MAECORP

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FINAL REPORT

for

SAMPLING AND ANALYTICAL INVESTIGATIONS

at the

STACK PROPERTY
22ND STREET
CHICAGO, ILLINOIS

Presented to:

Karaganis and White Ltd.
Attorneys at Law
414 North Orleans Street, Suite 810
Chicago, Illinois 60610

Submitted by:

MAECORP Incorporated

March 27, 1989

Report #IL-A013-1

EPA Region 5 Records Ctr.
229813

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EXECUTIVE SUMMARY

Investigations performed on the site included soil sampling, soil borings, and the installation of three PVC monitoring wells. Resultant laboratory data suggest that there is contamination of volatiles, heavy metals, and PCB's at various concentrations.

Composite soil analysis from borings shows contamination of the following parameters:

Methylene Chloride
Toluene
1,1,1-Trichloroethane
Trichloroethene
Silver
Mercury
Lead
Chromium
Cadmium
Barium

Groundwater from monitoring wells shows contamination of the following parameters:

Silver
Barium
Cadmium
Chromium
Mercury
Lead
Selenium

Causes for the previous site fire have been determined to be the result of cinders which were disposed of by an unknown party. Contamination of the site from the storm sewer appears to be coming from EMCO Chemical distributors. Discolored effluent from the storm sewer was witnessed by MAECORP personnel on March 15, 1989. Sources of metal contamination are unknown.

INTRODUCTION

MAECORP Incorporated was requested by Karaganis and White Ltd. to perform environmental sampling of soil and groundwater on the Stack property located on 22nd Street in North Chicago.

The purposes of this environmental sampling were to determine what environmental contamination may be present and how the fire started this past year.

BORINGS AND MONITORING WELL INSTALLATION

Four borings were installed at the Stack site on January 5 and 6, 1989. Drilling was performed by Fox Drilling under subcontract to MAECORP Incorporated. Boreholes for all wells were drilled with a hollow stem auger through the glacial material. Drill bits, augers, split spoons, and the drill rig were steam-cleaned between boreholes to prevent cross-contamination. MAECORP personnel were on site to determine the exact location of borings.

Split Spoon Sampling

Continuous split spoon sampling was conducted with a drill rig for all borings. Sampling was conducted with a hardened steel split spoon containing a basket spring retainer that was held in place by a removable nosepiece. An AW drill rod receptacle-driver head cap was threaded to the top of the 18-inch split spoon barrel. Lengths of the drill rod were then attached to the assembled split spoon, and the split spoon was driven 18 inches. When the sampler had reached the target depth, the sampler was retrieved, opened, and the contents placed in discrete glass sample jars. Resultant soil cores were evaluated by the geologist on site. Boring logs are included in this report.

Monitoring Well Installation

Each monitoring well was installed upon completion of the borehole. The wells were constructed of 2-inch outside diameter, flush-jointed, schedule 40 threaded PVC casing. All monitoring

wells were constructed with 5 feet of 2-inch outside diameter, 0.010-inch machine-slotted PVC screen. Five-foot lengths were used to ensure that the potentiometric surface is present in the screen.

The annular space surrounding the screened interval in each well was filled with a filter pack consisting of fine graded silica sand. Formational sands were also used to form the filter pack when caving could not be controlled. The filter pack extends from the bottom of the borehole to one foot above the screened-in area.

A two-foot pelletized bentonite seal was placed above the filter sand, followed by cement grout to the surface. The lockable, flush-mount, steel protective casing was then installed into the cement.

All wells were surveyed for exact location and elevation by a licensed registered surveyor. Boring locations may be found in Figure 1, and detailed installation logs are included in this report for all borings and monitoring wells.

Sampling

Soil samples were collected on February 5 and 6, 1989. Samples were kept in a 40-ml glass VOA vial and a 1-quart glass jar with a teflon lid. Water samples were taken on February 17, 1989. Wells were purged of three volumes of water to ensure a representative sample. Samples were collected using a 24-inch teflon bailer and collected in one brown 1-quart jar, one clear

1-quart jar, and two 40-ml VOA vials. Samples were hand-delivered to Tenco Laboratories. Laboratory analysis reports and chain-of-custody records are attached.

Decontamination

The following procedures were used for all equipment which came in direct or indirect contact with sample materials:

1. Wipe off all visual foreign material with a laboratory wipe.
2. Wash with warm, soapy Alconox water.
3. Rinse with deionized water.
4. Air dry.

BORINGS AND MONITORING WELLS

Boring 1

The first boring was located on the south part of the property next to the stream and 22nd Street. The boring was sampled by split spoon to a depth of 10.5 feet. No water was encountered, and drilling was discontinued at 25 feet; no well was installed. The boring was sealed with bentonite and concrete to prevent vertical migration of possible contaminants. Seven 18-inch split spoons were taken and analyzed individually in the field. A composite sample was sent to a laboratory for analysis. Composite soil analysis from Boring 1 was found to contain the following contaminants:

Parameter	Concentration (ppm)
Silver	5.08
Barium	53.1
Cadmium	0.677
Chromium	7.22
Mercury	0.417
Lead	221.0

Boring 2/Monitoring Well 1

The second boring was located east of the gravel road dividing the property. The boring was sampled to 10.5 feet, and the monitoring well was then set into the boring to this depth. The well consisted of a five-foot PVC screen connected to a PVC riser. Seven 18-inch split spoons were taken and analyzed individually in the field. A composite sample was sent for laboratory analysis. Total depth of the well from the ground surface is 12.5 feet, and depth to groundwater in the well from the top

of the casing was 10.33 feet. The top of the casing is at 651.83 feet above mean sea level. The top of the water table was calculated at 641.50 feet above mean sea level. Composite soil analysis from Boring 2 was found to contain the following contaminants:

Parameter	Concentration (ppm)
Silver	2.43
Barium	525.0
Cadmium	9.46
Chromium	12.8
Mercury	0.350
Lead	3881.0
Toluene	0.0429

Groundwater from monitoring well 1 (MW-1) was found to contain the following contaminants:

Parameter	Concentration (ppm)
Silver	0.018
Barium	0.558
Cadmium	0.006
Chromium	0.212
Mercury	0.0043
Lead	1.56
Selenium	0.016

Boring 3/Monitoring Well 2

The third boring was located at the perimeter of the burn area. The boring was sampled to 10.5 feet, and the monitoring well was then set into the boring to this depth. The well consisted of a five-foot PVC screen connected to a PVC riser. Seven 18-inch split spoons were taken and analyzed individually in the field. A composite sample was sent for laboratory analysis. Total depth of the well from the ground surface is 12.5 feet, and depth to groundwater in the well from the top of the casing was

9.92 feet. The top of the casing is at 650.55 feet above mean sea level. The top of the water table was calculated at 640.63 feet above mean sea level. Composite soil analysis from Boring 3 was found to contain the following contaminants:

Parameter	Concentration (ppm)
Silver	16.3
Barium	42.1
Cadmium	0.683
Chromium	10.8
Mercury	0.089
Lead	295.0

Groundwater from monitoring well 2 (MW-2) was found to contain the following contaminants:

Parameter	Concentration (ppm)
Silver	0.015
Barium	0.451
Cadmium	0.004
Chromium	0.157
Mercury	0.00222
Lead	2.01
Selenium	0.02

Boring 4/Monitoring Well 3

The fourth boring was located in the center of the burn area. The boring was sampled to 10.5 feet, and the monitoring well was then set into the boring to this depth. The well consisted of a five-foot PVC screen connected to a PVC riser. Seven 18-inch split spoons were taken and analyzed individually in the field. A composite sample was sent for laboratory analysis. Total depth of the well from the ground surface is 12.5 feet, and depth to groundwater in the well from the top of the casing was 8.92 feet. The top of the casing is at 651.38 feet above mean

sea level. The top of the water table was calculated at 642.46 feet above mean sea level. Composite soil analysis from boring #4 was found to contain the following contaminants:

Parameter	Concentration (ppm)
Silver	1.75
Barium	20.1
Chromium	5.35
Mercury	0.189
Lead	20.7
Methylene Chloride	0.0312

Groundwater from monitoring well 3 (MW-3) was found to contain the following contaminants:

Parameter	Concentration (ppm)
Silver	0.003
Barium	0.125
Chromium	0.019
Mercury	0.0001
Lead	0.019
Selenium	0.015

LABORATORY RESULTS

Off-site laboratory analysis of the soil samples was performed by Tenco Laboratories, subcontracted to MAECORP Incorporated. Each composite soil sample was analyzed for: volatile organics, polynuclear aromatic hydrocarbons, PCB's, and RCRA metals (see Tables 3, 4 & 5).

CONCLUSION

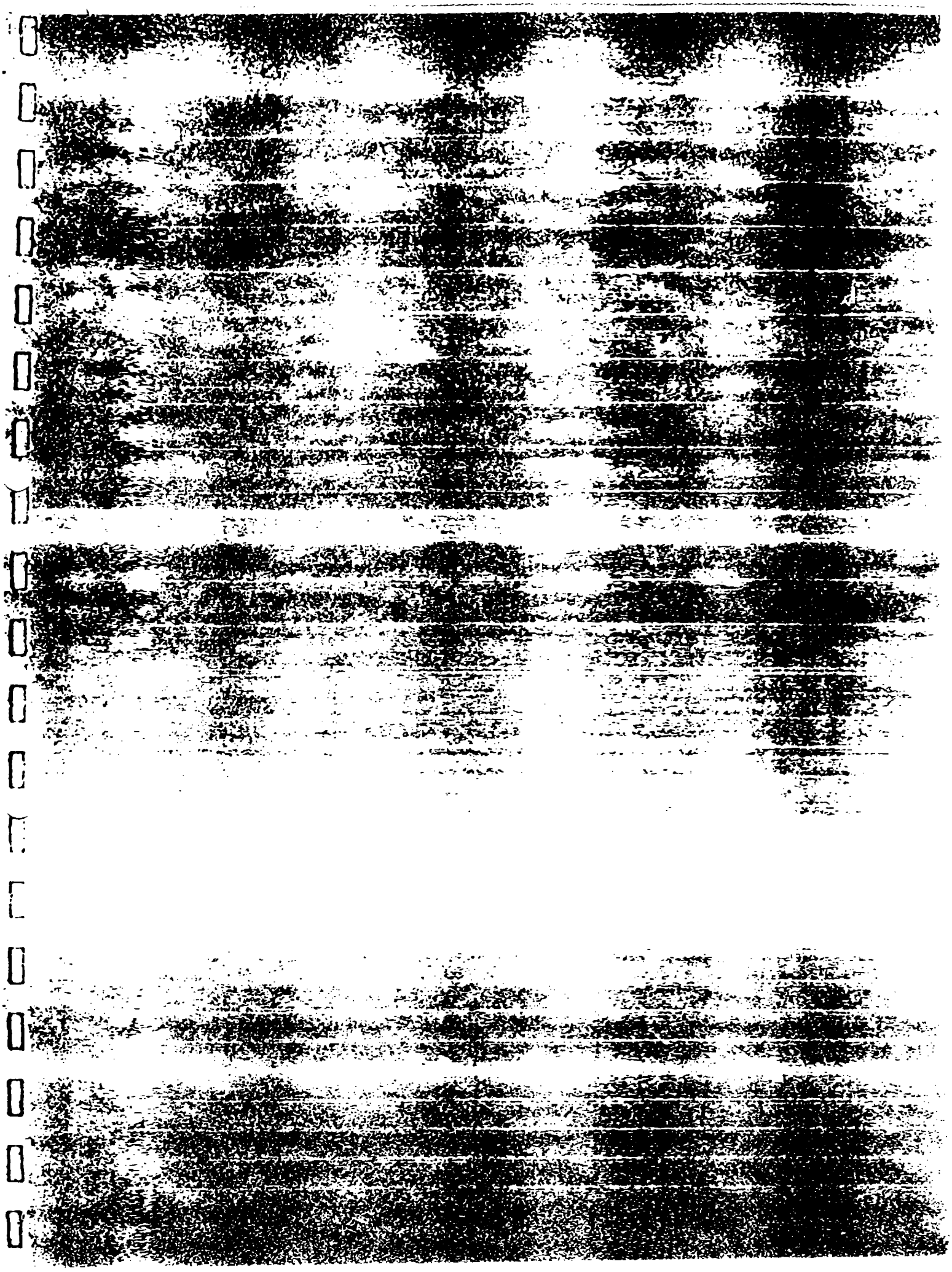
Investigations performed on the site included visual observations, soil sampling, soil borings, and the installation and sampling of three PVC monitoring wells. Causes for the previous site fire and contamination identified in the soil samples appear to be the result of cinders which were disposed by an unknown party. Visual contaminants in the storm sewer discharge may originate from EMCO Chemical distributors. Discolored effluent was witnessed by MAECORP personnel.

