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Matheson Gas Products
ILD148348287
SF/HRS
Volume 1 of 2

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Pre-Remedial

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CERCLA
Screening Site Inspection Report

Illinois Environmental Protection Agency
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1. INTRODUCTION

On January 24, 1991, the Pre-Remedial Unit of the Illinois Environmental Protection Agency (IEPA) was tasked by the United States Environmental Protection Agency (USEPA) to conduct a Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Screening Site Inspection (SSI) of the Matheson Gas Products facility in Joliet, Illinois.

The site was initially placed on CERCLIS (Comprehensive Environmental Response, Compensation and Liability Information System) in November of 1988 as a result of a request for discovery action initiated by the Illinois Environmental Protection Agency.

The site received its initial CERCLA evaluation in the form of a Preliminary Assessment (PA) report that was conducted by Greg Dunn of the IEPA in September of 1989. In May of 1991, the IEPA's Pre-Remedial Unit prepared and submitted to the Region V offices of the USEPA a Screening Site Inspection work plan for the Matheson Gas Products facility. The sampling portion of the Screening Site Inspection was conducted on June 4th and 5th, 1991 when the sampling team collected three groundwater samples and nine soil/waste samples.

The purposes of a Screening Site Inspection have been stated by the USEPA in a directive outlining Pre-Remedial program strategies. The directive states:

> All sites will receive a screening SI to 1) collect additional data beyond the PA to enable a more refined preliminary HRS [Hazard Ranking System] score, 2) establish priorities among sites most likely to qualify for the NPL [National Priorities List], and 3) identify the most critical data requirements for the Listing SI step. A Screening SI will not have rigorous data quality objectives [DQOs]. Based on the refined

> preliminary HRS score and other technical judgement factors, the site will then either be designated as NFRAP [No Further Remedial Action Planned], or carried forward as an NPL listing candidate. A Listing SI will not automatically be done on these sites, however. First, they will go through a management evaluation to determine whether they can be addressed by another authority such as RCRA [Resource Conservation and Recovery Act]... Sites that are designated NFRAP or deferred to other statutes are not candidates for a Listing SI.
>
> The Listing SI will address all the data requirements of the revised HRS using field screening and NPL level DQOs. It may also provide needed data in a format to support remedial investigation work plan development. Only sites that appear to score high enough for listing and that have not been deferred by another authority will receive a Listing SI (U.S.EPA 1988).

The Region V offices of the U.S. EPA have also requested that the Illinois Environmental Protection Agency identify sites during the Screening Site Inspection that may require removal action to remediate an immediate human health and/or environmental threat.

2. SITE BACKGROUND

2.1 INTRODUCTION

This section includes information obtained over the course of the CERCLA Screening Site Inspection investigation and previous IEPA activities involving this site.

2.2 SITE DESCRIPTION

Matheson Gas Products, Inc. is a 5.44 acre site located on Manhattan Road and Richards Street (Southwest 1/4 Section 22, Township 35 North, Range 10 East) in the southern part of Joliet, Illinois. The facility is an active facility that distributes high purity gases to universities and research facilities. Matheson Gas has more than 100 gases on site that can be repackaged in different size cylinders, depending on the need of the customer. The cylinders are rented out to the customers, along with any associated gas handling equipment. When the rented cylinders are returned to Matheson Gas, the cylinder can contain from 1 to 10 percent of remnant gas. The remnant gas is then vented from the cylinders through scrubber towers to be neutralized with either a caustic or acidic solution. This process generates a scrubber waste which is stored in a 5,000 gallon tank situated on the western part of the facility. The waste is analyzed for pH and shipped off-site as a non-hazardous waste. A 4-mile radius map surrounding the site is provided in Appendix A of this report.

2.3 SITE HISTORY

Activities began at the site in 1891 when Kirkpatrick, Howk, Massey Stone Company used the area for their quarry operations. The

