31100	*	P
2. Antimony	~~174~~ ~~174~~ MPC	N	F	14. Manganese	474		P
3. Arsenic	7.4 ~~5.2~~ MPC	N	F	15. Mercury	0.14U		CV
4. Barium	[55]		P	16. Nickel	29		P
5. Beryllium	[0.6]		P	17. Potassium	3510		P
6. Cadmium	1.4U		P	18. Selenium	1.4U		F
7. Calcium	68000		P	19. Silver	2.9U	N	MPC X P
8. Chromium	21		P	20. Sodium	423U		P
9. Cobalt	[8.6]		P	21. Thallium	2.9U		F
10. Copper	38		P	22. Vanadium	33		P
11. Iron	27600		P	23. Zinc	145	*	P
12. Lead	23 ~~16~~ MPC		F	Percent Solids (%)	70.~~4~~ MPC		
Cyanide	0.7 U	N					

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: SAMPLE DESCRIPTION: ~~SOIL, FINE, MEDIUM, COARSE, DARK~~ MPC ~~BROWN, WITH LEAVES~~ MPC ~~WITH ROOTS~~

SOIL, FINE, BROWN, WITH ROOTS

Lab Manager [signature]

IFB Amend. One

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Page 4 of 5

Form I

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

EPA Sample No.
MEP 770

Date 11-14-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME CSMRI-Analytica, Inc.
CASE NO. 8142
SOW NO. 785
Lab Receipt Date 10-2-87
LAB SAMPLE ID. NO. 3546-MEP 770
QC REPORT NO. 3546

Elements Identified and Measured

Concentration: Low X Medium ____

Matrix: Water ____ Soil X Sludge ____ Other ____

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

1.	Aluminum	19500	* P	13.	Magnesium	6590	* P
2.	Antimony	16U ~~12U~~ MRC	N F	14.	Manganese	397	P
3.	Arsenic	6.4 ~~4.8~~ MRC	N F	15.	Mercury	0.13 U	CV
4.	Barium	105	P	16.	Nickel	25	P
5.	Beryllium	[0.87]	P	17.	Potassium	2590	P
6.	Cadmium	1.3	P	18.	Selenium	1.3U ~~1U~~ MRC	F
7.	Calcium	10300	P	19.	Silver	2.7U	N MRC
8.	Chromium	30	P	20.	Sodium	395U	P
9.	Cobalt	[6.77]	P	21.	Thallium	2.7U	F
10.	Copper	30	P	22.	Vanadium	46	P
11.	Iron	32000	P	23.	Zinc	97	* P
12.	Lead	20 ~~15~~ MRC	F		Percent Solids (%)	~~74.9~~ MRC 75	

Cyanide 0.7U N

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: SAMPLE DESCRIPTION: SOIL, FINE, BLACK AND BROWN WITH ROOTS

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Lab Manager [signature]

ISB Amend. One

Document Control No._____

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Form I

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

EPA Sample No.
MEP 772

Date 11-14-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME CSMRI-Analytica, Inc.

CASE NO. 8142

SOW NO. 785

Lab Receipt Date 10-2-87

LAB SAMPLE ID. NO. 3546-MEP 772

QC REPORT NO. 3546

Elements Identified and Measured

Concentration: Low X Medium____

Matrix: Water____ Soil X Sludge____ Other____

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

1.	Aluminum	23900	* P	13.	Magnesium	15100	* P
2.	Antimony	15U ~~12U~~ MPC	N F	14.	Manganese	664	P
3.	Arsenic	6.9 ~~5.6~~ MPC	N F	15.	Mercury	0.12U	CV
4.	Barium	116	P	16.	Nickel	74	P
5.	Beryllium	[1.0]	P	17.	Potassium	5060	P
6.	Cadmium	1.2U	P	18.	Selenium	1.7U	F
7.	Calcium	22000	P	19.	Silver	2.5U	N MPC P
8.	Chromium	123	P	20.	Sodium	1290	P
9.	Cobalt	13	P	21.	Thallium	2.5U	F
10.	Copper	35	P	22.	Vanadium	50	P
11.	Iron	28900	P	23.	Zinc	129	* P
12.	Lead	30 ~~24~~ MPC	S F		Percent Solids (%)	81.3 MPC	

Cyanide 0.6U N

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: SAMPLE DESCRIPTION: SOIL, FINE, DARK BROWN WITH ROOTS

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Lab Manager [signature]

IFB Amend. One

Sample Number
EN 545

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: HAZLETON LABORATORIES

Case No: 8142

Lab Sample ID No: 71000455

QC Report No:

Sample Matrix: Soil

Contract No: 68-01-7146

Data Release Authorized By: [signature]

Date Sample Received: 10/02/87

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 10/06/87

Date Analyzed: 10/06/87

Conc/Dil Factor: 1 pH 8.3

Percent Moisture: (Not Decanted) 18.4 CF = 1.23

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	12 U
74-83-9	Bromomethane	12 U
75-01-4	Vinyl Chloride	12 U
75-00-3	Chloroethane	12 U
75-09-2	Methylene Chloride	13 B
67-64-1	Acetone	36 B
75-15-0	Carbon Disulfide	6 U
75-35-4	1, 1-Dichloroethene	6 U
75-34-3	1, 1-Dichloroethane	6 U
156-60-5	Trans-1, 2-Dichloroethene	6 U
67-66-3	Chloroform	5
107-06-2	1, 2-Dichloroethane	6 U
78-93-3	2-Butanone	12 U
71-55-6	1, 1, 1-Trichloroethane	6 U
56-23-5	Carbon Tetrachloride	6 U
108-05-4	Vinyl Acetate	12 U
75-27-4	Bromodichloromethane	6 U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	6 U
10061-02-6	Trans-1, 3-Dichloropropene	6 U
79-01-6	Trichloroethene	6 U
124-48-1	Dibromochloromethane	6 U
79-00-5	1, 1, 2-Trichloroethane	6 U
71-43-2	Benzene	6 U
10061-01-5	cis-1, 3-Dichloropropene	6 U
110-75-8	2-Chloroethylvinylether	12 U
75-25-2	Bromoform	6 U
108-10-1	4-Methyl-2-Pentanone	12 U
591-78-6	2-Hexanone	12 U
127-18-4	Tetrachloroethene	6 U
79-34-5	1, 1, 2, 2-Tetrachloroethane	6 U
108-88-3	Toluene	3 J B
108-90-7	Chlorobenzene	6 U
100-41-4	Ethylbenzene	6 U
100-42-5	Styrene	6 U
	Total Xylenes	6 U