Soil Boring 4 in the burn area contained burnt rubber, brick pieces, and burnt soil in the top 18 inches to 2 feet below grade. Combining this and previous evidence, it is very likely that the fire was not of a chemical nature and was limited to surficial vegetation and their root systems.

Groundwater at this site is contaminated by metals from an unknown source. Since the area is surrounded by metal processing facilities, an outside source is suspected.

RECOMMENDATIONS

This storm sewer should be traced if no engineering blueprints are available to pinpoint exact subsurface location and source.



BORING/WELL LOG DATA
MAECORP INCORPORATED

PROJECT: Northern Trust Bank	WELL/BORING NO.: Boring 1
LOCATION: 22nd Street Stack Property	DATE DRILLED: January 5, 1989
DRILLING METHOD: Auger	CASING TYPE/DIA: N/A
TOTAL DEPTH DRILLED: 25'	TOTAL CASING: N/A
GROUND ELEVATION: N/A	T.O.C. ELEVATION: N/A
GROUT TYPE/QUANTITY: Backfill and Cement	SCREEN TYPE/LENGTH: N/A
GROUT INTERVAL(S): N/A	SCREENED INTERVAL: N/A
DEPTH TO WATER: N/A	GRAVEL PACK TYPE: N/A
WATER LEVEL ELEVATION: N/A	GRAVEL PACK INTERVAL: N/A
	STATIC WATER LEVEL: N/A DATE: 1/5/89

REMARKS:

LOGGED BY: Diane C. Kanode

SIGNATURE: Diane C. Kanode

DEPTH	H2O/SOL SAMPLE	FORMATION DESCRIPTION
0-18"	B1-01	21, 52, 8 - 4" black gravely sandy fill, 6" black gravely sand
		no odor
19-36"	B1-02	2, 2, 4 - 3" gravely sand fill, 6" gray-brown mottled gravely silt,
		no odor
37-54"	B1-03	3, 4, 6 - 2" gray gravely silt, 9" gray-brown mottled silt no odor
55-72"	B1-04	3, 5, 8 - 9" gray gravely silt
73-90"	B1-05	9, 11, 13 - 6" gray-brown mottled gravely silt, 3" gray-brown clayey
		silt
91-108"	B1-06	7, 9, 15 - 10" gray-brown mottled silt
109-126"	B1-07	8, 9, 10 - 3" gray-brown mottled silt, 6" gray silty clay
		* dry boring

BORING/WELL LOG DATA
MAECORP INCORPORATED

PROJECT: Northern Trust Bank	**WELL/BORING NO.:** Boring 2
LOCATION: 22nd Street Stack Property	**DATE DRILLED:** January 5, 1989
DRILLING METHOD: Auger	**CASING TYPE/DIA:** PVC - 2"
TOTAL DEPTH DRILLED: 10.5 '	**TOTAL CASING:** 7'11"
GROUND ELEVATION: N/A	**T.O.C. ELEVATION:** N/A
GROUT TYPE/QUANTITY: Enviroplug & cement	**SCREEN TYPE/LENGTH:** PVC - 5 feet
GROUT INTERVAL(S): 2'7" - 5'5"	**SCREENED INTERVAL:** 7'11" - 12'11"
DEPTH TO WATER: @ 10.7'	**GRAVEL PACK TYPE:** sand
WATER LEVEL ELEVATION: N/A	**GRAVEL PACK INTERVAL:** 6'7" - 12'11"
	STATIC WATER LEVEL: 2'7" **DATE:** 1/5/89

REMARKS:

LOGGED BY: Diane C. Kanode	**SIGNATURE:** Diane C. Kanode

DEPTH	H2O/SOIL SAMPLE	FORMATION DESCRIPTION
0-18"	B2-01	17, 10, 26 - 9" black gravely sand
19-36"	B2-02	11, 16, 12 - 14" black medium sand with some gravel
37-54"	B2-03	3, 3, 5 - 15" black (fill) sand, 5" gray-brown mottled gravely silt
55-72"	B2-04	2, 1, 3 - 4" black (fill) sand, 5" gray-brown mottled gravely silt
73-90"	B2-05	2, 3, 5 - 4" gray coarse sandy silt, 12" medium sand
91-108"	B2-06	5, 6, 11 - 3" gray-brown mottled sandy silt, 4" gray coarse silt, 3" black gravely sand
109-126"	B2-07	1, 8, 16 - 6" black gravely sand, 5" gray silty clay

BORING/WELL LOG DATA
MAECORP INCORPORATED

PROJECT: Northern Trust Bank	**WELL/BORING NO.:** Boring 3
LOCATION: 22nd Street Stack Property	**DATE DRILLED:** January 5, 1989
DRILLING METHOD: Auger	**CASING TYPE/DIA:** PVC - 2"
TOTAL DEPTH DRILLED: 10.5'	**TOTAL CASING:** 7'11"
GROUND ELEVATION: N/A	**T.O.C. ELEVATION:** N/A
GROUT TYPE/QUANTITY: Enviroplug	**SCREEN TYPE/LENGTH:** PVC - 5 feet
GROUT INTERVAL(S): 2'7" - 6'10"	**SCREENED INTERVAL:** 7'11" - 12'11"
DEPTH TO WATER: @ 10.7'	**GRAVEL PACK TYPE:** sand
WATER LEVEL ELEVATION: N/A	**GRAVEL PACK INTERVAL:** 6'10" - 12'11"
	STATIC WATER LEVEL: 3'2" **DATE:** 1/5/89

REMARKS:

LOGGED BY: Diane C. Kanode **SIGNATURE:** Diane C. Kanode

DEPTH	H2O/SOL SAMPLE	FORMATION DESCRIPTION
0-18"	B3-01	45, 45, 15 - 12" black gravely (fill) sand - no odor
19-36"	B3-02	5, 7, 13 - 11" gray-brown mottled sandy silt, 4" black coarse (fill) sand
37-54"	B3-03	3, 5, 4 - 16" black (fill) sand
55-72"	B3-04	1, 2, 3 - 2" black (fill) sand, 9" gray-brown mottled coarse clayey silt
73-90"	B3-05	2, 2, 2 - 6" gray gravely clayey silt
91-108"	B3-06	3, 5, 7 - 14" gray sandy silt
109-126"	B3-07	5, 11, 19 - 8" gray silty clay, 2" coarse sand, 3" gray silty clay

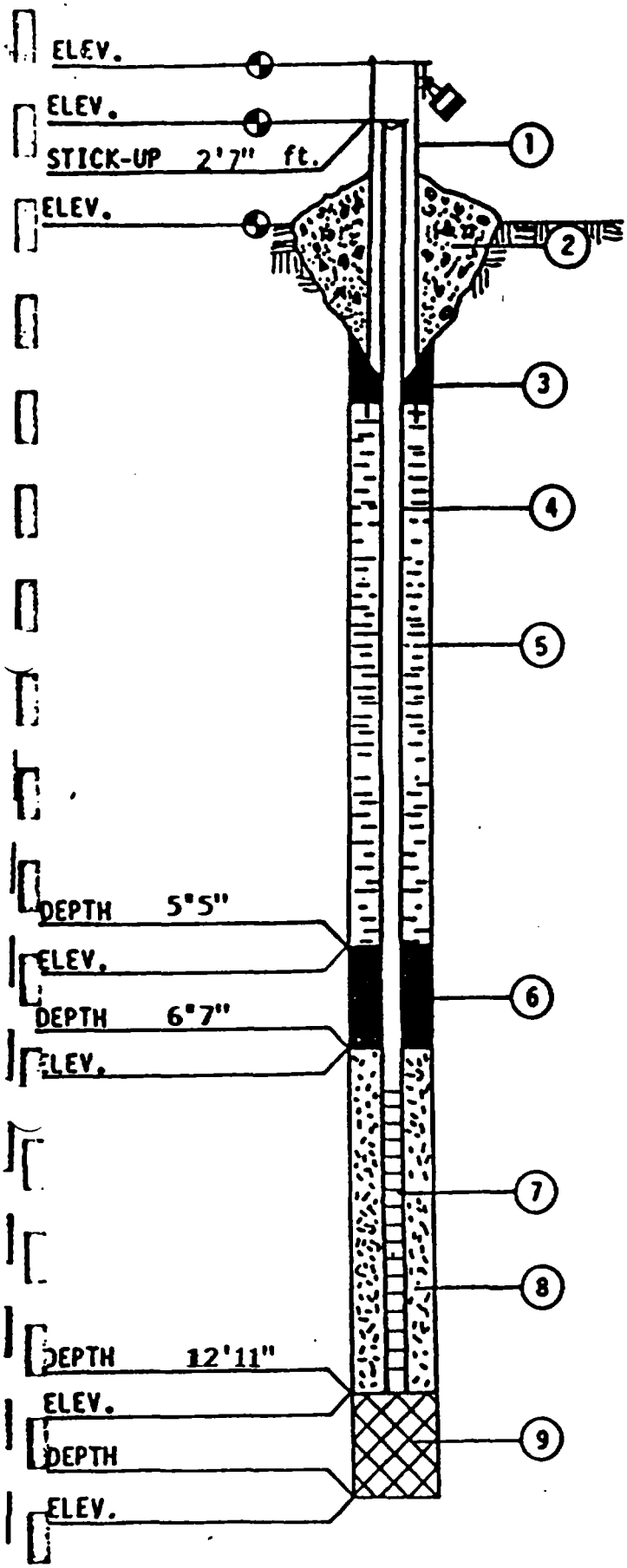
BORING/WELL LOG DATA
MAECORP INCORPORATED

PROJECT: Northern Trust Bank	**WELL/BORING NO.:** Boring 4
LOCATION: 22nd Street Stack Property	**DATE DRILLED:** January 6, 1989
DRILLING METHOD: Auger	**CASING TYPE/DIA:** PVC - 2"
TOTAL DEPTH DRILLED: 10.5'	**TOTAL CASING:** 7'11"
GROUND ELEVATION: N/A	**T.O.C. ELEVATION:** N/A
GROUT TYPE/QUANTITY: Enviroplug	**SCREEN TYPE/LENGTH:** 7'11" - 12'11"
GROUT INTERVAL(S): 2'7" - 7'0"	**SCREENED INTERVAL:** 7'11" - 12'11"
DEPTH TO WATER: @ 10.7'	**GRAVEL PACK TYPE:** Sand
WATER LEVEL ELEVATION: N/A	**GRAVEL PACK INTERVAL:** 7'0" - 12'11"
	STATIC WATER LEVEL: 1'7" **DATE:** 1/6/89

REMARKS: * Burnt rubber odor

LOGGED BY: Diane C. Kanode	**SIGNATURE:** Diane C. Kanode

DEPTH	H2O/SOIL SAMPLE	FORMATION DESCRIPTION
0-18"	B4-01	3, 6, 8 - 10" black brown sandy silt vegetation layer, * 4" burnt black sandy silt vegetation layer - piece of rubber in core
19-36"	B4-02	6, 7, 7 - 4" burnt black coarse silt with vegetation, 10" gray gravely clayey silt with crushed brick pieces
37-54"	B4-03	3, 5, 6 - 10" gray-brown gravely mottled clayey silt
55-72"	B4-04	3, 5, 9 - 16" gray-brown gravely mottled clayey silt
73-90"	B4-05	8, 10, 11 - 18" brown gravely silty sand
91-108"	B4-06	6, 12, 9 - 2" brown gravely sand, 2" silt, 6" brown fine gravely sand
109-126"	B4-07	6, 9, 11 - 6" gray gravely sandy silt, 10" gray sandy silt



MAECORP INCORPORATED

MONITORING WELL CONSTRUCTION INFORMATION

JOB NO. IL-A013

BORING/WELL NO. MW-1

DATE January 5, 1989

CHIEF/UNIT Diane C. Kanode

1. PROTECTIVE CASING YES NO

   LOCKING YES NO

2. CONCRETE SEAL YES NO

3. TYPE OF SURFACE SEAL (IF INSTALLED)
   cement and metal casing

4. SOLID PIPE TYPE PVC

   SOLID PIPE LENGTH 7'11" ft.