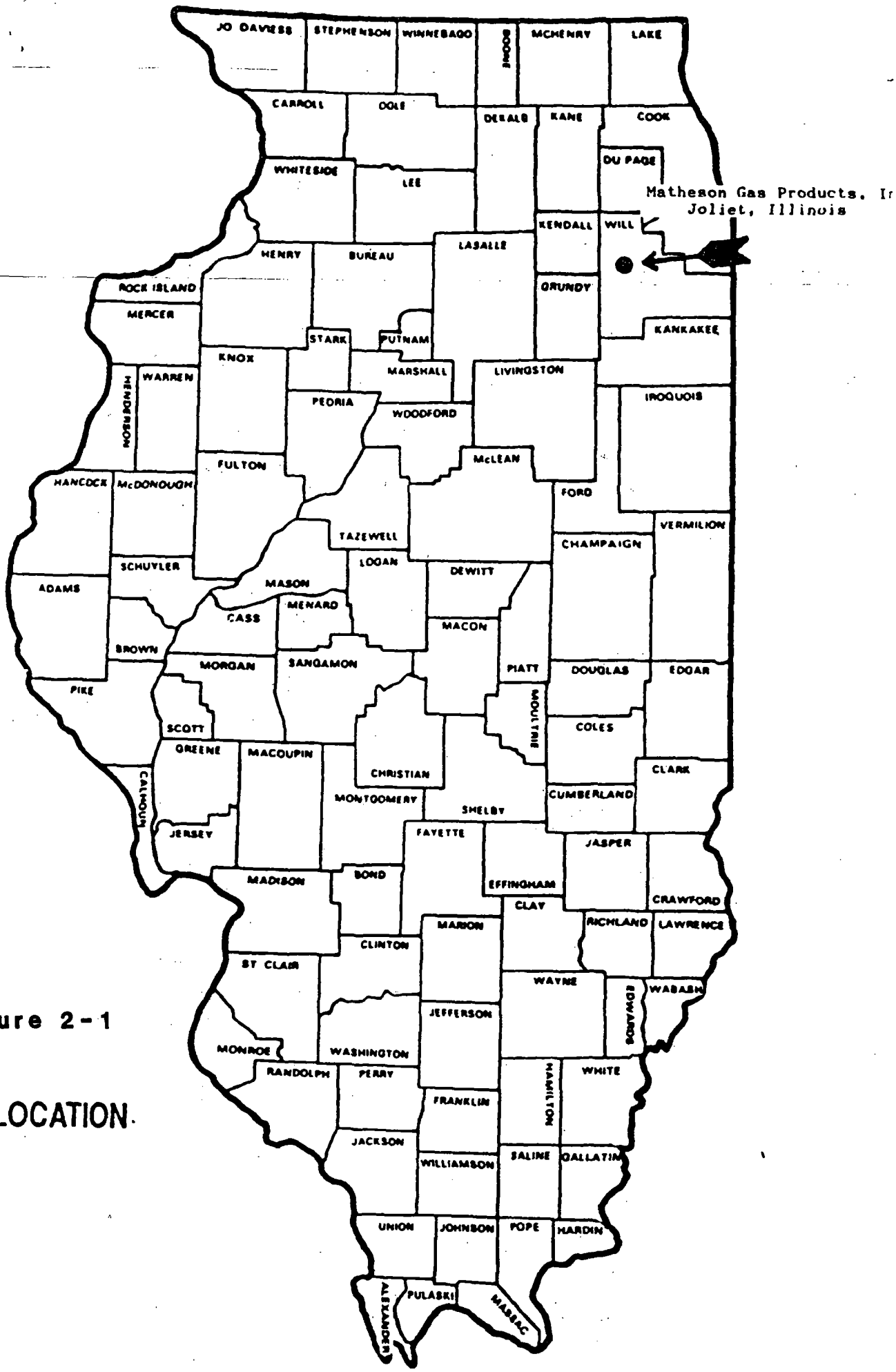
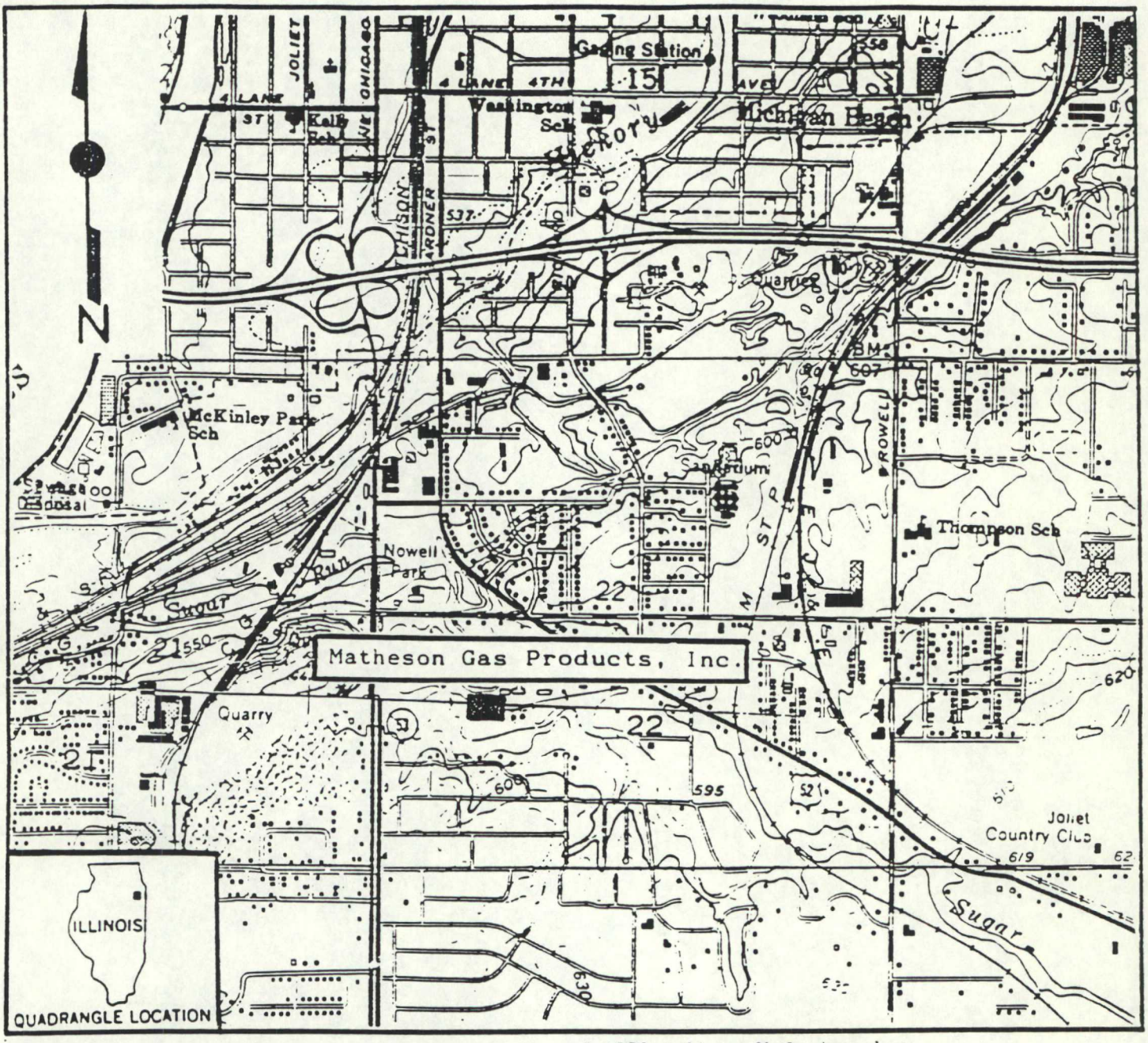