Data Reporting Qualifiers

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

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

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

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

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

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

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

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ecology and environment

Laboratory Name: HAZLETON LABORATORIES

Case No: 8142

Sample Number
EN 545

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 10/5/87

Date Analyzed: 10/27/87

Conc/Dil Factor: 1

Percent Moisture (Decanted) 18.4

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	410u	
111-44-4	bis-2-Chloroethyl Ether		
95-57-8	2-Chlorophenol		
541-73-1	1, 3-Dichlorobenzene		
106-46-7	1, 4-Dichlorobenzene		
100-51-6	Benzyl Alcohol		
95-50-1	1, 2-Dichlorobenzene		
95-48-7	2-Methylphenol		
39638-32-9	bis(2-chloroisopropyl) Ether		
106-44-5	4-Methylphenol		
621-64-7	N-Nitroso-Di-n-Propylamine		
67-72-1	Hexachloroethane		
98-95-3	Nitrobenzene		
78-59-1	Isophorone		
88-75-5	2-Nitrophenol		
105-67-9	2, 4-Dimethylphenol		
65-85-0	Benzoic Acid	80 J	•
111-91-1	bis-2-Chloroethoxy Methane	410u	
120-83-2	2, 4-Dichlorophenol		
120-82-1	1, 2, 4-Trichlorobenzene		
91-20-3	Naphthalene		
106-47-8	4-Chloroaniline		
87-68-3	Hexachlorobutadiene		
59-50-7	4-Chloro-3-Methylphenol		
91-57-6	2-Methylnaphthalene		
77-47-4	Hexachlorocyclopentadiene		
88-06-2	2, 4, 6-Trichlorophenol		
95-95-4	2, 4, 5-Trichlorophenol	2000u	•
91-58-7	2-Chloronaphthalene	410u	
88-74-4	2-Nitroaniline	2000u	•
131-11-3	Dimethyl Phthalate	410u	
208-96-8	Acenaphthylene		
99-09-2	3-Nitroaniline	2000u	•

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	410u	
51-28-5	2, 4-Dinitrophenol	2000u	•
100-02-7	4-Nitrophenol	2000u	•
132-64-9	Dibenzofuran	410u	
121-14-2	2, 4-Dinitrotoluene		
606-20-2	2, 6-Dinitrotoluene		
84-66-2	Diethylphthalate	278J	
7005-72-3	4-Chlorophenyl-phenylether	410u	
86-73-7	Fluorene		
100-01-6	4-Nitroaniline	2000u	•
534-52-1	4, 6-Dinitro-2-Methylphenol	2000u	•
86-30-6	N-Nitrosodiphenylamine (1)	410u	
101-55-3	4-Bromophenyl-phenylether		
118-74-1	Hexachlorobenzene		
87-86-5	Pentachlorophenol	2000u	•
85-01-8	Phenanthrene	56J	
120-12-7	Anthracene	410u	
84-74-2	Di-n-Butylphthalate	2600B	
206-44-0	Fluoranthene	410J	
129-00-0	Pyrene	83J	
85-68-7	Butylbenzylphthalate	410u	
91-94-1	3, 3'-Dichlorobenzidine	820u	•
56-55-3	Benzo(a)Anthracene	410u	
117-81-7	bis(2-Ethylhexyl)Phthalate	648J	
218-01-9	Chrysene	43J	
117-84-0	Di-n-Octyl Phthalate	410u	
205-99-2	Benzo(b)Fluoranthene	75J	coelute
207-08-9	Benzo(k)Fluoranthene		
50-32-8	Benzo(a)Pyrene	410u	
193-39-5	Indeno(1, 2, 3-cd)Pyrene		
53-70-3	Dibenzo(a,h)Anthracene		
191-24-2	Benzo(g,h,i)Perylene		

(1)-Cannot be separated from diphenylamine

Form 1

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Laboratory Name HAZLETON LABORATORIES

Case No 8142

Sample Number
EN 545

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared: 10-5-87

Date Analyzed 10-22-87

Conc/Dil Factor 1

Percent Moisture (decanted) 18.4%

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	9.8u
319-85-7	Beta-BHC	9.8u
319-86-8	Delta-BHC	9.8u
58-89-9	Gamma-BHC (Lindane)	9.8u
76-44-8	Heptachlor	9.8u
309-00-2	Aldrin	9.8u
1024-57-3	Heptachlor Epoxide	9.8u
959-98-8	Endosulfan I	9.8u
60-57-1	Dieldrin	20u
72-55-9	4,4'-DDE	20u
72-20-8	Endrin	20u
33213-65-9	Endosulfan II	20u
72-54-8	4,4'-DDD	20u
1031-07-8	Endosulfan Sulfate	20u
50-29-3	4,4'-DDT	20u
72-43-5	Methoxychlor	98u
53494-70-5	Endrin Ketone	20u
57-74-9	Chlordane	98u
8001-35-2	Toxaphene	200u
12674-11-2	Aroclor-1016	98u
11104-28-2	Aroclor-1221	98u
11141-16-5	Aroclor-1232	98u
53469-21-9	Aroclor-1242	98u
12672-29-6	Aroclor-1248	98u
11097-69-1	Aroclor-1254	200u
11096-82-5	Aroclor-1260	200u

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 — or W_s 24g V_t 20,000ul V_i 4.0ul

Laboratory Name HAZLETON LABORATORIES

Case No 8142

Sample Number
EN548

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. 57-15-8	2-Propanol, 1,1,1-Trichloro-2-Methyl	BNA	356	340
2.	Unknown		474	330
3. 17301-32-5	Undecane, 4,7-Dimethyl		773	240
4. 13287-21-3	Tridecane 6-Methyl		1173	320
5. 54105-62-8	Heptadecane, 2,6-Dimethyl		1178	500
6. 74264-11-7	Trans, Tricarbonyl(N-(Phenyl-2-Pyridinylmethylene Benzenemethanamine-N,N))		1256	220
7. 629-92-5	Nonadecane		1264	290
8. 17851-53-5	1,2-Benzenedicarboxylic Acid, Butyl 2-Methylhexyl Ester		1307	310
9.	Unknown		1336	200
10. 10544-50-0	Sulfur		1417	4300
11. 2432-89-5	Decanedioic Acid, Didecyl Ester		1749	430
12. 630-02-4	Octacosane		1867	280
13.	Unknown		1977	260
14.	Unknown		1982	210
15.	Unknown		2092	250
16.	Unknown		2112	290
17.	Unknown		2143	370
18.	Unknown		2158	230
19.	Unknown		2186	1700
20.	Unknown	↓	2208	230
21. 109-66-0	Pentane	VOA	225	29
22. 110-54-3	Hexane	↓	332	7
23. —	No Pesticides found	PEST	—	—
24.				
25.				
26.				
27.				
28.				
29.				
30.				