   JOINT TYPE SLIP/GLUED THREADED

5. TYPE OF BACKFILL Enviroplug

   HOW INSTALLED - TREMIE FROM SURFACE

6. TYPE OF LOWER SEAL (IF INSTALLED)
   Enviroplug

7. SCREEN TYPE PVC

   SCREEN LENGTH 5 feet

   SLOT-SIZE 10 LENGTH ft.

   SCREEN DIAMETER 2 in.

8. TYPE OF BACKFILL AROUND SCREEN
   sand

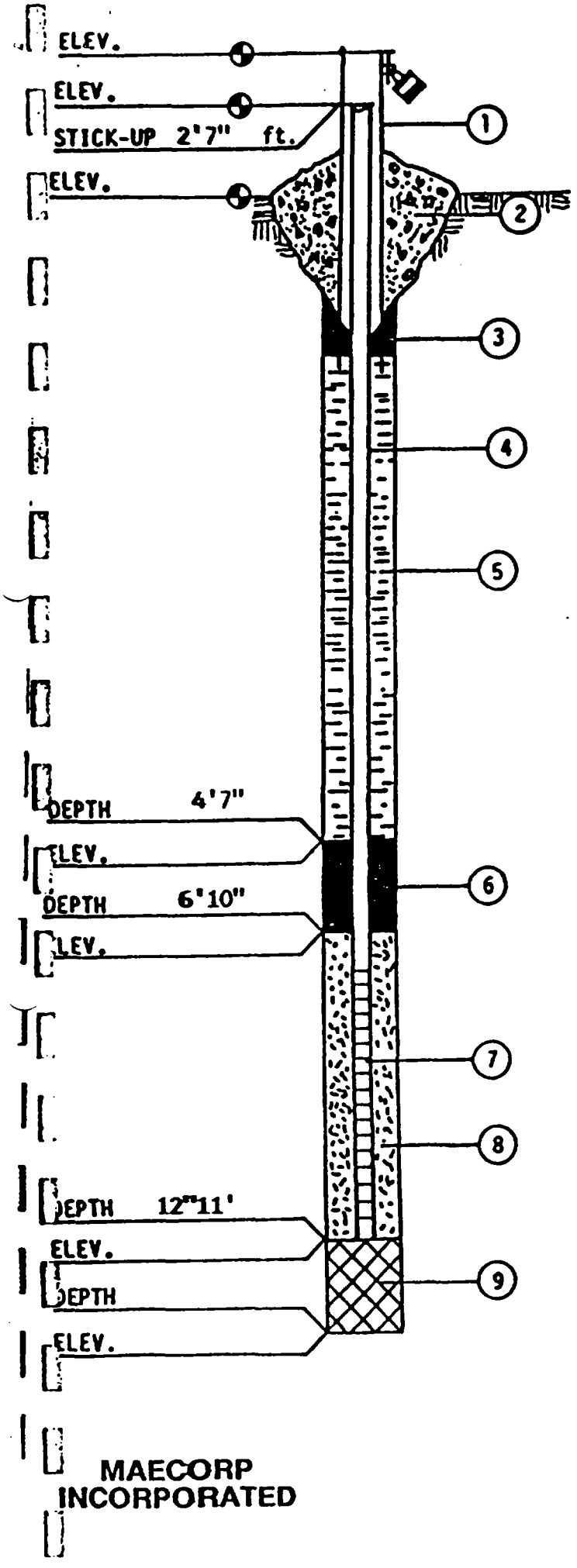
9. TYPE OF BACKFILL silty clay

10. DRILLING METHOD Auger

11. ADDITIVES USED (IF ANY)

WATER LEVEL 2'7" DATE 1/5/89

*ALL DEPTHS MEASURED FROM GROUND SURFACE.



MAECORP INCORPORATED

MONITORING WELL CONSTRUCTION INFORMATION

JOB NO. IL-A013

BORING/WELL NO. MW-2

DATE January 5, 1989

CHIEF/UNIT Diane C. Kanode

1. PROTECTIVE CASING YES NO

   LOCKING YES NO

2. CONCRETE SEAL YES NO

3. TYPE OF SURFACE SEAL (IF INSTALLED)
   cement

4. SOLID PIPE TYPE PVC

   SOLID PIPE LENGTH 7'11" ft.

   JOINT TYPE SLIP/GLUED THREADED

5. TYPE OF BACKFILL Enviroplug

   HOW INSTALLED - TREMIE FROM SURFACE

6. TYPE OF LOWER SEAL (IF INSTALLED)
   Enviroplug

7. SCREEN TYPE PVC

   SCREEN LENGTH 5 feet

   SLOT-SIZE 10 LENGTH ft.

   SCREEN DIAMETER 2 in.

8. TYPE OF BACKFILL AROUND SCREEN
   sand

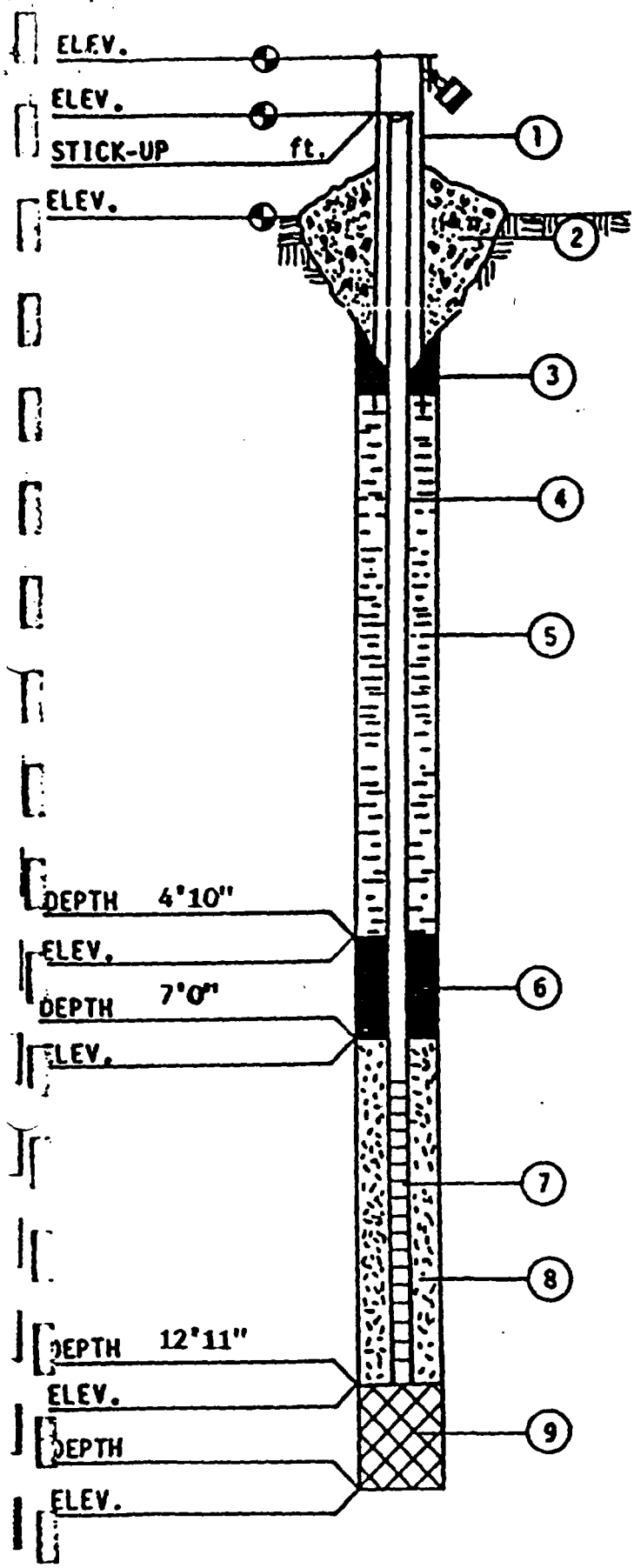
9. TYPE OF BACKFILL silty clay

10. DRILLING METHOD Auger

11. ADDITIVES USED (IF ANY)

WATER LEVEL 3'2" DATE 1/5/89

*ALL DEPTHS MEASURED FROM GROUND SURFACE.



MAECORP INCORPORATED

MONITORING WELL CONSTRUCTION INFORMATION

JOB NO. IL-A013

BORING/WELL NO. MW-3

DATE January 6, 1989

CHIEF/UNIT Diane C. Kanode

1. PROTECTIVE CASING YES NO

   LOCKING YES NO

2. CONCRETE SEAL YES NO

3. TYPE OF SURFACE SEAL (IF INSTALLED)

   Cement

4. SOLID PIPE TYPE PVC

   SOLID PIPE LENGTH 7'11" ft.