Figure 2-1

SITE LOCATION

Figure 2-2

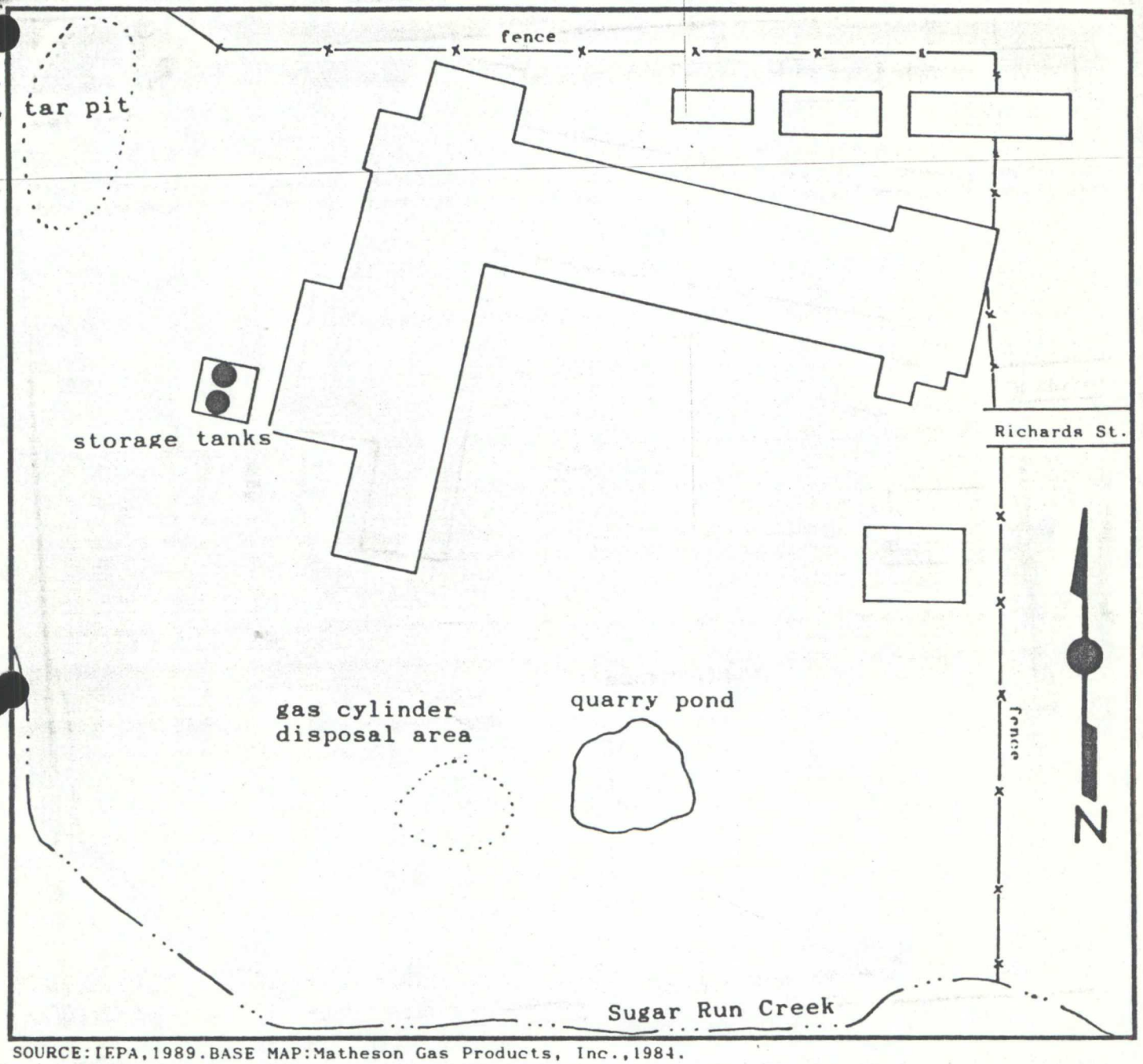


SOURCE: IEPA, 1989. BASE MAP: USGS 1973 Elwood, IL and 1973 Joliet, IL Quadrangles.

1000 2000 3000 4000 5000 6000 7000 FEET

Site Area

Figure 2-3



SOURCE: IEPA, 1989. BASE MAP: Matheson Gas Products, Inc., 1984.

Approximate Scale
1" = 75 feet

SITE MAP

quarrying lasted until 1911 when the property was sold to the Joliet Oil Refining Company for use as a refinery. A Sanborn fire insurance map of the Joliet area from 1924 shows that Joliet Refining Co. was operating at the site and that several oil tanks were present and also present were several stills, two pump houses and a boiler house. The property changed owners but continued to be used as a refinery until 1946 when Matheson Gas bought the property.

While the property was being used as a oil refinery, refinery waste was deposited in at least one old quarry pit left from when the property was being used as a quarry. A pit on site measuring about 125' by 30' (unknown depth) contains viscous petroleum tar-like waste. Adjacent areas also contain viscous petroleum tar-like waste and part of these areas have been filled over by Matheson Gas in order to expand their room to operate. In the above pit in June of 1988, a dog became trapped and although eventually freed, the dog died apparently from exposure to conditions while in the pit.

During the 1960's, Matheson Gas disposed of gas cylinders on site that may have contained phosgene, chlorine, hydrogen sulfide and nitrogen dixoide. These areas where the cylinders were disposed are to the west and north of the quarry pond. Also, smaller gas cylinders could have been disposed of in the quarry pond.

Matheson Gas filed a RCRA Part A application with the USEPA on November 18, 1990 for their scrubber waste process (T04). However, the facility amended their Part A in 1984 to close their hazardous waste storage area (SO2) in order to be classified as a generator only. This unit was certified closed on September 17, 1985, by the Illinois EPA. The IEPA concurred on April 27, 1989 with the USEPA and Matheson Gas

that the scrubber tower was not RCRA regulated and withdrew the Matheson Gas Part A on that date. The facility also has three other permits that have been issued by the IEPA. The first permit is issued by the IEPA Division of Air Pollution Control for pollution control equipment consisting of a scrubber system and dispatching oven (permit #197809AAX). The IEPA Division of Water Pollution Control issued an NPDES permit (#IL0062a618) for non-contact cooling water that is discharged to the on-site quarry pond. The Division of Land Pollution Control approved a permit (1981-59-OP) on January 5, 1984 for Matheson Gas to operate two 5,000 gallon tanks for storage of scrubber wastes.

3. SCREENING SITE INSPECTION PROCEDURES AND FIELD OBSERVATIONS

3.1 INTRODUCTION

This section outlines procedures utilized and observations made during the CERCLA Screening Site Inspection conducted at the Matheson Gas Products, Inc., facility. Specific portions of this section contain information pertaining to the reconnaissance inspection, site representative interview and field sampling procedures. The Screening Site Inspection for the Matheson Gas Products facility was conducted in accordance with the site inspection work plan which was developed and submitted to the U.S.EPA Region V offices prior to the initiation of field activities.

The U.S.EPA Potential Hazardous Waste Site Inspection Report (Form 2070-13) for Matheson Gas Products is located in Appendix D of this report.

3.2 SITE RECONNAISSANCE

on May 2, 1991, Mr. Alan Kirwan of the Illinois Environmental Protection Agency conducted the initial CERCLA Screening Site Inspection reconnaissance inspection of the Matheson Gas Products facility. Mr. Stuart Miller and Mr. Casey Von Swol of Matheson Gas Products accompanied Mr. Kirwan on the inspection. The reconnaissance inspection included a visual inspection of the facility to delineate the extent of their activities, identify potential sampling locations and identify potential sampling requirements. During the reconnaissance inspection, it was determined that level D personal protection equipment could be worn during the sampling activities

unless air monitoring equipment detected any concentrations over background.

Site reconnaissance observations showed that Matheson Gas is located on Richards Street about 1/4 of a mile west of the intersection of Richards Street and Manhattan Road. The area immediately surrounding Matheson Gas is mostly wooded. To the immediate east and northeast of Matheson Gas are industrialized areas. Immediately to the south, west and north of Matheson Gas are wooded areas. Sugar Run creek actually flows through part of Matheson Gas property on the wooded south side of the property. Sugar run creek enters the property from the east and flows west beyond Mathesons property where it then turns and flows north to the Desplaines river approximately one mile from where it enters Matheson property. Beyond the immediate wooded areas on the south, west and north side of the site are residential areas.