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Sample Number
EN545 RE

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: HAZLETON LABORATORIES
Case No: 8142
Lab Sample ID No: 71000455
QC Report No:
Sample Matrix: Soil
Contract No: 68-01-7146
Data Release Authorized By: David C. Yelle
Date Sample Received: 10/02/87

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 10/07/87
Date Analyzed: 10/07/87
Conc/Dil Factor: 1 pH 8.3
Percent Moisture: (Not Decanted) 18.4 CF=1.23

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	12U
74-83-9	Bromomethane	12U
75-01-4	Vinyl Chloride	12U
75-00-3	Chloroethane	12U
75-09-2	Methylene Chloride	11 B
67-64-1	Acetone	22 B
75-15-0	Carbon Disulfide	6U
75-35-4	1, 1-Dichloroethene	6U
75-34-3	1, 1-Dichloroethane	6U
156-60-5	Trans-1, 2-Dichloroethene	6U
67-66-3	Chloroform	2J
107-06-2	1, 2-Dichloroethane	6U
78-93-3	2-Butanone	12U
71-55-6	1, 1, 1-Trichloroethane	6U
56-23-5	Carbon Tetrachloride	6U
108-05-4	Vinyl Acetate	12U
75-27-4	Bromodichloromethane	6U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	6U
10061-02-6	Trans-1, 3-Dichloropropene	6U
79-01-6	Trichloroethene	6U
124-48-1	Dibromochloromethane	6U
79-00-5	1, 1, 2-Trichloroethane	6U
71-43-2	Benzene	6U
10061-01-5	cis-1, 3-Dichloropropene	6U
110-75-8	2-Chloroethylvinylether	12U
75-25-2	Bromoform	6U
108-10-1	4-Methyl-2-Pentanone	12U
591-78-6	2-Hexanone	12U
127-18-4	Tetrachloroethene	6U
79-34-5	1, 1, 2, 2-Tetrachloroethane	6U
108-88-3	Toluene	3JB
108-90-7	Chlorobenzene	6U
100-41-4	Ethylbenzene	6U
100-42-5	Styrene	6U
	Total Xylenes	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 µg/l and a concentration of 3 µg/l is calculated, report as 3J

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

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

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

Laboratory Name HAZLETON LABORATORIES

Case No 8142

Sample Number
EN 545 RE

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 volatiles found	VOA		
2.				
3.				
4.				
5.				
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30.				

Sample Number
EN 546

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: HAZLETON LABORATORIES
Case No: 8142
Lab Sample ID No: 71000456
QC Report No:
Sample Matrix: Soil
Contract No: 68-01-7146
Data Release Authorized By: David C Gilly
Date Sample Received: 10/02/87

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 10/06/87
Date Analyzed: 10/06/87
Conc/Dil Factor: 1 pH 8.2
Percent Moisture: (Not Decanted) 25.5 C.F. = 1.34

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	13u
74-83-9	Bromomethane	13u
75-01-4	Vinyl Chloride	13u
75-00-3	Chloroethane	13u
75-09-2	Methylene Chloride	9 B
67-64-1	Acetone	40 B
75-15-0	Carbon Disulfide	7u
75-35-4	1, 1-Dichloroethene	7u
75-34-3	1, 1-Dichloroethane	7u
156-60-5	Trans-1, 2-Dichloroethene	7u
67-66-3	Chloroform	3J
107-06-2	1, 2-Dichloroethane	7u
78-93-3	2-Butanone	13u
71-55-6	1, 1, 1-Trichloroethane	7u
56-23-5	Carbon Tetrachloride	7u
108-05-4	Vinyl Acetate	13u
75-27-4	Bromodichloromethane	7u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	7u
10061-02-6	Trans-1, 3-Dichloropropene	7u
79-01-6	Trichloroethene	7u
124-48-1	Dibromochloromethane	7u
79-00-5	1, 1, 2-Trichloroethane	7u
71-43-2	Benzene	7u
10061-01-5	cis-1, 3-Dichloropropene	7u
110-75-8	2-Chloroethylvinylether	13u
75-25-2	Bromoform	7u
108-10-1	4-Methyl-2-Pentanone	13u
591-78-6	2-Hexanone	13u
127-18-4	Tetrachloroethene	7u
79-34-5	1, 1, 2, 2-Tetrachloroethane	7u
108-88-3	Toluene	2J B
108-90-7	Chlorobenzene	7u
100-41-4	Ethylbenzene	7u
100-42-5	Styrene	7u
	Total Xylenes	7u

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 pesticide ≥10 ng/ul in the final extract should be confirmed by GC/MS

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

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

Laboratory Name: HAZLETON LABORATORIES

Case No: 8142

Sample Number
EN 546

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 10/5/87

Date Analyzed: 10/27/87

Conc/Dil Factor: 1

Percent Moisture (Decanted) 25%

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	450 u
111-44-4	bis-2-Chloroethyl Ether	
95-57-8	2-Chlorophenol	
541-73-1	1,3-Dichlorobenzene	
106-46-7	1,4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	
95-50-1	1,2-Dichlorobenzene	
95-48-7	2-Methylphenol	
39638-32-9	bis(2-chloroisopropyl) Ether	
106-44-5	4-Methylphenol	
621-64-7	N-Nitroso-Di-n-Propylamine	
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	
78-59-1	Isophorone	
88-75-5	2-Nitrophenol	
105-67-9	2,4-Dimethylphenol	✓
65-85-0	Benzoic Acid	2200 u •
111-91-1	bis-2-Chloroethoxy Methane	450 u
120-83-2	2,4-Dichlorophenol	
120-82-1	1,2,4-Trichlorobenzene	
91-20-3	Naphthalene	
106-47-8	4-Chloroaniline	
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	
91-57-6	2-Methylnaphthalene	
77-47-4	Hexachlorocyclopentadiene	
88-06-2	2,4,6-Trichlorophenol	✓
95-95-4	2,4,5-Trichlorophenol	2200 u •
91-58-7	2-Chloronaphthalene	450 u
88-74-4	2-Nitroaniline	2200 u •
131-11-3	Dimethyl Phthalate	450 u
208-96-8	Acenaphthylene	✓
99-09-2	3-Nitroaniline	2200 u •