   JOINT TYPE SLIP/GLUED THREADED

5. TYPE OF BACKFILL Enviroplug

   HOW INSTALLED - TREMIE FROM SURFACE

6. TYPE OF LOWER SEAL (IF INSTALLED)

7. SCREEN TYPE PVC

   SCREEN LENGTH 5 feet

   SLOT-SIZE 10 LENGTH ft

   SCREEN DIAMETER 2 in

8. TYPE OF BACKFILL AROUND SCREEN

   sand

9. TYPE OF BACKFILL sandy silt

10. DRILLING METHOD Auger

11. ADDITIVES USED (IF ANY)

WATER LEVEL 1'7" DATE 1/6/89

*ALL DEPTHS MEASURED FROM GROUND SURFACE

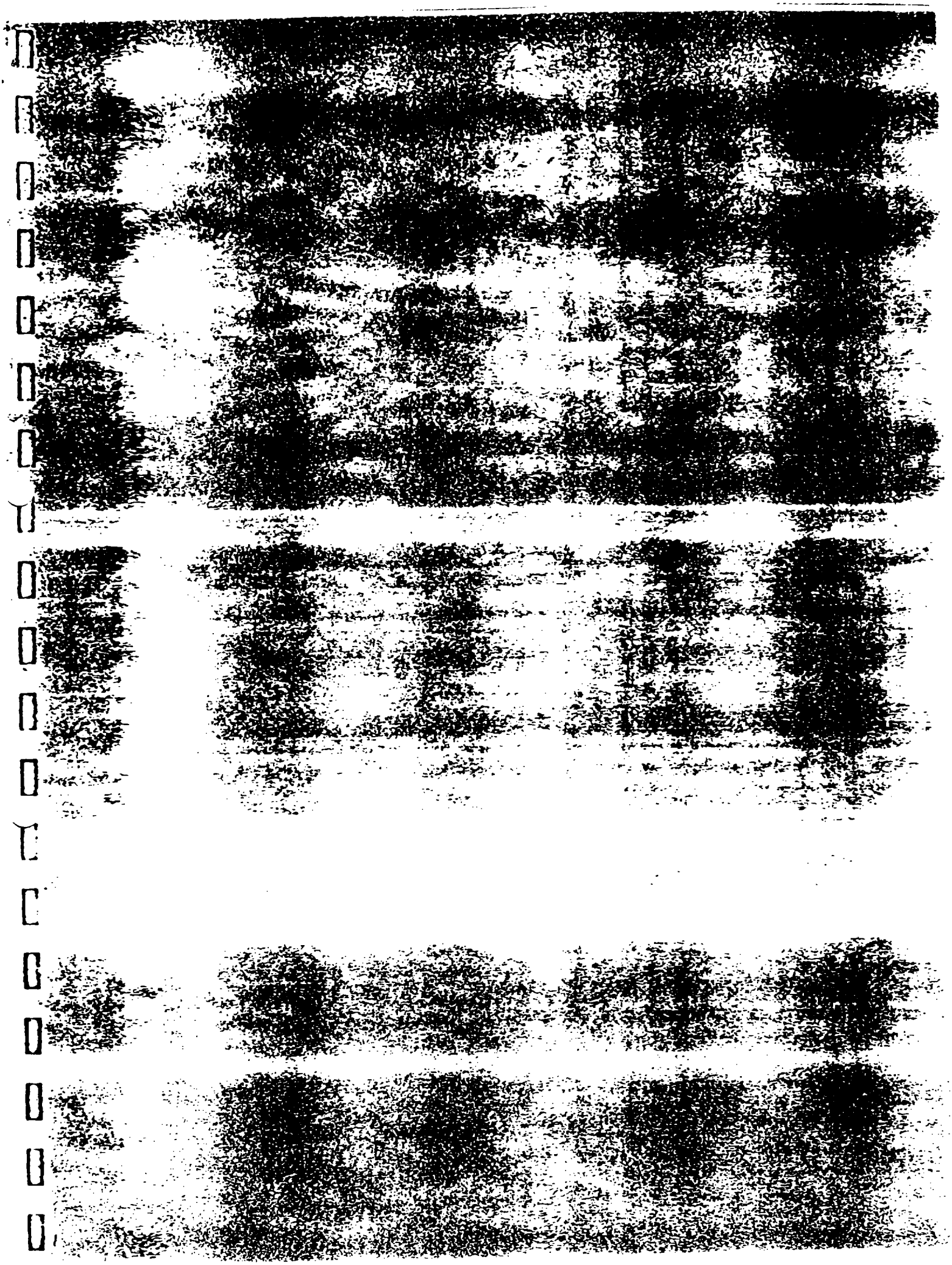
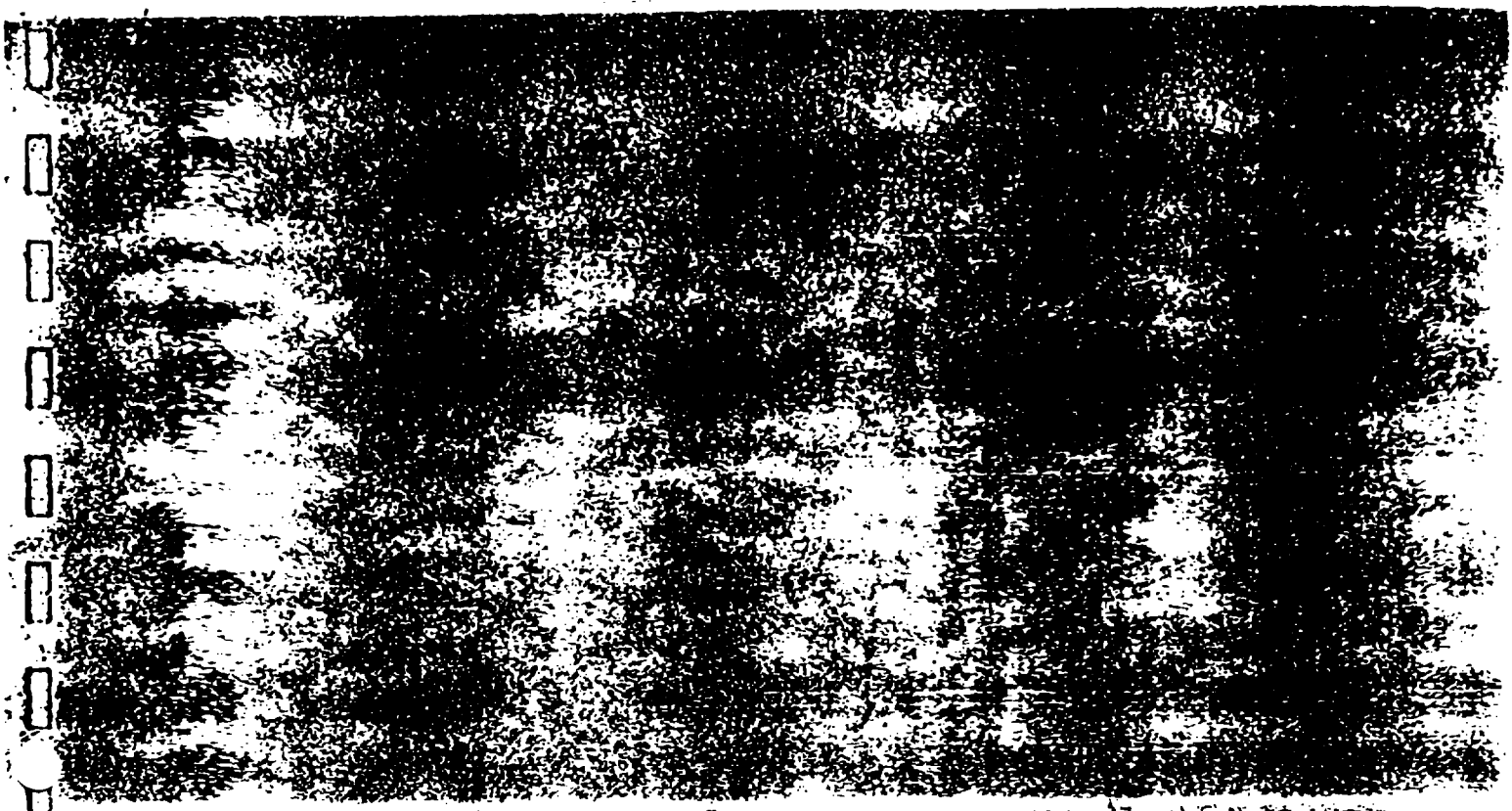


TABLE 2

COMPATABILITY TESTS

IL-A013

SAMPLE NUMBER	pH	BURNABILITY	HNU READING (ppm)	SOLUBILITIES WATER	HEXANE	METHANOL	ACETONE	OXIDIZER	PEROXIDE	CYANIDE	SULFIDE
B1-01	8	negative	0.4	S	PS	S	S	negative	negative	negative	negative
B1-02	7	negative	0.4	S	PS	S	S	negative	negative	negative	negative
B1-03	7	negative	0.4	S	NS	PS	PS	negative	negative	negative	negative
B1-04	7	negative	0.0	S	NS	S	S	negative	negative	negative	negative
B1-05	7	negative	0.4	S	NS	S	S	negative	negative	negative	negative
B1-06	7	negative	0.4	S	NS	S	S	negative	negative	negative	negative
B1-07	7	negative	0.4	S	NS	S	S	negative	negative	negative	negative
B2-01	8	negative	0.4	S	NS	S	S	negative	negative	negative	negative
B2-02	7	negative	0.4	S	NS	S	S	negative	negative	negative	negative
B2-03	7	negative	0.4	S	NS	S	S	negative	negative	negative	negative
B2-04	7	negative	0.4	S	NS	S	S	negative	negative	negative	negative
B2-05	7	negative	0.4	S	NS	S	S	negative	negative	negative	negative
B2-06	7	negative	0.4	S	NS	S	S	negative	negative	negative	negative
B2-07	7	negative	0.4	S	NS	S	S	negative	negative	negative	negative
B3-01	7	negative	0.4	S	NS	S	S	negative	negative	negative	negative
B3-02	7	negative	0.4	S	NS	S	S	negative	negative	negative	negative
B3-03	8	negative	0.4	S	NS	S	S	negative	negative	negative	negative
B3-04	7	negative	0.4	S	NS	S	S	negative	negative	negative	negative
B3-05	7	negative	0.4	S	NS	S	S	negative	negative	negative	negative
B3-06	7	negative	0.4	S	NS	S	S	negative	negative	negative	negative
B3-07	7	negative	0.4	S	NS	S	S	negative	negative	negative	negative
B4-01	7	negative	7.0	PS	PS	PS	PS	negative	negative	negative	negative
B4-02	7	negative	7.0	S	PS	S	S	negative	negative	negative	negative
B4-03	7	negative	5.0	PS	NS	NS	NS	negative	negative	negative	negative
B4-04	7	negative	4.0	PS	NS	PS	PS	negative	negative	negative	negative
B4-05	7	negative	2.0	S	NS	S	S	negative	negative	negative	negative
B4-06	7	negative	1.0	S	NS	S	S	negative	negative	negative	negative
B4-07	7	negative	0.2	S	NS	S	S	negative	negative	negative	negative



TENCO LABORATORIES

BPM INDUSTRIES
1150 Junction Avenue - Schererville, Indiana 46375
1-219-322-2560 ● 1-800-428-3311

REPORT TO:
Freddie Walker
MAECORP
17450 South Halsted
Homewood, IL 60430

Date: 1/23/89
Recd: 1/09/89
WO #: 21-0830

IL-A013
EPA METHOD 601,602,603

Laboratory Smp ID No.:	3527-9	3528-9	3529-9	3530-9	3531-9		
DESCRIPTION: ——>	IL-A013-B1-C1	IL-A013-B2-C1	IL-A013-B4-C1	IL-A013-B4-C1	IL-A013-B4-C2		
rless otherwise noted; sults in parts per lion - ppb]	Soil	Soil	Soil	Soil	Soil		
PARAMETERS:	Boring 1	Boring 2	Boring 3	Boring 4	Boring 4		
CROLEIN	ND	ND	ND	ND	ND		
CRYLONITRILE	ND	ND	ND	ND	ND		
ENZENE	ND	ND	ND	ND	ND		
ROMODICHLOROMETHANE	ND	ND	ND	ND	ND		
ROMOFORM	ND	ND	ND	ND	ND		
ROMOMETHANE	ND	ND	ND	ND	ND		
ARBON TETRACHLORIDE	ND	ND	ND	ND	ND		
HLOROBENZENE	ND	ND	ND	ND	ND		
HLOROETHANE	ND	ND	ND	ND	ND		
-CHLOROETHYLVINYL ETHER	ND	ND	ND	ND	ND		
HLOROFORM	ND	ND	ND	ND	ND		
HLOROMETHANE	ND	ND	ND	ND	ND		
BROMOCHLOROMETHANE	ND	ND	ND	ND	ND		
1-DICHLOROETHANE	ND	ND	ND	ND	ND		
2-DICHLOROETHANE	ND	ND	ND	ND	ND		
1-DICHLOROETHENE	ND	ND	ND	ND	ND		
ans-1,2-DICHLOROETHENE	ND	ND	ND	ND	ND		

ND=Not Detected at 5 ppb.

TENCO LABORATORIES
BPM INDUSTRIES
1150 Junction Avenue - Schererville, Indiana 46375
1-219-322-2560 ● 1-800-428-3311

REPORT TO:

Freddie Walker
MAECORP
17450 South Halsted
Homewood, IL 60430

IL-A013
EPA METHODS 601,602,603

Date: 1/23/89
Recd: 1/09/89
WO #: 21-0830

Laboratory Smp ID No.:	3527-9	3528-9	3529-9	3530-9	3531-9		
DESCRIPTION: —> (Unless otherwise noted; results in parts per billion - ppb) PARAMETERS: ↓	IL-A013-B1-C1 Soil Boring 1	IL-A013-B2-C1 Soil Boring 2	IL-A013-B4-C1 Soil Boring 3	IL-A013-B4-C1 Soil Boring 4	IL-A013-B4 C2 Soil Boring 4		
1,2-DICHLOROPROPANE	ND	ND	ND	ND	ND		
cis-1,3-DICHLOROPROPENE	ND	ND	ND	ND	ND		
trans,1,3-DICHLOROPROPENE	ND	ND	ND	ND	ND		
ETHYL BENZENE	ND	ND	ND	ND	ND		
METHYLENE CHLORIDE	ND	ND	ND	31.2	ND		
1,1,2,2-TETRACHLOROETHANE	ND	ND	ND	ND	ND		
TETRACHLOROETHENE	ND	ND	ND	ND	ND		
TOLUENE	ND	42.9	ND	ND	ND		
1,1,1-TRICHLOROETHANE	ND	ND	ND	ND	5.12		
1,1,2-TRICHLOROETHANE	ND	ND	ND	ND	ND		
TRICHLOROETHENE	ND	ND	ND	ND	91.2		
TRICHLOROFLUOROMETHANE	ND	ND	ND	ND	ND		
VINYL CHLORIDE	ND	ND	ND	ND	ND		

ND=Not Detected at 5 ppb.