An area of the parking lot south of the facilities building's showed where a petroleum, tar-like substance was making its way up to the surface of the parking lot from below. This area of the site had been filled over and elevated to create more space for manufacturing. More to the south beyond the filled area are areas where the petroleum tar-like substance was disposed of while the site area was used as a refinery. There is at least one old quarry pit in this area that contains the tar-like waste. This pit and adjacent areas where the tar was disposed were viewed during the site reconnaissance. An old creek bed pathway from the above referenced pit was followed to where it runs into the present day path of Sugar Run creek. Quite possibly the former pathway of Sugar Run creek ran through the quarried area

where the tar-like substance is disposed of. Mr. Miller and Mr. Von Swol informed this author that the property boundaries of Matheson Gas end at a area in the above referenced pit and that two other property owners share common boundaries with Matheson Gas within the area of the pit.

3.3 SITE REPRESENTATIVE INTERVIEW

On June 4, 1991, a site representative interview was held at Matheson Gas. Representing the Illinois EPA were Alan Kirwan, Gregg Dunn, Judy Triller and Hank Konzelman. Representing Matheson Gas were plant manager Mr. Casey Von Swol and attorney Mr. David Rifkind. Mr. Rifkind is employed by the law firm of Morgan, Lewis and Bockius in Philadelphia, Pennsylvania. Mr. Rifkind stated that he was present representing Matheson Gas and that he was there for liability and safety purposes. Mr. Von Swol and Mr. Rifkind were informed of the Screening Site Inspection objectives and sampling points. Safety considerations during sampling activities were also discussed. Mr. Von Swol accompanied the IEPA sampling team during the inspection and provided glass jars with which the Illinois EPA sampling team split on-site samples with Matheson Gas. Samples were split at the request of Matheson Gas.

3.4 SAMPLIING PROCEDURES

The field activities portion of the CERCLA Screening Site Inspection included the collection of three groundwater and nine soil/waste samples by the Illinois Environmental Protection Agency

inspection team. The twelve samples were collected to determine if any U.S.EPA Target Compound List compounds were present at the site or at potential receptors of concern. The Target Compound List and corresponding program established detection limits are provided in Appendix D of this report. (Refer to the analytical data in Appendix I for detection limits associated with each sample point.

3.5 GROUNDWATER SAMPLING PROCEDURES

On June 4, 1991, the Matheson Gas on-site industrial/washroom well, a public well and a private well were sampled by Illinois EPA personnel. The wells were purged for fifteen minutes, with temperature, pH and specific conductivity readings taken during purging and prior to sampling in order to determine that representative groundwater was being sampled. The wells were sampled at points before the water entered any conditioners or treatment, with the water transferred dirrectly into the appropriate sampling containers provided by the Illinois EPA's Contract Lab Program. Preservatives were added to the appropriate inorganic sample containers after each container was filled.

The in-well pump at the Matheson Gas industrial/washroom on-site well was allowed to operate for 15 minutes. The well water flow during the 15 minute purging process was 3.6 gallons per minute. The well was sampled at 10:15 AM. Well water sample from the on-site well at Matheson Gas was split with Matheson Gas. The Matheson Gas well is 106 feet deep and is cased at 73 feet. A residence private well located on Old Elm Road approximately 400 feet south of the Matheson Gas bottling building was sampled at 11:15AM. Flow during the purging was about

three gallons per minute. The private well is approximately 152 feet deep and is cased at 80 feet. The Clearview subdivision public well no. 2 was sampled at 12:40 PM. The well is located about 1/4 mile north of the site. The flow during the purging was about one and one-half gallons per minute. The subdivision well had been running most of the morning before sampling. The subdivision well is approximately 220 feet deep and is cased at 60 feet.

3.6 SOIL SAMPLING PROCEDURES

On June 4, 1991, Illinois EPA personnel collected soil/waste samples X103 through X107. On June 5, 1991, Illinois EPA personnel collected soil/waste samples X101, X102, X108 and X109. The purpose of the sampling was to compare on-site samples to downgradient samples and a background sample. Table 3-1 on the following page describes each of the samples with their location, depth and physical appearance noted. The samples were collected with stainless steel spoons. The sample material was transferred directly into the sample jars from the sampling spoons. Before the spoons were used at the site, each had been decontaminated at the Illinois EPA warehouse.

The soil/waste sample containers and the groundwater sample containers were packaged and sealed in accordance with previously documented Pre-Remedial Program procedures. The Illinois EPA samples were analyzed for the Target Compound List be Illinois EPA laboratories. Photographs of the Screening Site Inspection sampling activities are provided in Appendix E of this report.

Table 3-1

Sample	Depth	Appearance	Location
X101	0-6"	black soil	Background sample taken about 300' south of bottling building across creek
X102	0-6"	dark, wet sand and mud	Southern edge of quarry pond at overflow discharge to Sugar Run creek
X103	0-6"	soil with black tar-like material	Along former creek bed about 35' south from confluence of Sugar Run creek
X104	0-6"	dark brown soil with viscous tar material	At north edge of tar pit one foot north of fence
X105	0-6"	black, viscous tar-like material	About 80' east of bottling building and 60' south of north fence line in lot area
X106	0-6"	black, viscous tar-like material	At southern end of fenced tar pit about 10' north inside tar pit
X107	0-6"	black, viscous tar-like material	At north end of fenced tar pit about 18' south inside tar pit
X108	0-6"	brown/black mud with red discoloration	At north edge of quarry pond about 30' east of NPDES discharge outfall pipe
X109	0-6"	black/green mud	About 16' south of NPDES discharge outfall to quarry pond along discharge route

3.8 DECONTAMINATION PROCEDURES

Standard Illinois Environmental Protection Agency decontamination procedures were followed prior to the collection of all samples. The procedured included the scrubbing of all equipment with a non-foaming Trisodium Phosphate solution, rinsing with hot tap water again and a final rinse with distilled water. All equipment is air dried, then wrapped and stored in heavy duty aluminum foil for transport to the field. Field decontamination procedures include all of the above except the hot tap water rinse.