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	450 u
51-28-5	2,4-Dinitrophenol	2200 u •
100-02-7	4-Nitrophenol	2200 u •
132-64-9	Dibenzofuran	450 u
121-14-2	2,4-Dinitrotoluene	
606-20-2	2,6-Dinitrotoluene	
84-66-2	Diethylphthalate	
7005-72-3	4-Chlorophenyl-phenylether	
86-73-7	Fluorene	✓
100-01-6	4-Nitroaniline	2200 u •
534-52-1	4,6-Dinitro-2-Methylphenol	2200 u •
86-30-6	N-Nitrosodiphenylamine (1)	450 u
101-55-3	4-Bromophenyl-phenylether	
118-74-1	Hexachlorobenzene	✓
87-86-5	Pentachlorophenol	2200 u •
85-01-8	Phenanthrene	65 J
120-12-7	Anthracene	45 J u
84-74-2	Di-n-Butylphthalate	530 B
206-44-0	Fluoranthene	100 J
129-00-0	Pyrene	75 J
85-68-7	Butylbenzylphthalate	450 u
91-94-1	3,3'-Dichlorobenzidine	900 u •
56-55-3	Benzo(a)Anthracene	450 u
117-81-7	bis(2-Ethylhexyl)Phthalate	150 BJ
218-01-9	Chrysene	50 J
117-84-0	Di-n-Octyl Phthalate	450 u
205-99-2	Benzo(b)Fluoranthene	62 J } combined
207-08-9	Benzo(k)Fluoranthene	✓
50-32-8	Benzo(a)Pyrene	450 u
193-39-5	Indeno(1,2,3-cd)Pyrene	
53-70-3	Dibenzo(a,h)Anthracene	
191-24-2	Benzo(g,h,i)Perylene	✓

(1)-Cannot be separated from diphenylamine

Laboratory Name HAZLETON LABORATORIES

Case No 8142

Sample Number
EW 546

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared 10-5-87

Date Analyzed 10-22-87

Conc/Dil Factor: 1

Percent Moisture (decanted) 25.5

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	11u
319-85-7	Beta-BHC	11u
319-86-8	Delta-BHC	11u
58-89-9	Gamma-BHC (Lindane)	11u
76-44-8	Heptachlor	11u
309-00-2	Aldrin	11u
1024-57-3	Heptachlor Epoxide	11u
959-98-8	Endosulfan I	11u
60-57-1	Dieldrin	21u
72-55-9	4,4'-DDE	21u
72-20-8	Endrin	21u
33213-65-9	Endosulfan II	21u
72-54-8	4,4'-DDD	21u
1031-07-8	Endosulfan Sulfate	21u
50-29-3	4,4'-DDT	21u
72-43-5	Methoxychlor	110u
53494-70-5	Endrin Ketone	21u
57-74-9	Chlordane	110u
8001-35-2	Toxaphene	210u
12674-11-2	Aroclor-1016	110u
11104-28-2	Aroclor-1221	110u
11141-16-5	Aroclor-1232	110u
53469-21-9	Aroclor-1242	110u
12672-29-6	Aroclor-1248	110u
11097-69-1	Aroclor-1254	210u
11096-82-5	Aroclor-1260	210u

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 — or W_s 22 g V_t 20,000 µl V_i 4.0 µl

Laboratory Name HAZLETON LABORATORIES

Case No 8142

Sample Number
EN546

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. 17301-32-5	Undecane, 4,7-Dimethy	BNA	991	260
2. 6418-91-7	Tridecane, 3-Methyl		1177	320
3. 1921-30-6	Pentadecane, 2,6,10,13-Tetramethyl		1177	520
4. 74764-11-7	Trans Tricarbonyl [N-(Benzylidene)-2-Pyridinemethylamine]		1255	250
5. 629-92-5	Nonadecane		1263	320
6. 10544-50-0	Sulfur		1417	7500
7. 54105-67-8	Heptadecane 2,6-Dimethyl		1484	280
8.	Unknown		1541	350
9.	Unknown		1548	290
10. 629-97-0	Docosane		1554	770
11.	Unknown		1561	300
12.	Unknown		1565	690
13.	Unknown		1696	410
14. 629-99-2	Pentacosane		1975	410
15.	Unknown		2091	520
16.	Unknown		2112	460
17.	Unknown		2187	4200
18.	Unknown		2206	680
19.	Unknown		2223	280
20.	Unknown	↓	2288	850
21. 629-14-1	1,2-Diethoxyethane	VOA	191	8
22. 109-66-0	Pentane	↓	226	20
23. —	No Pesticides found	PEST	—	—
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Sample Number
EN 547

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: HAZLETON LABORATORIES
Case No: 8142
Lab Sample ID No: 71000457
QC Report No:
Sample Matrix: Soil
Contract No: 68-01-7146
Data Release Authorized By: David Cijek
Date Sample Received: 10/02/87

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 10/06/87
Date Analyzed: 10/06/87
Conc/Dil Factor: 1 pH 8.1
Percent Moisture: (Not Decanted) 24.2 C·F = 1.32

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	13U
74-83-9	Bromomethane	13U
75-01-4	Vinyl Chloride	13U
75-00-3	Chloroethane	13U
75-09-2	Methylene Chloride	6JB
67-64-1	Acetone	31B
75-15-0	Carbon Disulfide	7U
75-35-4	1, 1-Dichloroethene	7U
75-34-3	1, 1-Dichloroethane	7U
156-60-5	Trans-1, 2-Dichloroethene	7U
67-66-3	Chloroform	4J
107-06-2	1, 2-Dichloroethane	7U
78-93-3	2-Butanone	13U
71-55-6	1, 1, 1-Trichloroethane	7U
56-23-5	Carbon Tetrachloride	7U
108-05-4	Vinyl Acetate	13U
75-27-4	Bromodichloromethane	7U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	7U
10061-02-6	Trans-1, 3-Dichloropropene	7U
79-01-6	Trichloroethene	7U
124-48-1	Dibromochloromethane	7U
79-00-5	1, 1, 2-Trichloroethane	7U
71-43-2	Benzene	7U
10061-01-5	cis-1, 3-Dichloropropene	7U
110-75-8	2-Chloroethylvinylether	13U
75-25-2	Bromoform	7U
108-10-1	4-Methyl-2-Pentanone	13U
591-78-6	2-Hexanone	13U
127-18-4	Tetrachloroethene	7U
79-34-5	1, 1, 2, 2-Tetrachloroethane	7U
108-88-3	Toluene	1JB
108-90-7	Chlorobenzene	7U
100-41-4	Ethylbenzene	7U
100-42-5	Styrene	7U
	Total Xylenes	7U