TERCO LABORATORIES
BPM INDUSTRIES
1150 Junction Avenue - Schererville, Indiana 46375
1-219-322-2560 ● 1-800-428-3311

REPORT TO:
Freddie Walker
MAECORP
17450 South Halsted
Homewood, IL 60430

Date: 1/23/89
Recd: 1/09/89
WO #: 21-0830

IL-A013
EPA METHODS 606,607,609,610,611,612

Laboratory Smp ID No.:	3527-9	3528-9	3529-9	3530-9	3531-9
Sample Description Unless otherwise noted, results in ppb	IL-A013-B1-C1 Soil Boring 1	IL-A013-B2-C1 Soil Boring 2	IL-A013-B3-C1 Soil Boring 3	IL-A013-B4-C1 Soil Boring 4	IL-A013-B4-C2 Soil Boring 4
ACENAPHTHENE	ND	ND	ND	ND	ND
ACENAPHTHYLENE	ND	ND	ND	ND	ND
ANTHRACENE	ND	ND	ND	ND	ND
BENZIDINE	ND	ND	ND	ND	ND
BENZO(A)ANTHRACENE	ND	ND	ND	ND	ND
BENZO(A)PYRENE	ND	ND	ND	ND	ND
BENZO(B)FLUORANTHENE	ND	ND	ND	ND	ND
BENZO(K)FLUORANTHENE	ND	ND	ND	ND	ND
BENZO(G,H,I)PERYLENE	ND	ND	ND	ND	ND
BENZYL BUTYL PHTHALATE	ND	ND	ND	ND	ND
BIS(2-CHLOROETHYOXY)METHANE	ND	ND	ND	ND	ND
BIS(2-CHLOROETHYL)ETHER	ND	ND	ND	ND	ND
BIS(2-CHLOROISOPROPYL)ETHER	ND	ND	ND	ND	ND
BIS(2-ETHYLHEXYL)PHTHALATE	ND	ND	ND	ND	ND
4-BROMOPHENYL PHENYL ETHER	ND	ND	ND	ND	ND
2-CHLORONAPHTHALENE	ND	ND	ND	ND	ND
4-CHLOROPHENYL PHENYL ETHER	ND	ND	ND	ND	ND
CHRYSENE	ND	ND	ND	ND	ND
DIBENZO(A,H)ANTHRACENE	ND	ND	ND	ND	ND

ND=Not Detected at 100 ppb.

Certified by: [signature]

TENCO LABORATORIES

BPM INDUSTRIES
1150 Junction Avenue - Schererville, Indiana 46375
1-219-322-2560 ● 1-800-428-3311

REPORT TO:
Freddie Walker
MAECORP
17450 South Halsted
Homewood, IL 60430

IL-A013

EPA METHODS 606,607,609,610,611,612

Date: 1/23/89
Recd: 1/09/89
WO #: 21-0830

Laboratory Smp ID No.:	3527-9	3528-9	3529-9	3530-9	3531-9
Sample Description Unless otherwise noted, results in ppb	IL-A013-B1-C1 Soil Boring 1	IL-A013-B2-C1 Soil Boring 2	IL-A013-B3-C1 Soil Boring 3	IL-A013-B4-C1 Soil Boring 4	IL-A013-B4-C2 Soil Boring 4
,2-DICHLOROBENZENE	ND	ND	ND	ND	ND
,3-DICHLOROBENZENE	ND	ND	ND	ND	ND
,4-DICHLOROBENZENE	ND	ND	ND	ND	ND
,3-DICHLOROBENZIDINE	ND	ND	ND	ND	ND
ETHYLPHTHALATE	ND	ND	ND	ND	ND
METHYLPHTHALATE	ND	ND	ND	ND	ND
-N-BUTYLPHTHALATE	ND	ND	ND	ND	ND
4-DINITROTOLUENE	ND	ND	ND	ND	ND
6-DINITROTOLUENE	ND	ND	ND	ND	ND
-N-OCTYLPHTHALATE	ND	ND	ND	ND	ND
UORANTHENE	ND	ND	ND	ND	ND
UORENE	ND	ND	ND	ND	ND
XACHLOROBENZENE	ND	ND	ND	ND	ND
XACHLOROBUTADIENE	ND	ND	ND	ND	ND
XACHLOROCYCLOPENTADIENE	ND	ND	ND	ND	ND
XACHLOROETHANE	ND	ND	ND	ND	ND
DENO (1,2,3-CD)PYRENE	ND	ND	ND	ND	ND

ND=not Detected at 100 ppb.

Certified by: [signature]

TENCO LABORATORIES

BPM INDUSTRIES
1150 Junction Avenue - Schererville, Indiana 46375
1-219-322-2560 ● 1-800-428-3311

REPORT TO:
Freddie Walker
MAECORP
17450 South Halsted
Homewood, IL 60430

IL-A013

Date: 1/23/89
Recd: 1/09/89
WO #: 21-0830

EPA METHODS 606,607,609,610,611,612

Laboratory Smp ID No.:	3527-9	3528-9	3529-9	3530-9	3531-9		
DESCRIPTION: —> (Unless otherwise noted; results in parts per million - ppb) PARAMETERS: ↓	IL-A013-B1-C1 Soil Boring 1	IL-A013-B2-C1 Soil Boring 2	IL-A013-B3-C1 Soil Boring 3	IL-A013-B4-C1 Soil Boring 4	IL-A013-B4-C2 Soil Boring 4		
ISOPHORONE	ND	ND	ND	ND	ND		
NAPHTHALENE	ND	ND	ND	ND	ND		
NITROBENZENE	ND	ND	ND	ND	ND		
N-NITROSODIMETHYLAMINE	ND	ND	ND	ND	ND		
N-NITROSODI-N-PROPYLAMINE	ND	ND	ND	ND	ND		
N-NITROSODIPHENYLAMINE	ND	ND	ND	ND	ND		
PHENANTHRENE	ND	ND	ND	ND	ND		
PYRENE	ND	ND	ND	ND	ND		
1,2,4-TRICHLOROBENZENE	ND	ND	ND	ND	ND		

ND=Not Detected at 100 ppb.

TENCO LABORATORIES
BPM INDUSTRIES
1150 Junction Avenue - Schererville, Indiana 46375
1-219-322-2560 ● 1-800-428-3311

REPORT TO:
Freddie Walker
MAECORP
17450 South Halsted
Homewood, IL 60430

Date: 1/23/89
Recd: 1/09/89
WO #: 21-0830

IL-A013

Laboratory Smp ID No.:	3527-9	3528-9	3529-9	3530-9	3531-9		
DESCRIPTION: —> [Unless otherwise noted; results in parts per million - ppm] PARAMETERS: ↓	IL-A013-B1-C1 Soil Boring 1	IL-A013-B2-C1 Soil Boring 2	IL-A013-B3-C1 Soil Boring 3	IL-A013-B4-C1 Soil Boring 4	IL-A013-B4-C2 Soil Boring4		
Arsenic	<0.01	<0.01	<0.01	<0.01	<0.01		
Silver	5.08	2.43	16.3	1.75	4.50		
Mercury	0.417	0.350	0.089	0.189	0.023		
Lead	221	3881	295	20.7	<0.01		
Selenium	<0.01	<0.01	<0.01	<0.01	<0.01		
Chromium	7.22	12.8	10.8	5.35	8.60		
Cadmium	0.677	9.46	0.683	<0.002	<0.002		
Barium	53.1	525	42.1	20.1	26.9		

Certified by: [signature]

BPM INDUSTRIES
1150 Junction Avenue · Schererville, Indiana 46375
1-219-322-2560 ● 1-800-428-3311

REPORT TO:
Freddie Walker
MAECORP
17450 South Halsted
Homewood, IL 60430

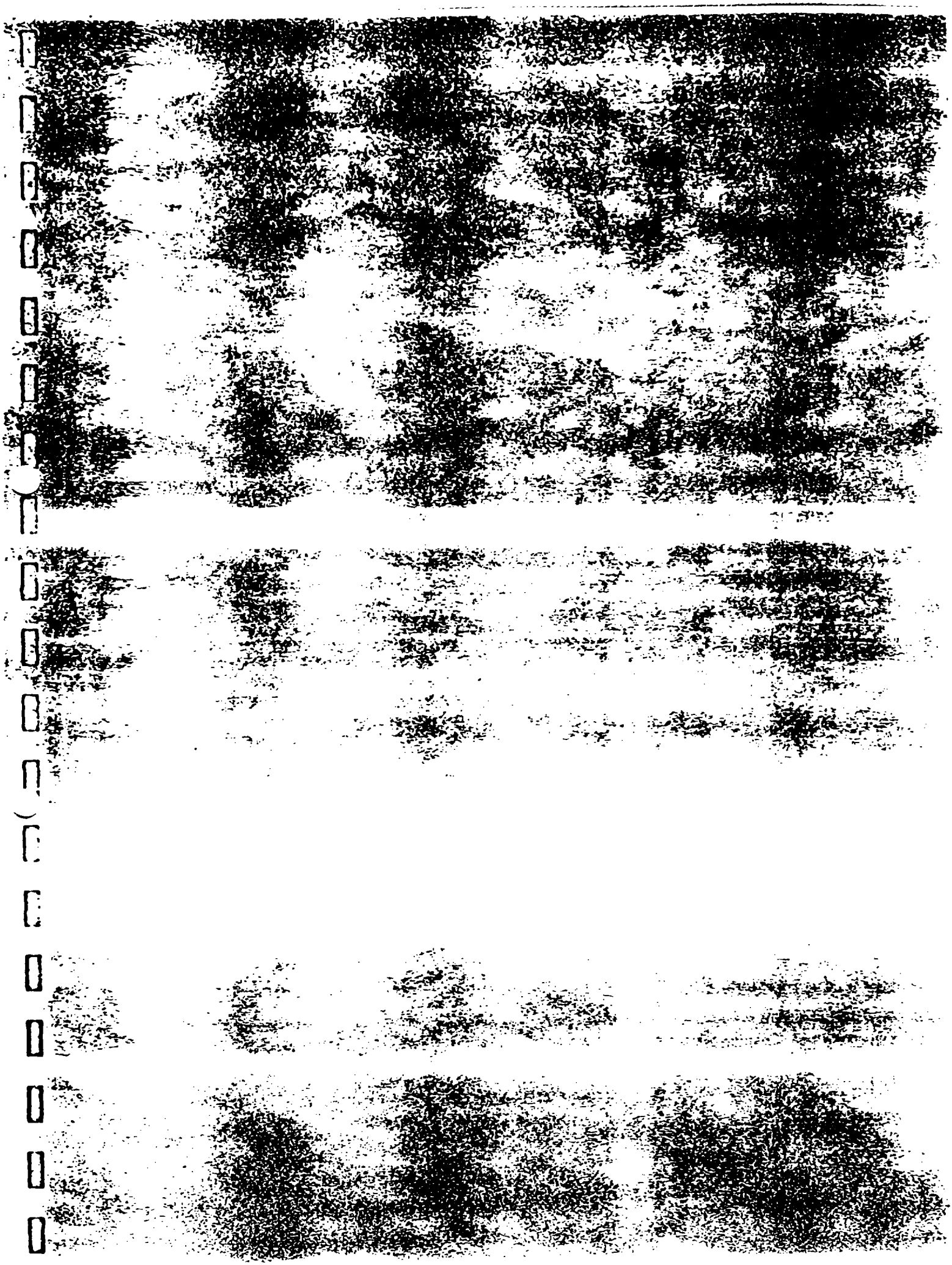
IL-A013

EPA METHOD SW 846-8080

Date: 1/23/89
Recd: 1/09/89
WO #: 21-0830

Laboratory Smp ID No.:	3527-9	3528-9	3529-9	3530-9	3531-9		
DESCRIPTION: —: (Unless otherwise noted, results in milligram/kilogram - mg/kg	IL-A013-B1-C1 Soil	IL-A013-B2-C1 Soil	IL-A013-B3-C1 Soil	IL-A013-B4 C1 Soil	IL-A013-B4-C2 Soil		
PARAMETERS: ↓	Boring 1	Boring 2	Boring 3	Boring 4	Boring 4		
PCB's as:							
AROCHLOR 1016	ND	ND	ND	ND	ND		
AROCHLOR 1221	ND	ND	ND	ND	ND		
AROCHLOR 1232	ND	ND	ND	ND	ND		
AROCHLOR 1242	ND	ND	ND	ND	ND		
AROCHLOR 1248	ND	ND	ND	ND	ND		
AROCHLOR 1254	ND	ND	ND	0.238	2.25		
AROCHLOR 1260	ND	ND	ND	ND	ND		

ND=Not Detected at 0.10 mg/kg.