Figure 3-1 Site Sampling Location Map

approximate scale: 1" = 100"

denotes photo No. and direction

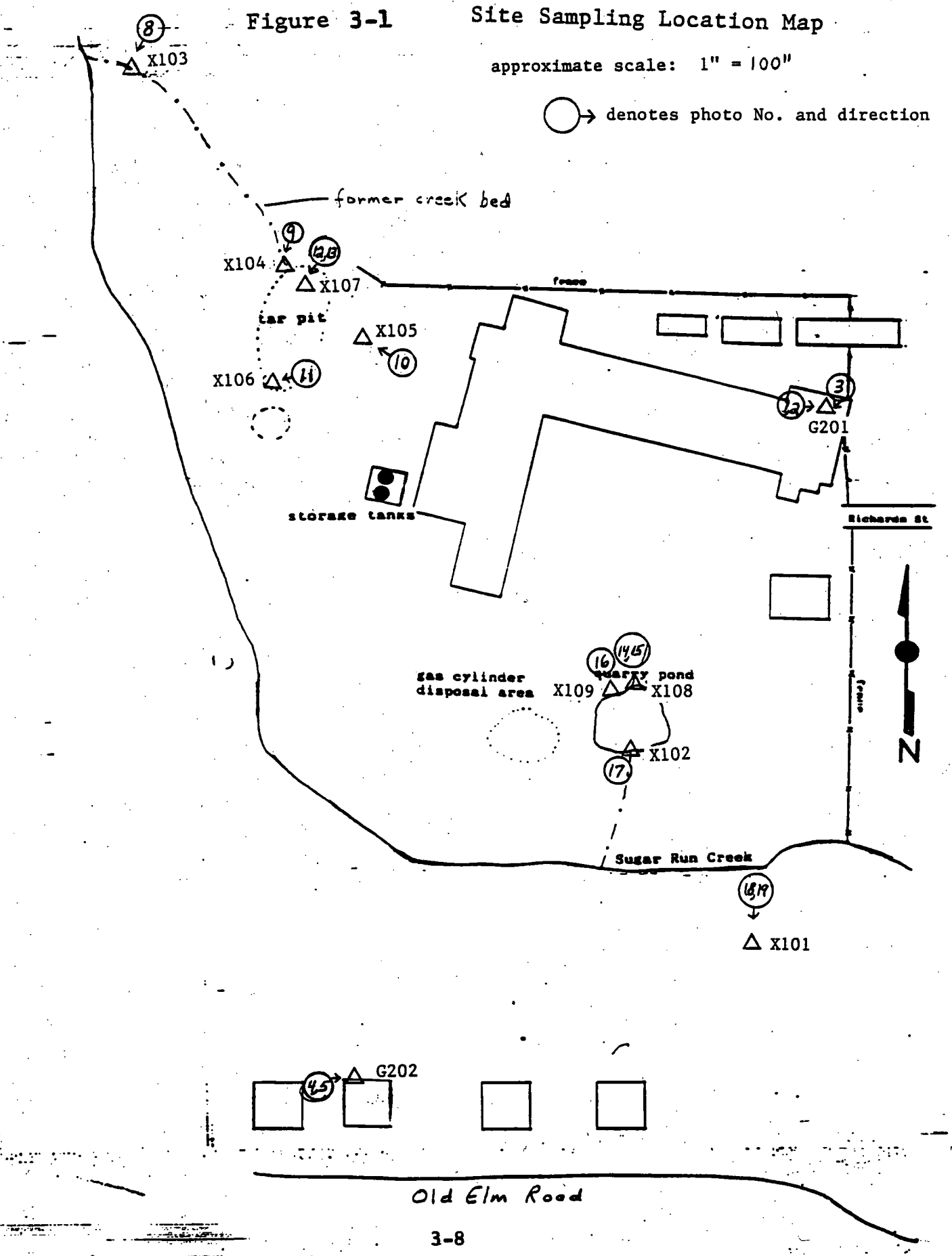
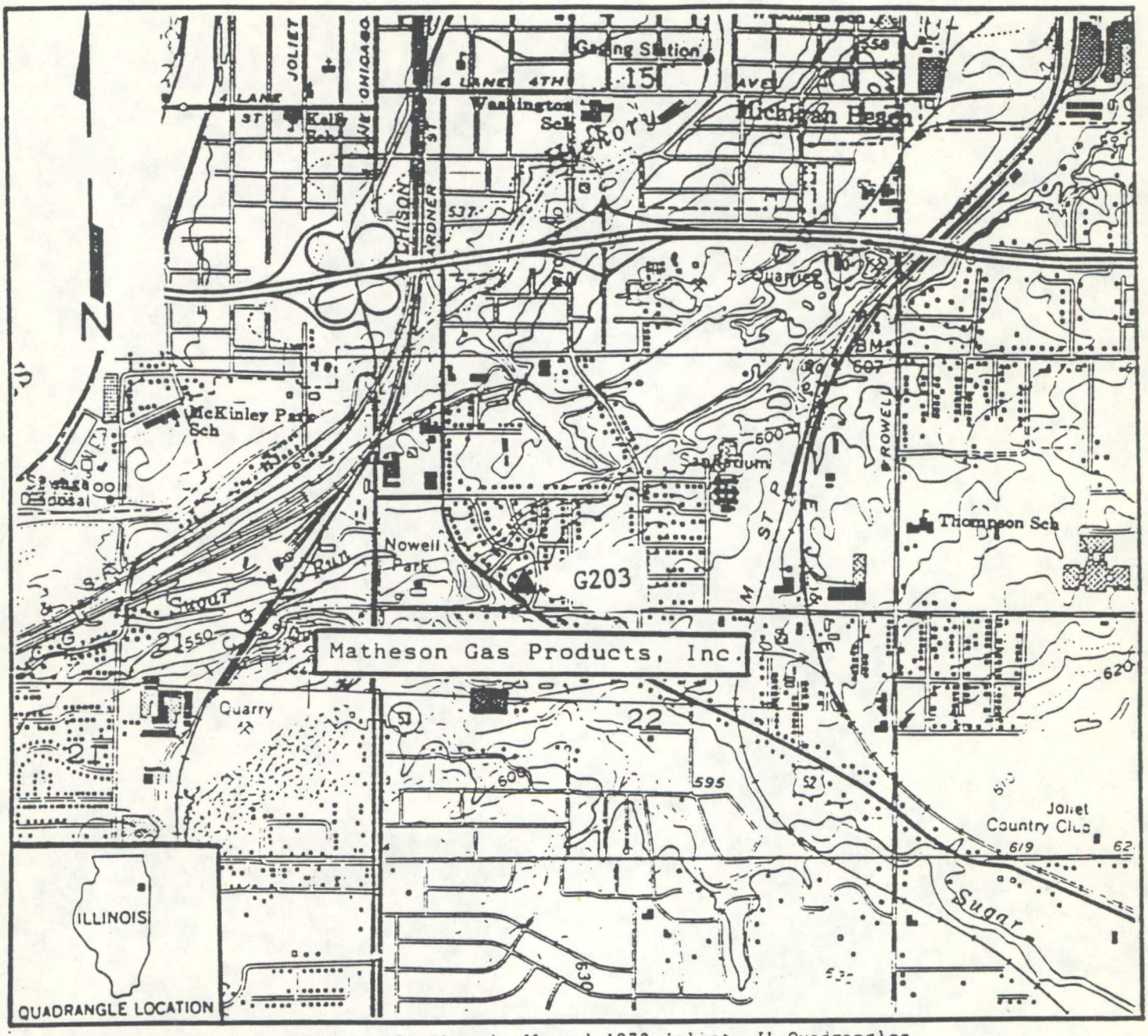


Figure 3-2



SOURCE: IEPA, 1989. BASE MAP: USGS 1973 Elwood, IL and 1973 Joliet, IL Quadrangles.