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

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Laboratory Name: HAZLETON LABORATORIES

Case No: 8142

Sample Number
FN 547

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 10/5/87

Date Analyzed: 10/27/87

Conc/Dil Factor: 1

Percent Moisture (Decanted) 24.2

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	440 u	
111-44-4	bis-2-Chloroethyl Ether		
95-57-8	2-Chlorophenol		
541-73-1	1,3-Dichlorobenzene		
106-46-7	1,4-Dichlorobenzene		
100-51-6	Benzyl Alcohol		
95-50-1	1,2-Dichlorobenzene		
95-48-7	2-Methylphenol		
39638-32-9	bis(2-chloroisopropyl)Ether		
106-44-5	4-Methylphenol		
621-64-7	N-Nitroso-Di-n-Propylamine		
67-72-1	Hexachloroethane		
98-95-3	Nitrobenzene		
78-59-1	Isophorone		
88-75-5	2-Nitrophenol		
105-67-9	2,4-Dimethylphenol		
65-85-0	Benzoic Acid	2200 u	•
111-91-1	bis-2-Chloroethoxy Methane	440 u	
120-83-2	2,4-Dichlorophenol		
120-82-1	1,2,4-Trichlorobenzene		
91-20-3	Naphthalene		
106-47-8	4-Chloroaniline		
87-68-3	Hexachlorobutadiene		
59-50-7	4-Chloro-3-Methylphenol		
91-57-6	2-Methylnaphthalene		
77-47-4	Hexachlorocyclopentadiene		
88-06-2	2,4,6-Trichlorophenol		
95-95-4	2,4,5-Trichlorophenol	2200 u	•
91-58-7	2-Chloronaphthalene	440 u	
88-74-4	2-Nitroaniline	2200 u	•
131-11-3	Dimethyl Phthalate	440 u	
208-96-8	Acenaphthylene	440 u	
99-09-2	3-Nitroaniline	2200 u	•

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	440 u	
51-28-5	2,4-Dinitrophenol	2200 u	•
100-02-7	4-Nitrophenol	2200 u	•
132-64-9	Dibenzofuran	440 u	
121-14-2	2,4-Dinitrotoluene		
606-20-2	2,6-Dinitrotoluene		
84-66-2	Diethylphthalate	18 BJ	
7005-72-3	4-Chlorophenyl-phenylether	440 u	
86-73-7	Fluorene		
100-01-6	4-Nitroaniline	2200 u	•
534-52-1	4,6-Dinitro-2-Methylphenol	2200 u	•
86-30-6	N-Nitrosodiphenylamine (1)	59 BJ	
101-55-3	4-Bromophenyl-phenylether	440 u	
118-74-1	Hexachlorobenzene		
87-86-5	Pentachlorophenol	2200 u	•
85-01-8	Phenanthrene	440 u	
120-12-7	Anthracene		
84-74-2	Di-n-Butylphthalate	3300 B	
206-44-0	Fluoranthene	440 u	
129-00-0	Pyrene	4 J	
85-68-7	Butylbenzylphthalate	440 u	
91-94-1	3,3'-Dichlorobenzidine	880 u	•
56-55-3	Benzo(a)Anthracene	440 u	
117-81-7	bis(2-Ethylhexyl)Phthalate	25 BJ	
218-01-9	Chrysene	440 u	
117-84-0	Di-n-Octyl Phthalate		
205-99-2	Benzo(b)Fluoranthene		
207-08-9	Benzo(k)Fluoranthene		
50-32-8	Benzo(a)Pyrene		
193-39-5	Indeno(1,2,3-cd)Pyrene		
53-70-3	Dibenz(a,h)Anthracene		
191-24-2	Benzo(g,h,i)Perylene		

(1)-Cannot be separated from diphenylamine

Laboratory Name HAZLETON LABORATORIES

Case No 8142

Sample Number
EN 547

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared: 10·5·87

Date Analyzed 10·22·87

Conc/Dil Factor 1

Percent Moisture (decanted) 34.2%

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	11u
319-85-7	Beta-BHC	11u
319-86-8	Delta-BHC	11u
58-89-9	Gamma-BHC (Lindane)	11u
76-44-8	Heptachlor	11u
309-00-2	Aldrin	11u
1024-57-3	Heptachlor Epoxide	11u
959-98-8	Endosulfan I	11u
60-57-1	Dieldrin	21u
72-55-9	4, 4'-DDE	21u
72-20-8	Endrin	21u
33213-65-9	Endosulfan II	21u
72-54-8	4, 4'-DDD	21u
1031-07-8	Endosulfan Sulfate	21u
50-29-3	4, 4'-DDT	21u
72-43-5	Methoxychlor	110u
53494-70-5	Endrin Ketone	21u
57-74-9	Chlordane	110u
8001-35-2	Toxaphene	210u
12674-11-2	Aroclor-1016	110u
11104-28-2	Aroclor-1221	110u
11141-16-5	Aroclor-1232	110u
53469-21-9	Aroclor-1242	110u
12672-29-6	Aroclor-1248	110u
11097-69-1	Aroclor-1254	210u
11096-82-5	Aroclor-1260	210u

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 — or W_s 23 g V_t 20,000 ul V_i 4.0 ul

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ecology and environment

Laboratory Name HAZLETON LABORATORIES

Case No 8142

Sample Number EN547

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. 109-66-0	Pentane	VOA	225	11
2. 3970-62-5	3-Pentanol, 2,2-Dimethyl	BNA	256	240
3. 3240-09-3	5-Hexene-2-one, 5-methyl		319..	210
4. 57-15-8	2-Propanol, 1,1,1,1-Trichloro-2-Methyl		355	400
5. 17851-53-5	1,2-Benzenedicarboxylic Acid, Butyl 2-Methyl propyl Ester		1307	400
6.				
7.	Unknown		2143	190
8.	Unknown		2166	940
9.	Unknown		2169	310
10.	Unknown		2175	330
11.	Unknown		2210	1800
12. —	No Pesticides found	PEST	—	—
13.				
14.				
15.				
16.				
17.				
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21.				
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29.				
30.				