Sample Number
139455

1B
PESTICIDE ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Gulf Coast Laboratories, Inc.
Contract:
Lab Code: WESIL Case No.:
SAS No.: SDG No.:
Matrix: (soil/water) Water
Lab Sample ID:
Sample weight/volume: 880 (g/ml) mL
Lab File ID:
Level: (low/medium)
Date Received:
% Moisture: (Not Dec.) NA dec.
Date Extracted: 9/12/88
Extraction: (SepF/Cont/Sonc) SEPF
Date Analyzed: 9/14/88
GPC Cleanup: (Yes/No) NO pH 7
Dilution Factor: 1

CAS #	COMPOUND	CONCENTRATION UNITS ug/l	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC (Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.5	U
53494-70-5	Endrin ketone	0.10	U
5103-71-9	alpha-Chlordane	0.5	U
5103-74-2	gamma-Chlordane	0.5	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.5	U
11104-28-2	Aroclor-1221	0.5	U
11141-16-5	Aroclor-1232	0.5	U
53469-21-9	Aroclor-1242	0.5	U
12672-29-6	Aroclor-1248	0.5	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U
	Total PCBs	1.0	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE
139455

Lab Name: GULF COAST LABORATORIES Contract: 000

Lab Code: WESIL Case No.: ---- SAS No.: ---- SDG No.: ----

Matrix: (soil/water) water Lab Sample ID: 139455

Sample wt/vol: 5 (g/mL) mL Lab File ID: >MAE01

Level: (low/med) low Date Received: 9/06/88

% Moisture: not dec. ---- Date Analyzed: 9/14/88

Column: (pack/cap) pack Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	10.	IU
74-83-9	Bromomethane	10.	IU
75-01-4	Vinyl Chloride	10.	IU
75-00-3	Chloroethane	10.	IU
75-09-2	Methylene Chloride	54.	I
67-64-1	Acetone	25.	I
75-15-0	Carbon Disulfide	5.	IU
75-35-4	1,1-Dichloroethene	5.	IU
75-34-3	1,1-Dichloroethane	5.	IU
540-59-0	1,2-Dichloroethene (total)	52.	I
67-66-3	Chloroform	5.	IU
107-02-2	1,2-Dichloroethane	5.	IU
78-93-3	2-Butanone	10.	IU
71-55-6	1,1,1-Trichloroethane	5.	I
56-23-5	Carbon Tetrachloride	5.	IU
108-05-4	Vinyl Acetate	10.	IU
75-27-4	Bromodichloromethane	5.	IU
78-87-5	1,2-Dichloropropane	5.	IU
10061-01-5	cis-1,3-Dichloropropene	5.	IU
79-01-6	Trichloroethene	19.	I
124-48-1	Dibromochloromethane	5.	IU
79-00-5	1,1,2-Trichloroethane	5.	IU
71-43-2	Benzene	5.	IU
10061-02-6	trans-1,3-Dichloropropene	5.	IU
75-25-2	Bromoform	5.	IU
108-10-1	4-Methyl-2-pentanone	10.	IU
591-78-6	2-Hexanone	10.	IU
127-18-4	Tetrachloroethene	5.	IU
79-34-5	1,1,2,2-Tetrachloroethane	5.	IU
108-88-3	Toluene	5.	IU
108-90-7	Chlorobenzene	5.	IU
100-41-4	Ethylbenzene	5.	IU
100-42-5	Styrene	5.	IU
1330-20-7	Xylene (total)	5.	IU

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

139455

Lab Name: GULF COAST LABORATORIES Contract: 000

Lab Code: WESIL Case No.: ---- SAS No.: ---- SDG No.: ----

Matrix: (soil/water) water Lab Sample ID: 139455

Sample wt/vol: 5 (g/mL) mL Lab File ID: >MAE01

Level: (low/med) low Date Received: 9/06/88

% Moisture: not dec. Date Analyzed: 9/14/88

Column: (pack/cap) pack Dilution Factor: 1.00000

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
107-02-8	Acrolein	100.	U
107-13-1	Acrylonitrile	100.	U
75-71-8	Dichlorodifluoromethane	20.	U
542-88-1	Bis(chloromethyl)ether	20.	U
75-69-4	Trichlorofluoromethane	10.	U
110-75-8	2-Chloroethyl vinyl ether	10.	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
139455

Lab Name: GULF COAST LABS Contract: -----

Lab Code: WESIL Case No.: ----- SAS No.: ----- SDG No.: ------

Matrix: (soil/water) WATER Lab Sample ID: 139455

Sample wt/vol: 850 (g/mL) mL Lab File ID: >MAE50

Level: (low/med) LOW Date Received: 09/06/88

% Moisture: not dec.- dec. - Date Extracted: 09/07/88

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 9/19/88

GPC Cleanup: (Y/N) NO pH: ---- Dilution Factor: 1.00000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)Ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
39638-32-9	bis(2-chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-Di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

139455

Lab Name: GULF COAST LABS Contract: -----

Lab Code: WESIL Case No.: ----- SAS No.: ----- SDG No.: ------

Matrix: (soil/water) WATER Lab Sample ID: 139455

Sample wt/vol: 850 (g/mL) mL Lab File ID: >MAE50

Level: (low/med) LOW Date Received: 09/06/88

% Moisture: not dec.- dec. - Date Extracted: 09/07/88

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 9/19/88

GPC Cleanup: (Y/N) NO pH: ---- Dilution Factor: 1.00000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
99-09-2	3-Nitroaniline	50.	U
83-32-9	Acenaphthene	10.	U
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	50.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	50.	U
86-30-6	N-Nitrosodiphenylamine (1)	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	50.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-butylphthalate	1.	J
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate	11.	B
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U
53-70-3	Dibenzo(a,h)anthracene	10.	U
191-24-2	Benzo(g,h,i)perylene	10.	U

18

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

139455

Lab Name: GULF COAST LABS Contract: -----

Lab Code: WESIL Case No.: ----- SAS No.: ----- SDG No.: ------

Matrix: (soil/water) WATER Lab Sample ID: 139455

Sample wt/vol: 850 (g/mL) ML Lab File ID: >MAE50

Level: (low/med) LOW Date Received: 09/06/88

% Moisture: not dec.- dec. - Date Extracted: 09/07/88

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 09/19/88

GPC Cleanup: (Y/N) NO pH: ---- Dilution Factor: 1.00000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
	N-Nitrosodimethylamine	10.	U
	1,2-Diphenylhydrazine	10.	U
	Benzidine	100.	U
	3-Methylphenol (1)	10.	U
	Dioxin (2)	NA	

(1) Screened by MC4 108,107,79 Ion Search.
(2) Screened by Method 625. Federal Register 49:209.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

139455

Lab Name: GULF COAST LABS Contract: -----

Lab Code: WESIL Case No.: ----- SAS No.: ----- SDG No.: ------

Matrix: (soil/water) WATER Lab Sample ID: 139455

Sample wt/vol: 950 (g/mL) ML Lab File ID: >MAE50

Level: (low/med) LOW Date Received: 09/06/88

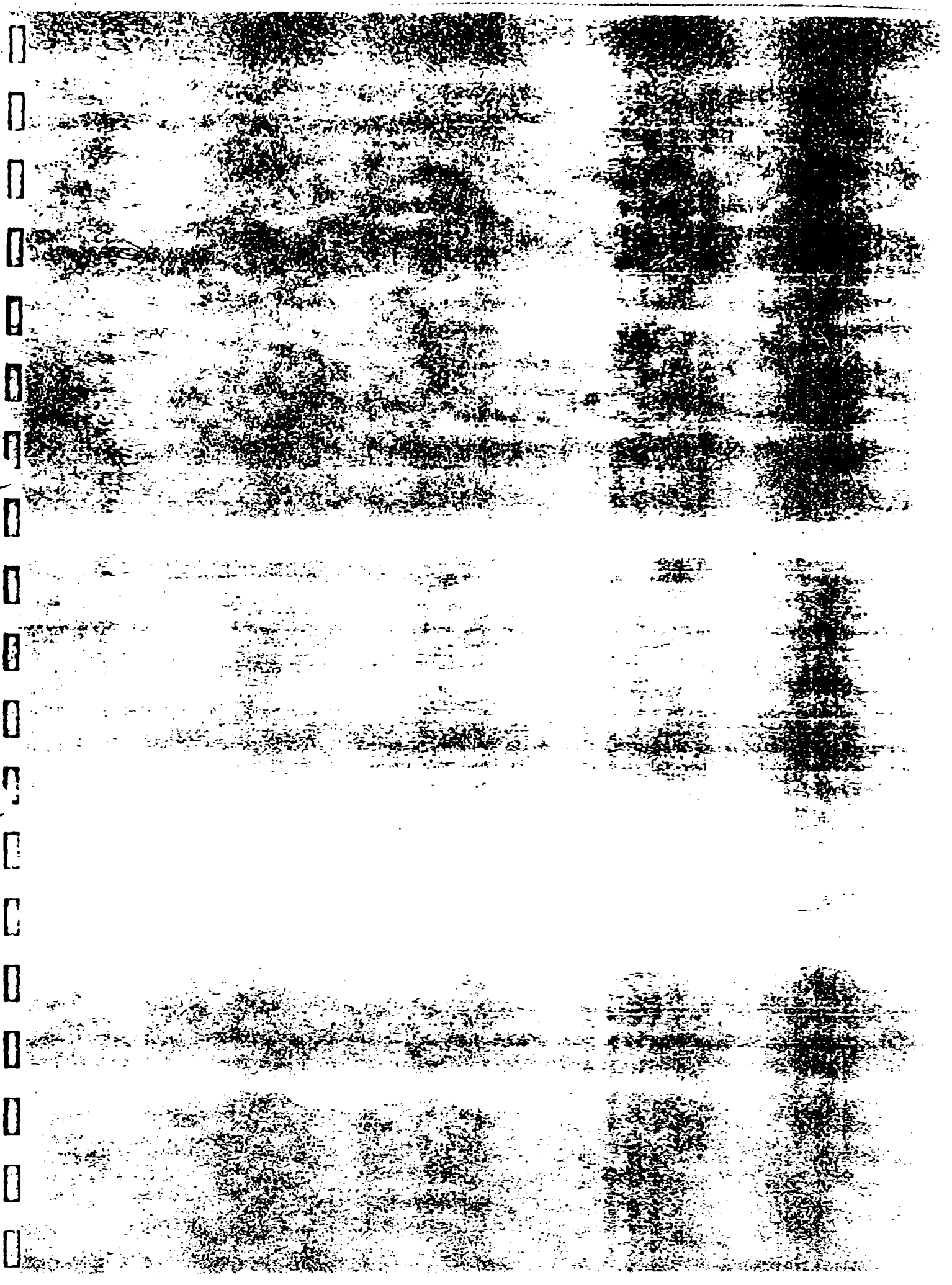
Moisture: not dec.- dec. - Date Extracted: 09/07/88