1000 2000 3000 4000 5000 6000 7000 FEET

Background Groundwater Sample Location Map

4. ANALYTICAL RESULTS

4.1 INTRODUCTION

This section includes a summary of the analytical results of samples collected during the Screening Site Inspection conducted at the Matheson Gas Products facility in Joliet, Illinois. Table 4-1 summarizes sample results collected by site inspection personnel. Some samples contained unknown organic compounds with corresponding estimated concentrations. Table 4-1 does not include these unknown organic compounds. Complete laboratory analytical data, including unknown compounds and substances that were analyzed for but not detected, is provided for in Appendix G (volume 2 of 2) of this report.

4.2 ANALYTICAL RESULTS FROM IEPA COLLECTED SAMPLES

Chemical analysis of the three groundwater samples collected by the site inspection personnel indicated that common inorganic groundwater constituents and metals were contained in the samples. Several of the common inorganic constituents that are indicators of "hardness" of water are at relatively high concentrations in the three samples collected. The high concentrations of these "hardness" indicators in these three samples are characteristic of the dolomitic aquifer that they contact.

The on-site groundwater sample (G201) analysis found a unknown semi-volatile organic compound at an estimated concentration of 1.8 parts per billion.

Analysis of the nine soil/waste samples collected during the inspection revealed the following substances: volatiles, semi-volatiles, pesticides, metals, suspected laboratory artifacts and

common inorganic soil constituents.

Analysis of samples X106 and X107 from the old quarry pit filled in with tar-like waste shows that the pit contains the highest concentrations of volatiles, semi-volatiles and lead. Sample X106 also contained the pesticide 4,4-DDT. Sample point X105 where tar-like waste is oozing upward through fill material also shows high concentrations of volatiles, semi-volatiles and lead. Sample point X104, just outside the pit where a dry former creek bed exists, showed relatively high concentrations of both known and unknown semi-volatiles and had a high lead content. Compared to the background sample, the above referenced samples and other samples from the site show a significant increase in concentrations of volatiles, semi-volatiles and lead.

TABLE 4-1
IEPA COLLECTED SAMPLE SUMMARY

Matheson Gas Products
ILD148348217

Sampling Point Sample Date	G201 6/4/91	G202 6/4/91	G203 6/4/91	X101 6/5/91	X102 6/5/91	X103 6/4/91	X104 6/4/91	X105 6/4/91	X106 6/4/91	X107 6/4/91	X108 6/5/91	X109 6/5/91	Trip Blank
PARAMETER													
Volatiles (parts per billion)													
Acetone	--	--	--	--	16.0	10.0J	140.0	1500.0	490.0J	--	170.0	80.0	130.0J
Methylene Chloride	--	--	--	--	--	--	4.0J	--	260.0J	--	6.0J	--	--
Benzene	--	--	--	--	--	--	--	--	2800.0	--	--	4.0J	--
Ethylbenzene	--	--	--	--	--	--	--	2200.0	1400.0	3200.0	--	10.0	--
Toluene	--	--	--	--	--	--	--	--	1900.0	3500.0	--	12.0	--
Xylene (total)	--	--	--	--	--	--	--	11000.0	10000.0	14000.0	--	20.0	--
Chloroform	--	--	--	--	--	--	--	--	--	--	--	8.0	--
Carbon Disulfide	--	--	--	--	--	--	--	--	--	--	--	4.0J	--
1,-1 Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	4.0J	--
1,1,2,2-Tetrachloroethane	--	--	--	--	--	--	--	2200.0	--	--	--	--	--
Semivolatiles (parts per billion)													
Chrysene	--	--	--	--	--	--	5100.0J	--	44000.0	--	--	--	--
Napthalene	--	--	--	--	--	--	--	14000.0	28000.0J	13000.0J	--	--	--
Flourene	--	--	--	--	--	--	--	--	27000.0J	6300.0J	--	--	--
Phenanthrene	--	--	--	--	--	--	--	48000.0	110000.0	50000.0J	--	--	--
2-Methylnapthalene	--	--	--	--	--	--	--	51000.0	140000.0J	39000.0J	--	--	--
Hexachlorobenzene	--	--	--	--	--	--	--	--	--	--	--	210.0J	--
Phenol	--	--	--	--	--	--	--	6800.0J	--	24000.0J	--	420.0J	--
Dimethyl Phthalate	--	--	--	--	--	--	--	--	--	--	--	390.0J	--
Di-n-Butylphthalate	--	--	--	--	--	--	--	--	--	--	--	1700.0J	--
Butylbenzylphthalate	--	--	--	--	--	--	--	--	--	--	--	420.0J	--
Bis (2-ethylhexyl) Phthalate	--	--	--	--	--	--	8100.0J	--	--	--	--	--	--
Pesticides (parts per billion)													
4,4'-DDT	--	--	--	--	--	--	--	--	270.0	--	--	--	--
Aroclor-1254	--	--	--	--	--	--	--	--	--	--	--	2800.C	--
Aroclor-1260	--	--	--	--	--	--	--	--	--	--	--	3200.0	--

NOTE: The J qualifier indicates an estimated value

Table 4-1 (cont.)