Sample Number
EN548

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: HAZLETON LABORATORIES
Case No: 8142
Lab Sample ID No: 7100045 8
QC Report No:
Sample Matrix: Soil
Contract No: 68-01-7146
Data Release Authorized By: David C. Gillh
Date Sample Received: 10/02/87

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 10/06/87
Date Analyzed: 10/06/87
Conc/Dil Factor: 1 pH 7.9
Percent Moisture: (Not Decanted) 23.7 CF = 1.31

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	13U
74-83-9	Bromomethane	13U
75-01-4	Vinyl Chloride	13U
75-00-3	Chloroethane	13U
75-09-2	Methylene Chloride	7JB
67-64-1	Acetone	12JB
75-15-0	Carbon Disulfide	7U
75-35-4	1, 1-Dichloroethene	7U
75-34-3	1, 1-Dichloroethane	7U
156-60-5	Trans-1, 2-Dichloroethene	7U
67-66-3	Chloroform	4J
107-06-2	1, 2-Dichloroethane	7U
78-93-3	2-Butanone	13U
71-55-6	1, 1, 1-Trichloroethane	7U
56-23-5	Carbon Tetrachloride	7U
108-05-4	Vinyl Acetate	13U
75-27-4	Bromodichloromethane	7U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	7U
10061-02-6	Trans-1, 3-Dichloropropene	7U
79-01-6	Trichloroethene	7U
124-48-1	Dibromochloromethane	7U
79-00-5	1, 1, 2-Trichloroethane	7U
71-43-2	Benzene	7U
10061-01-5	cis-1, 3-Dichloropropene	7U
110-75-8	2-Chloroethylvinylether	13U
75-25-2	Bromoform	7U
108-10-1	4-Methyl-2-Pentanone	13U
591-78-6	2-Hexanone	13U
127-18-4	Tetrachloroethene	7U
79-34-5	1, 1, 2, 2-Tetrachloroethane	7U
108-88-3	Toluene	3JB
108-90-7	Chlorobenzene	7U
100-41-4	Ethylbenzene	7U
100-42-5	Styrene	7U
	Total Xylenes	7U

Data Reporting Qualifiers

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

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

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

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

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

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

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

Laboratory Name: HAZLETON LABORATORIES

Case No: 8142

Sample Number
EN 54X

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 10/5/87

Date Analyzed: 10/20/87

Conc/Dil Factor: 1

Percent Moisture (Decanted) 23.7

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	440u	
111-44-4	bis-2-Chloroethyl Ether		
95-57-8	2-Chlorophenol		
541-73-1	1,3-Dichlorobenzene		
106-46-7	1,4-Dichlorobenzene		
100-51-6	Benzyl Alcohol		
95-50-1	1,2-Dichlorobenzene		
95-48-7	2-Methylphenol		
39638-32-9	bis(2-chloroisopropyl) Ether		
106-44-5	4-Methylphenol		
621-64-7	N-Nitroso-Di-n-Propylamine		
67-72-1	Hexachloroethane		
98-95-3	Nitrobenzene		
78-59-1	Isophorone		
88-75-5	2-Nitrophenol		
105-67-9	2,4-Dimethylphenol	✓	
65-85-0	Benzoic Acid	2200u	*
111-91-1	bis-2-Chloroethoxy Methane	440u	
120-83-2	2,4-Dichlorophenol		
120-82-1	1,2,4-Trichlorobenzene		
91-20-3	Naphthalene		
106-47-8	4-Chloroaniline		
87-68-3	Hexachlorobutadiene		
59-50-7	4-Chloro-3-Methylphenol		
91-57-6	2-Methylnaphthalene		
77-47-4	Hexachlorocyclopentadiene		
88-06-2	2,4,6-Trichlorophenol	✓	
95-95-4	2,4,5-Trichlorophenol	2200u	*
91-58-7	2-Chloronaphthalene	440u	
88-74-4	2-Nitroaniline	2200u	*
131-11-3	Dimethyl Phthalate	440u	
208-96-8	Acenaphthylene	✓	
99-09-2	3-Nitroaniline	2200u	*

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	440u	
51-28-5	2,4-Dinitrophenol	2200u	*
100-02-7	4-Nitrophenol	2200u	*
132-64-9	Dibenzofuran	440u	
121-14-2	2,4-Dinitrotoluene		
606-20-2	2,6-Dinitrotoluene		
84-66-2	Diethylphthalate	2785	
7005-72-3	4-Chlorophenyl-phenylether	440u	
86-73-7	Fluorene	✓	
100-01-6	4-Nitroaniline	2200u	*
534-52-1	4,6-Dinitro-2-Methylphenol	2200u	*
86-30-6	N-Nitrosodiphenylamine (1)	360J	
101-55-3	4-Bromophenyl-phenylether	440u	
118-74-1	Hexachlorobenzene	✓	
87-86-5	Pentachlorophenol	2200u	*
85-01-8	Phenanthrene	440u	
120-12-7	Anthracene	✓	
84-74-2	Di-n-Butylphthalate	390J	
206-44-0	Fluoranthene	135J	
129-00-0	Pyrene	125J	
85-68-7	Butylbenzylphthalate	440u	
91-94-1	3,3'-Dichlorobenzidine	880u	*
56-55-3	Benzo(a)Anthracene	440u	
117-81-7	bis(2-Ethylhexyl)Phthalate		
218-01-9	Chrysene		
117-84-0	Di-n-Octyl Phthalate		
205-99-2	Benzo(b)Fluoranthene		
207-08-9	Benzo(k)Fluoranthene		
50-32-8	Benzo(a)Pyrene		
193-39-5	Indeno(1,2,3-cd)Pyrene		
53-70-3	Dibenzo(a,h)Anthracene		
191-24-2	Benzo(g,h,i)Perylene		

(1)-Cannot be separated from diphenylamine

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Laboratory Name HAZLETON LABORATORIES