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 9/19/88

GPC Cleanup: (Y/N) NO pH: ---- Dilution Factor: 1.00000

Number TICs found: 13 CONCENTRATION UNITS: (ug/L OR ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	6.62	10	J B
2.	1,1,2,2-TETRACHLOROETHANE	8.52	6	J
3.	UNKNOWN	8.66	48	J B
4.	UNKNOWN	8.98	10	J
5.	UNKNOWN	9.43	80	J
6.	UNKNOWN	12.51	7	J
7.	UNKNOWN	17.11	6	J
8.	UNKNOWN	17.40	6	J
9.	UNKNOWN	17.60	6	J
10.	UNKNOWN	24.18	5	J
11.	UNKNOWN	28.84	17	J
12.	UNKNOWN	36.78	6	J
13.	UNKNOWN	37.42	5	J
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				



TEKO LABORATORIES
BPM INDUSTRIES
1150 Junction Avenue - Schererville, Indiana 46375
1-219-322-2560 ● 1-800-428-3311

REPORT TO:
Freddie Walker
MAECORP
17450 South Halsted
Homewood, IL 60430

Date: 2/28/89
Recd: 2/20/89
WO #: 21-1171

PROJECT IL-A013

Laboratory Smp ID No.:	4360-9	4361-9	4362-9	4363-9			
DESCRIPTION: —> [Unless otherwise noted; results in parts per million - ppm]	BLK 1:10 pm	MW1 12:40 pm	MW2 1:45 am	MW3 1:00 pm			
PARAMETERS: ↓	2/17/89	2/17/89	2/17/89	2/17/89			
Silver	<0.002	0.018	0.015	0.003			
Arsenic	<0.010	<0.010	<0.010	<0.010			
Barium	<0.050	0.558	0.451	0.125			
Cadmium	<0.002	0.006	0.004	<0.002			
Chromium	<0.004	0.212	0.157	0.019			
Mercury	<0.0001	0.0043	0.0222	0.0001			
Lead	<0.009	1.56	2.01	0.019			
Selenium	<0.01	0.016	0.02	0.015			
TOC	<1	59	39.6	11.3			

MAECORP INCORPORATED
QA/QC REVIEW NO
QA/QC APPROVAL NO
DATE 03-03-89
SIGNED

Certified by:

BPM INDUSTRIES
1150 Junction Avenue - Schererville, Indiana 46375
1-219-322-2560 ● 1-800-428-3311

REPORT TO:
Freddie Walker
MAECORP INC
17450 S Halsted St
Homewood IL 60430

Date: 3/08/89
Recd: 2/20/89
WO #: 21-1171

EPA METHOD 608 PROJECT IL A013

Laboratory Smp ID No.:	4360-9	4361-9	4362-9	4363-9			
DESCRIPTION: —> (Unless otherwise noted; results in parts per billion - ppb)	BLK 1:10 pm	MW1 12:40 pm	MW2 1:45 am	MW3 1:00 pm			
PARAMETERS:	2/17/89	2/17/89	2/17/89	2/17/89			
PCB's as:							
AROCHLOR 1016	ND	ND	ND	ND			
AROCHLOR 1221	ND	ND	ND	ND			
AROCHLOR 1232	ND	ND	ND	ND			
AROCHLOR 1242	ND	ND	ND	ND			
AROCHLOR 1248	ND	ND	ND	ND			
AROCHLOR 1254	ND	ND	ND	ND			
AROCHLOR 1260	ND	ND	ND	ND			
					ND		
					ND		
					03-08-89		
					Freddie Walker		

ND=Not Detected at 1ppb

Certified by: Sheila St. Amour

TENCO LABORATORIES
BPM INDUSTRIES
1150 Junction Avenue - Schererville, Indiana 46375
1-219-322-2560 ● 1-800-428-3311

REPORT TO:
Froddie Walker
MAECORP
17450 South Halsted
Homewood, IL 60430

Date: 2/28/89
Recd: 2/20/89
WO #: 21-1171

PROJECT IL-A013

Laboratory Smp ID No.:	4360-9	4361-9	4362-9	4363-9			
DESCRIPTION: —> [Unless otherwise noted; results in parts per billion - ppb] PARAMETERS: ↓	BLK 1:10 pm 2/17/89	MW1 12:40 pm 2/17/89	MW2 1:45 am 2/17/89	MW3 1:00 pm 2/17/89			Detection Limits
Acenapthene	ND	ND	ND	ND			18 ppb
Acenapthylene	ND	ND	ND	ND			10 ppb
Anthracene	ND	ND	ND	ND			6.6 ppb
Benzo(a)anthracene	ND	ND	ND	ND			0.13 ppb
Benzo(b)fluoranthene	ND	ND	ND	ND			0.18 ppb
Benzo(a)pyrene	ND	ND	ND	ND			0.23 ppb
Benzo(ghi)perylene	ND	ND	ND	ND			0.76 ppb
Benzo(k)fluoranthene	ND	ND	ND	ND			1.5 ppb
Chrysene	ND	ND	ND	ND			1.5 ppb
Dibenzo(a,h)anthracene	ND	ND	ND	ND			0.3 ppb
Fluoranthene	ND	ND	ND	ND			2.1 ppb
Fluorene	ND	ND	ND	ND			2.1 ppb
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND			0.43 ppb
Napthalene	ND	ND	ND	ND			10 ppb
Phenanthrene	ND	ND	ND	ND			6.4 ppb
Pyrene	ND	ND	ND	ND			2.7 ppb

ND=Not Detected

TENCO LABORATORIES

BPM INDUSTRIES
1150 Junction Avenue - Schererville, Indiana 46375
1-219-322-2560 ● 1-800-428-3311

REPORT TO:
Freddie Walker
MAECORP
17450 South Halsted
Homewood, IL 60430

PROJECT IL-A013

EPA METHOD 601,602,603

Date: 2/28/89
Recd: 2/20/89
WO #: 21-1171

Laboratory Smp ID No.:	4360-9	4361-9	4362-9	4363-9			
DESCRIPTION: —>	BLK	MW1	MW2	MW3			
less otherwise noted; ults in parts per lion - ppb]	1:10 pm	12:40 pm	1:45 am	1:00 pm			
PARAMETERS: ↓	2/17/89	2/17/89	2/17/89	2/17/89			
ROLEIN	ND	ND	ND	ND			
RYLONITRILE	ND	ND	ND	ND			
NZENE	ND	ND	ND	ND			
OMODICHLOROMETHANE	ND	ND	ND	ND			
OMOFORM	ND	ND	ND	ND			
OMOMETHANE	ND	ND	ND	ND			
RBON TETRACHLORIDE	ND	ND	ND	ND			
LOROBENZENE	ND	ND	ND	ND			
LOROETHANE	ND	ND	ND	ND			
CHLOROETHYLVINYL ETHER	ND	ND	ND	ND			
LOROFORM	ND	ND	ND	ND			
LOROMETHANE	ND	ND	ND	ND			
BROMOCHLOROMETHANE	ND	ND	ND	ND			
1-DICHLOROETHANE	ND	ND	ND	ND			
2-DICHLOROETHANE	ND	ND	ND	ND			
1-DICHLOROETHENE	ND	ND	ND	ND			
ans-1,2-DICHLOROETHENE	ND	ND	ND	ND			

TENCO LABORATORIES

BPM INDUSTRIES
1150 Junction Avenue - Schererville, Indiana 46375
1-219-322-2560 ● 1-800-428-3311

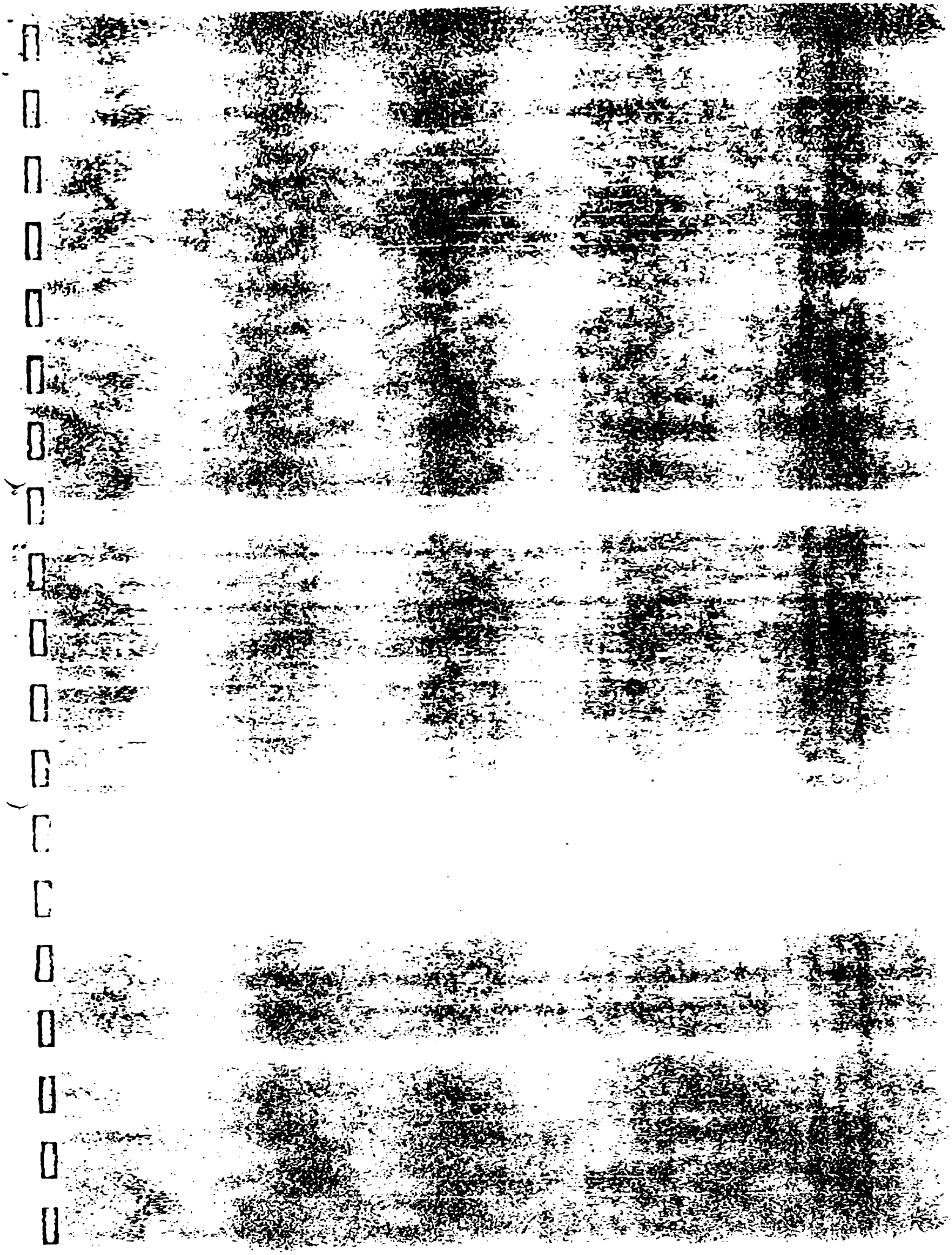
REPORT TO:
Freddie Walker
MAECORP
17450 South Halsted
Homewood, IL 60430

PROJECT IL-A013
EPA METHODS 601,602,603

Date: 2/28/89
Recd: 2/20/89
WO #: 21-1171

Laboratory Smp ID No.:	4360-9	4361-9	4362-9	4363-9			
DESCRIPTION: —>	BLK	MW1	MW2	MW3			
Unless otherwise noted; results in parts per billion - ppb)	1:10 pm	12:40 pm	1:45 am	1:00 pm			
PARAMETERS: ↓	2/17/89	2/17/89	2/17/89	2/17/89			
,2-DICHLOROPROPANE	ND	ND	ND	ND			
is-1,3-DICHLOROPROPENE	ND	ND	ND	ND			
rans,1,3-DICHLOROPROPENE	ND	ND	ND	ND			
THYL BENZENE	ND	ND	ND	ND			
ETHYLENE CHLORIDE	ND	ND	ND	ND			
,1,2,2-TETRACHLOROETHANE	ND	ND	ND	ND			
ETRACHLOROETHENE	ND	ND	ND	ND			
OLUENE	ND	ND	ND	ND			
,1,1-TRICHLOROETHANE	ND	ND	ND	ND			
,1,2-TRICHLOROETHANE	ND	ND	ND	ND			
RICHLOROETHENE	ND	ND	ND	ND			
RICHLOROFLUOROMETHANE	ND	ND	ND	ND			
INYL CHLORIDE	ND	ND	ND	ND			