Matheson Gas Products
ILD148348287

Sample Point	G201	G202	G203	X101	X102	X103	X104	X105	X106	X107	X108	X109
Sample Date	6/4/91	6/4/91	6/4/91	6/5/91	6/5/91	6/4/91	6/4/91	6/4/91	6/4/91	6/4/91	6/5/91	6/5/91
PARAMETER												
Inorganics												
Aluminum	--	--	--	13200.0	4170.0	14700.0	20400.0	2220.0	2700.0	453.0	7990.0	8520.0
Antimony	49.5B	--	--	9.6B	73.9	34.8	--	36.3	--	--	63.5	58.6
Arsenic	--	--	--	7.9	5.1	11.0	9.4	1.4B	3.2B	0.7B	27.7	8.5
Barium	73.4B	61.0B	72.2B	112.0	21.1	88.9	111.0	21.6B	38.2B	7.2B	382.4	68.9
Beryllium	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	--	--	--	1.3B	--	--	212.0	--	--	--	--	--
Calcium	148000.0	174000.0	157000.0	24300.0	103000.0	59700.0	18400.0	50200.0	4260.0	700.0B	120000.0	99200.0
Chromium	9.5B	7.2B	9.0B	18.7	11.5	24.3	68.0	6.5	--	10.1	15.9	75.0
Cobalt	--	--	--	5.7B	--	3.1B	8.8B	--	--	--	--	1.0B
Copper	--	--	--	26.1	9.8	25.4	81.0	7.9	8.1	--	10.5	192.0
Iron	2670.0	1550.0	1110.0	21300.0	12400.0	24500.0	41500.0	4440.0	2360.0	1220.0	48600.0	35400.0
Lead	--	2.9B	--	26.5	11.0	30.4	318.0	95.0	197.0	60.0	16.8	378.0
Magnesium	72200.0	104000.0	70400.0	12000.0	60700.0	35100.0	8560.0	19600.0	839.0B	271.0B	55700.0	45500.0
Manganese	72.8	81.3	61.1	569.0	292.0	597.0	678.0	57.4	30.5	9.5	920.0	2320.0
Mercury	--	--	--	0.12	--	0.04	0.53	--	--	--	--	--
Nickel	--	--	15.8B	20.8	13.2	25.9	44.8	3.3B	--	7.3B	14.3	--
Potassium	4900.0B	5350.0	5090.0	2310.0	1450.0B	2650.0	2600.0	953.0B	825.0B	309.0B	2950.0	2760.0
Selenium	--	28.0	--	--	0.4B	0.5B	--	0.4B	0.8B	--	--	--
Silver	--	--	--	--	3.5	2.1	0.7B	1.9B	--	--	4.0	3.5
Sodium	73100.0	179000.0	83500.0	102.0B	188.0B	101.0B	258.0B	253.0B	683.0	281.0B	107.0B	686.0B
Thallium	--	--	--	--	--	--	--	1.0B	--	2.0B	--	--
Vanadium	29.1B	73.2	34.1B	26.1	11.0B	29.5	40.3	4.7B	7.4B	1.4B	18.3	19.9
Zinc	71.6	19.5B	--	100.0	49.5	116.0	321.0	27.2	13.3	4.4B	50.6	191.0
Cyanide	--	--	--	--	--	--	--	4.8	--	--	--	114.0
Sulfide	--	--	--	--	--	--	--	--	--	--	--	--
Sulfate	162000.0	267000.0	164000.0	--	--	--	--	--	--	--	--	--
	(ppb)	(ppb)	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)

NOTE: The B qualifier indicates that the reported value is less than the CRDL, but greater than the IDL.

5. DISCUSSION OF MIGRATION PATHWAYS

5.1 IINTRODUCTION

This section includes data and information that may be useful in analyzing Matheson Gas Products site impact on the four migration pathways identified in CERCLA's Hazard Ranking System (HRS). The migration pathways which will be analyzed in this section include groundwater, surface water, air and soil exposure.

5.2 GROUNDWATER

Groundwater samples were collected from the Matheson Gas on-site industrial/washroom well, the Clearview subdivision public well no.2 and a residence private well south of the site.

The geology of the area consists of a loam type material from the surface to three feet deep, with a clay layer from three to twelve feet deep. The Silurian Dolomite (Niagaran and Alexandrian Series) underlies the clay down to depths of 240 feet. This dolomite is part of the geohydrologic system present throughout northeastern Illinois that is referred to as the shallow dolomite aquifer system. This dolomite is underlain by the Maquoketa Group (Ordovician age) which consists primarily of nonwater-bearing shales that separate the Silurian aquifer from deeper water-bearing units. These shales generally are between 100 to 250 feet thick and occur from approximately 50 to 500 feet in depth. Below the Maquouketa lies the thick sequence of hydrologically connected rocks that are referred to as the Cambrian Ordovician aquifer system. This aquifer system is made

up of, in downward order, the Galena and Platteville Dolomite Groups, Glenwood-St. Peter Sandstone, Prairie du Chien Group - Dolomitic Sandstone, Eminence-Potosi Dolomite, Franconia Formation (dolomite, sandstone and shale) and the Ironton-Galesville Sandstone.

Private and public wells in the area of Matheson Gas Products (other than the Joliet city wells) obtain water from the Silurian Dolomite aquifer (see Appendix F for area well logs). The Joliet wells obtain water from the Cambrian-Ordovician aquifer at depths between 1400 feet and 1700 feet. Approximately 20 public water supply systems and 674 private wells tap the Silurian Dolomite aquifer and serve 7,169 residents within four miles of the site. Private wells range from 50-340 feet in depth. Public wells range from 50-360 feet in depth. This total does not include industrial and commercial wells that may supply water to their employees. The closest private well is on-site and can be used for drinking by the employees at the facility. The closest public supply well is less than 1/4 mile north in the Clearview subdivision. No wellhead protection areas (as designated by Section 1428 of the Safe Drinking Water Act) exist near the site.

5.3 SURFACE WATER

No surface water samples were collected during the June 4th and 5th, 1991 Screening Site Inspection of Matheson Gas Products. Surface water runoff probably flows south or east from the facility where it would enter a wooded area and then flow into Sugar Run creek. Sugar Run creek flows to the west and then to the north for about one mile from the site where it enters the Desplaines river. Surface water use of the Desplaines river is recreational only, with no surface water intakes within fifteen miles downstream of the site. The site is

within a 100 year floodplain.

Sensitive environments within a fifteen mile downstream distance of the site include a state wildlife refuge, state designated natural areas and habitat known to be used by state designated or threatened species. Desplaines Conservation Area, a state wildlife refuge, is located approximately 13 miles downstream of Matheson Gas. A state endangered bird, the Pied-billed Grebe, has been reported at the Desplaines Conservation Area. Two state listed natural areas, the Schweizer West Geological Area and the Rockdale Geological Area are located approximately 14 miles downstream of the site. A state endangered plant, Corn Salad (*Valerianella chenopodifolia*), occurs approximately 14 miles downstream of the site.

5.4 AIR

No documented releases to air were observed during the CERCLA Screening Site Inspection. A photo-ionization detector (HNU) with an 11.7 eV lamp was used to determine the presence of certain air-borne contaminants. No significant readings over background levels were observed.