Case No 8142

Sample Number
EN 548

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 10-5-87

Date Analyzed 10-22-87

Conc/Dil Factor 1

Percent Moisture (decanted) 23.7

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	10u
319-85-7	Beta-BHC	10u
319-86-8	Delta-BHC	10u
58-89-9	Gamma-BHC (Lindane)	10u
76-44-8	Heptachlor	10u
309-00-2	Aldrin	10u
1024-57-3	Heptachlor Epoxide	10u
959-98-8	Endosulfan I	10u
60-57-1	Dieldrin	21u
72-55-9	4,4'-DDE	21u
72-20-8	Endrin	21u
33213-65-9	Endosulfan II	21u
72-54-8	4,4'-DDD	21u
1031-07-8	Endosulfan Sulfate	21u
50-29-3	4,4'-DDT	21u
72-43-5	Methoxychlor	100u
53494-70-5	Endrin Ketone	21u
57-74-9	Chlordane	100u
8001-35-2	Toxaphene	210u
12674-11-2	Aroclor-1016	100u
11104-28-2	Aroclor-1221	100u
11141-16-5	Aroclor-1232	100u
53469-21-9	Aroclor-1242	100u
12672-29-6	Aroclor-1248	100u
11097-69-1	Aroclor-1254	210u
11096-82-5	Aroclor-1260	210u

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 — or W_s 23g V_t 20,000 µl V_i 41.0 µl

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Laboratory Name HAZLETON LABORATORIES

Case No 8142

Sample Number
EN 548

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 volatiles found	VOA	—	—
2. 57-15-8	2-Propanol, 1,1,1-Trichloro-2-Methyl	BNA	353	220
3. 17351-53-5	1,2-Benzenedicarboxylic Acid, Butyl		1308	360
4.	2-Methylpropyl Ester			
5. 7206-25-9	9-Octadecene		1764	180
6. 74764-11-7	Iron, Tricarbonyl[N-(Phenyl-2-Pyridinylmethylene)		1929	250
7.	Benzenamine-N,N']-			
8. 1454-85-9	1-Heptadecanol		1996	580
9. 629-99-2	Pentacosane		2083	470
10.	Unknown		2101	560
11.	Unknown		2145	890
12.	Unknown		2154	360
13.	Unknown		2159	370
14.	Unknown		2170	340
15.	Unknown		2179	360
16.	Unknown		2199	960
17.	Unknown		2216	1400
18.	Unknown		2220	1300
19.	Unknown		2231	1700
20.	Unknown	↓	2252	260
21. —	No pesticides found	PEST	—	—
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Sample Number
EN 550

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: HAZLETON LABORATORIES
Case No: 8142
Lab Sample ID No: 71000459
QC Report No:
Sample Matrix: Soil
Contract No: 68-01-7146
Data Release Authorized By: David C. Gill
Date Sample Received: 10/02/87

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 10/07/87
Date Analyzed: 10/07/87
Conc/Dil Factor: 1 pH 8.1
Percent Moisture: (Not Decanted) 17.5 CF = 1.21

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	12 U
74-83-9	Bromomethane	12 U
75-01-4	Vinyl Chloride	12 U
75-00-3	Chloroethane	12 U
75-09-2	Methylene Chloride	20 B
67-64-1	Acetone	24 B
75-15-0	Carbon Disulfide	6 U
75-35-4	1, 1-Dichloroethene	6 U
75-34-3	1, 1-Dichloroethane	6 U
156-60-5	Trans-1, 2-Dichloroethene	6 U
67-66-3	Chloroform	3 J
107-06-2	1, 2-Dichloroethane	6 U
78-93-3	2-Butanone	12 U
71-55-6	1, 1, 1-Trichloroethane	6 U
56-23-5	Carbon Tetrachloride	6 U
108-05-4	Vinyl Acetate	12 U
75-27-4	Bromodichloromethane	6 U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	6 U
10061-02-6	Trans-1, 3-Dichloropropene	6 U
79-01-6	Trichloroethene	6 U
124-48-1	Dibromochloromethane	6 U
79-00-5	1, 1, 2-Trichloroethane	6 U
71-43-2	Benzene	6 U
10061-01-5	cis-1, 3-Dichloropropene	6 U
110-75-8	2-Chloroethylvinylether	12 U
75-25-2	Bromoform	6 U
108-10-1	4-Methyl-2-Pentanone	12 U
591-78-6	2-Hexanone	12 U
127-18-4	Tetrachloroethene	6 U
79-34-5	1, 1, 2, 2-Tetrachloroethane	6 U
108-88-3	Toluene	6 B
108-90-7	Chlorobenzene	6 U
100-41-4	Ethylbenzene	6 U
100-42-5	Styrene	6 U
	Total Xylenes	6 U

Data Reporting Qualifiers

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

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

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

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

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

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

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

Laboratory Name HAZLETON LABORATORIES

Case No: 8142

Sample Number
EN5J0

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 10/5/82

Date Analyzed: 10/27/87

Conc/Dil Factor: 1

Percent Moisture (Decanted) 175

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	400 u
111-44-4	bis-2-Chloroethyl Ether	
95-57-8	2-Chlorophenol	
541-73-1	1,3-Dichlorobenzene	
106-46-7	1,4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	
95-50-1	1,2-Dichlorobenzene	
95-48-7	2-Methylphenol	
39638-32-9	bis(2-chloroisopropyl)Ether	
106-44-5	4-Methylphenol	
621-64-7	N-Nitroso-Di-n-Propylamine	
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	
78-59-1	Isophorone	
88-75-5	2-Nitrophenol	
105-67-9	2,4-Dimethylphenol	
65-85-0	Benzoic Acid	2000 u
111-91-1	bis-2-Chloroethoxy Methane	400 u
120-83-2	2,4-Dichlorophenol	
120-82-1	1,2,4-Trichlorobenzene	
91-20-3	Naphthalene	
106-47-8	4-Chloroaniline	
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	
91-57-6	2-Methylnaphthalene	
77-47-4	Hexachlorocyclopentadiene	
88-06-2	2,4,6-Trichlorophenol	
95-95-4	2,4,5-Trichlorophenol	2000 u
91-58-7	2-Chloronaphthalene	400 u
88-74-4	2-Nitroaniline	2000 u
131-11-3	Dimethyl Phthalate	400 u
208-96-8	Acenaphthylene	14 J
99-09-2	3-Nitroaniline	2000 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	110 J
51-28-5	2,4-Dinitrophenol	2000 u
100-02-7	4-Nitrophenol	2000 u
132-64-9	Dibenzofuran	55 J
121-14-2	2,4-Dinitrotoluene	400 u
606-20-2	2,6-Dinitrotoluene	
84-66-2	Diethylphthalate	20 BJ
7005-72-3	4-Chlorophenyl-phenylether	400 u
86-73-7	Fluorene	140 J
100-01-6	4-Nitroaniline	2000 u
534-52-1	4,6-Dinitro-2-Methylphenol	2000 u
86-30-6	N-Nitrosodiphenylamine (1)	400 u
101-55-3	4-Bromophenyl-phenylether	
118-74-1	Hexachlorobenzene	
87-86-5	Pentachlorophenol	2000 u
85-01-8	Phenanthrene	2100
120-12-7	Anthracene	420
84-74-2	Di-n-Butylphthalate	2900 B
206-44-0	Fluoranthene	1400
129-00-0	Pyrene	3700
85-68-7	Butylbenzylphthalate	400 u
91-94-1	3,3'-Dichlorobenzidine	800 u
56-55-3	Benzo(a)Anthracene	1600
117-81-7	bis(2-Ethylhexyl)Phthalate	140 BJ
218-01-9	Chrysene	1600
117-84-0	Di-n-Octyl Phthalate	400 u
205-99-2	Benzo(b)Fluoranthene	3500
207-08-9	Benzo(k)Fluoranthene	
50-32-8	Benzo(a)Pyrene	1800
193-39-5	Indeno(1,2,3-cd)Pyrene	1400
53-70-3	Dibenzo(a,h)Anthracene	400 u
191-24-2	Benzo(g,h,i)Perylene	1100