ND=Not Detected at 5 ppb



MAECORP INCORPORATED
17450 S. Halsted Street
Homewood, IL 60430

CHAIN-OF-CUSTODY RECORD

CHAIN-OF-CUSTODY № 003668

RECEIVING ENTITY Teneco

ENTITY CONTACT/PHONE _____ / _____

MAECORP JOB SITE PHONE _____

PROJECT LOCATION	NAME OF CLIENT	PROJECT TELEPHONE NUMBER	PROJECT NUMBER
North Chicago	Northern Trust Bank		IL-A013

ITEM NUMBER	SAMPLE NUMBER	NUMBER & SIZE OF CONTAINERS	DESCRIPTION	TRANSFER NUMBER & CHECK 1	2	3	4	5	6	7
1	IL-A013-B1-C1	1-Qt Jar 1-250ml Amber Jar 7-VOA Vials 1-250ml Jar	Soil Composite from Boring 1 7 VOA vials w/ sample # IL-A013-B1-01 to 07 make up IL-A013-B1-C1 (Please composite them)	✓						
2	IL-A013-B2-C1	"	Soil Composite from Boring 2 7 VOA vials w/ sample # IL-A013-B2-01 to 07 make up IL-A013-B2-C1 (Please composite them)	✓						
3	IL-A013-B3-C1	"	Soil Composite from Boring 3 7 VOA vials w/ sample # IL-A013-B3-01 to 07 make up IL-A013-B3-C1 (Please composite them)	✓						
4	IL-A013-B4-C1	"	Soil Composite from Boring 4 7 VOA vials w/ sample # IL-A013-B4-01 to 07 make up IL-A013-B4-C1 (Please composite them)	✓						
5	IL-A013-B4-C2	1-Qt Jar 1-250ml Amber Jar 1-250ml Jar	Soil Composite from Boring 4	✓						

Send results to
Freddie Walker
c/o MAECORP
PO# 25919-ILA013.

Person Responsible for Sample	Affiliation	Date	Time
Katie Dignan	MAECORP	1/9/89	1:30PM

Purpose of analysis (use back of front sheet if necessary)

VOC's PCB's
PNA's
8 RCRA Metals (tot)

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	ACCEPTED BY	DATE	TIME
1	1-5	Katie Dign			
2					
3					
4					
5					
6					
7					

MAECORP INCORPORATED
17450 S. Halsted Street
Homewood, IL 60430

CHAIN-OF-CUSTODY RECORD

CHAIN-OF-CUSTODY № 004793

RECEIVING ENTITY: Trace Labs

ENTITY CONTACT/PHONE: _____ / _____

MAECORP JOB SITE PHONE: _____

PROJECT LOCATION	NAME OF CLIENT	PROJECT TELEPHONE NUMBER	PROJECT NUMBER
22nd St North Chicago	Northern Trust Bank		IL-[illegible]

ITEM NUMBER	SAMPLE NUMBER	NUMBER & SIZE OF CONTAINERS	DESCRIPTION	TRANSFER NUMBER & CHECK 1	2	3	4	5	6	7
1	MW01 - IL-A013	2 Vom(40ml)vials 1 lgt glass 1 lgt Amber	water							
2	MW02 - IL-A013	2 Vom(40ml)vials 1 lgt glass 1 lgt Amber	"							
3	MW03 - IL-A013	2 Vom(40ml)vials 1 lgt glass 1 lgt. Amber	"							
4	Blank1 [illegible]	1 qt Jar 1 Vom(40ml)Vial	Travel Blank							
5	~~[illegible]~~	~~[illegible]~~								

MAECORP INCORPORATED
CAPS REVIEWED
CAPS APPROVED
DATE
BY

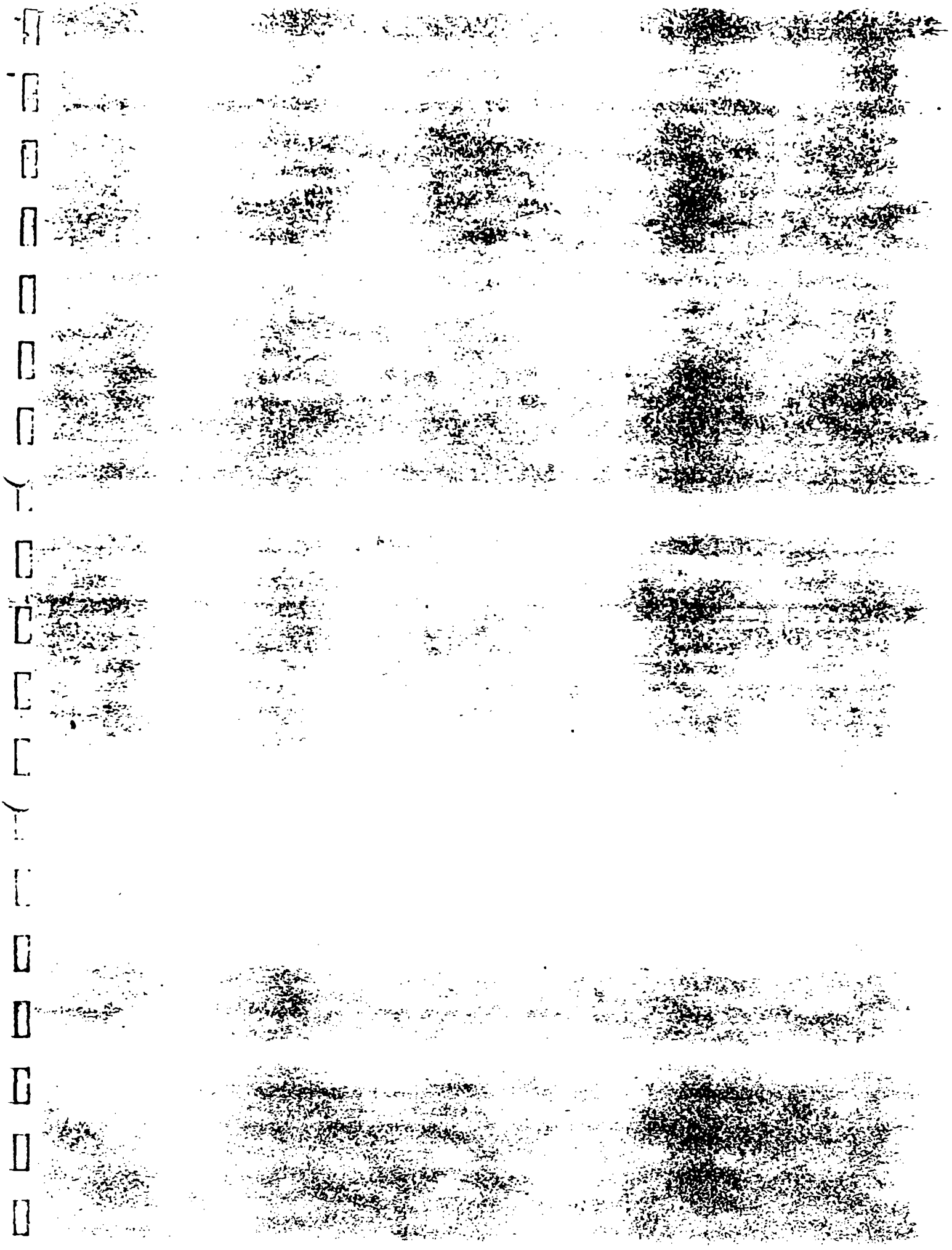
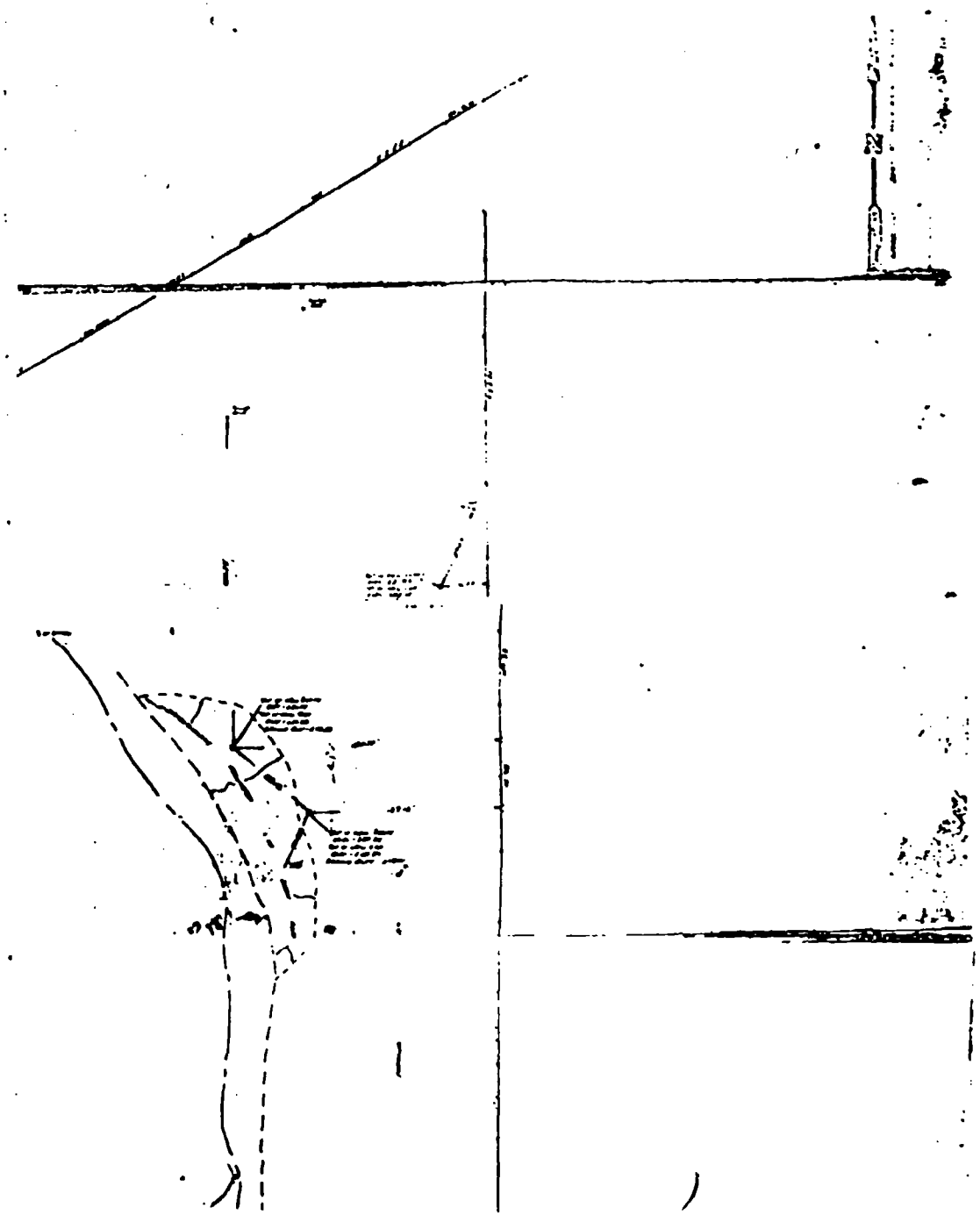
Please send results to:
c/o MAECORP
Pat [illegible] - IL-A013

Person Responsible for Sample	Affiliation	Date	Time
[illegible]	MAECORP	[illegible]	[illegible]

Purpose of analysis (use back of front sheet if necessary)

PNA (610)
PCB's
TOC
RCRA metals
VOA (601, 602, 603, 606, 607, 609, 611, 612)

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	ACCEPTED BY	DATE	TIME
1	1-7	Uma Prasad	B. Fenlon	7/5	[illegible]
2					
3					
4					
5					
6					
7					



MONITORING WELL LOCATION PL