(1)-Cannot be separated from diphenylamine

DL= 400

HRS

HRS

J ZCK

Form 1 7/85

* data "J'd due to initial calibration - high RSD

Laboratory Name HAZLETON LABORATORIES

Case No 8142

Sample Number
EN 550

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared: 10-5-87

Date Analyzed: 10-22-87

Conc/Dil Factor: 1

Percent Moisture (decanted) 17.5 %

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	9.7u
319-85-7	Beta-BHC	9.7u
319-86-8	Delta-BHC	9.7u
58-89-9	Gamma-BHC (Lindane)	9.7u
76-44-8	Heptachlor	9.7u
309-00-2	Aldrin	9.7u
1024-57-3	Heptachlor Epoxide	9.7u
959-98-8	Endosulfan I	9.7u
60-57-1	Dieldrin	19u
72-55-9	4,4'-DDE	19u
72-20-8	Endrin	19u
33213-65-9	Endosulfan II	19u
72-54-8	4,4'-DDD	19u
1031-07-8	Endosulfan Sulfate	19u
50-29-3	4,4'-DDT	19u
72-43-5	Methoxychlor	97u
53494-70-5	Endrin Ketone	19u
57-74-9	Chlordane	97u
8001-35-2	Toxaphene	190u
12674-11-2	Aroclor-1016	97u
11104-28-2	Aroclor-1221	97u
11141-16-5	Aroclor-1232	97u
53469-21-9	Aroclor-1242	97u
12672-29-6	Aroclor-1248	97u
11097-69-1	Aroclor-1254	190u
11096-82-5	Aroclor-1260	190u

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 — or W_s 25 g V_t 20,000 µl V_i 4.0 µl

recycled paper

Laboratory Name HAZLETON LABORATORIES

Case No 8142

Sample Number
EN 350

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. 17851-53-5	1,2-Benzenedicarboxylic Acid Butyl 2-Ethylpropyl	BNA	1306	200
2.	Unknown		1332	340
3. 10544-50-0	Sulfur		1412	610
4. 22360-33-6	Naphthalene, 1,8-Di-1-propynyl		1484	360
5. 243-42-5	Benzo [B] Naphtho [2,3-D] Furan		1508	200
6. 238-84-6	11H-Benzo[A] Fluorene		1548	250
7. 243-17-4	11H-Benzo[B] Fluorene		1560	230
8. 203-12-3	Benzo [GHI] Fluoranthene		1664	220
9. 195-19-7	Benzo [C] Phenanthrene		1722	220
10.	Unknown		1866	210
11. 205-82-3	Benzo [J] Fluoranthene		1907	310
12. 205-99-2	Benz [E] Acephenanthrylene		1933	1700
13. 18435-45-5	n-Nonadecane		1981	2800
14. 629-99-2	Pentacosane		2081	350
15.	Unknown		2093	900
16.	Unknown		2148	3400
17.	Unknown		2157	1300
18.	Unknown		2180	1600
19.	Unknown		2208	400
20.	Unknown		2221	340
21. 629-14-1	Ethane, 1,2-diethoxy	VOA	187	10
22. 109-66-0	Pentane		224	12
23. 110-54-3	Hexane		332	6
24. —	No Pesticides found	PEST	—	—
25.				
26.				
27.				
28.				
29.				
30.				

Reference 4

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL

TELEPHONE CONVERSATION RECORD

COOK COUNTY - LPC

ARLINGTON HTS. / MUNICIPAL SITE INVENTORY NO. 0310090 1

Re:

Conversation With: GENE WILLROTH, DIR. PUB. WORKS - ARL. HTS.

⋈ I Called Party ( ) Party Called Me DATE: 2-18-76 TIME: 11:30 AM

What I Said:

① I WAS AT THE LANDFILL YESTERDAY AND SAW THE BARRELS BEING COVERED.

③ BUT THEY MUST HAVE A RESIDUE IN THEM AS A FILM CAN BE OBSERVED FLOATING ON THE ADJACENT PONDED WATER.

⑤ PLEASE SEND ME A LETTER TO THAT EFFECT + A COPY OF THE RECEIPT FROM LAKE LDFL.

⑦ SEND WHATEVER YOU CAN

What Other Party Said:

② YES, THEY ARE ALL EMPTY.

④ YES, I'M SURE THEY DO. THE BARR CAME FROM AN ADJOINING IND - TH HONEYWELL CO. THEY CONTAINED H_2O soluble cutting oils. WE HAD THE FULL ONES HAULED OUT TO LAKE LANDFILL. THEY WERE BROUG IN 2-2½ yrs. ago.

⑥ WILL DO, HOWEVER, THE BARRELS MA HAVE BEEN MIXED WITH GARBAGE.

RECEIVED
FEB 20 1976
ILL. E.P.A. - D.L.P.C.
STATE OF ILLINOIS

Bob Wengrow
Title: EPS II

SDMS US EPA Region V

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OVERSIZE MAP OF ARLINGTON HEIGHTS VICINITY

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