The potential for windblown particulates to carry contaminants off-site is possible since contaminants were found in the top six inches of soil on-site. The nearest regularly occupied building is the facility office. The approximate number of individuals potentially exposed to particulates include:

Distance	Population
On a source	24
Greater than 0 to 1/4 mile	306
Greater than 1/4 to 1/2 mile	1224
Greater than 1/2 to 1 mile	4590
Greater than 1 to 2 miles	16830
Greater than 2 to 3 miles	29070
Greater than 3 to 4 miles	26010

The above populations were taken from the 1990 census for Will County and a 3.06 people per household average for Will County as established by the U.S. Census Bureau.

There are no sensitive environments within 1/2 mile of Matheson Gas Products.

5.5 SOIL EXPOSURE

Soil samples, and waste samples taken from the old quarry pit, during the Screening Site Inspection indicate an observed release to the soil exposure pathway by contaminants that are attributable to the site. The compounds found three times background concentrations or above detection limits, in the top six inches, include benzene, ethylbenzene, toluene, xylene, napthalene, chrysene, flourene and phenanthrene. The heavy metal lead was also found at three times background concentrations.

The site is fenced on the north and east side of the property. Access to the site is relatively easy through wooded areas on the west and south sides. The old quarry pit that contains refinery waste has been fenced by Matheson Gas with a wooden fence such as the type used

along highways to prevent snow from blowing onto roads. Reportedly, children have occasionally played in the wooded area on the west and south side of the property.

6. BIBLIOGRAPHY

Illinois Department of Conservation, September 24, 1991 letter from Mr. Richard Lutz to Mr. Al Kirwan of the Illinois Environmental Protection Agency concerning sensitive environments near Matheson Gas Products.

Illinois Department of Energy and Natural Resources, State Water Survey, water well records of wells near Matheson Gas Products, Will County, T.35N., R.10E.

Illinois Environmental Protection Agency 1989 CERCLA Potential Hazardous Waste Site Preliminary Assessment of Matheson Gas Products, prepared by Greg Dunn, Springfield, Il.

Illinois Environmental Protection Agency 1990 CERCLA Potential Hazardous Waste Site Screening Site Inspection of American Cyanamid Company, prepared by Ken Corkill, Springfield, Il.

U.S. Census Bureau, 1990, Average persons per household in Will County, Illinois.

U.S.EPA, Office of Solid Waste and Emergency Response, February 12, 1988, Pre-Remedial Strategy for Implementing SARA, Directive number 9345.2-01, Washington, D.C.

USGS, 1973, Channahan, Il. Quadrangle, 7.5 Minute Series.

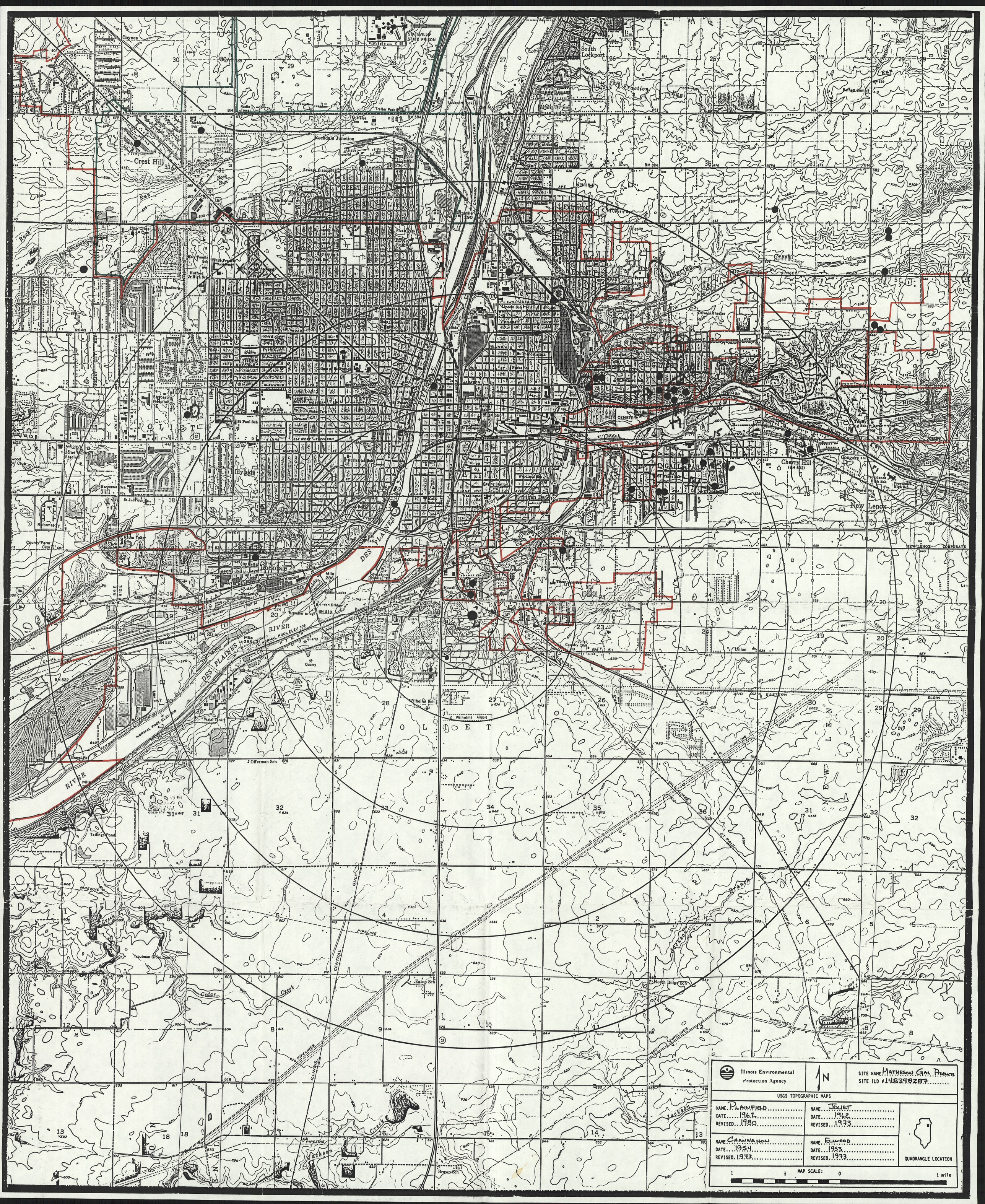
USGS, 1973, Elwood, Il. Quadrangle, 7.5 Minute Series.

USGS, 1973, Joliet, Il. Quadrangle, 7.5 Minute Series.

USGS, 1980, Plainfield, Il. Quadrangle, 7.5 Minute Series.

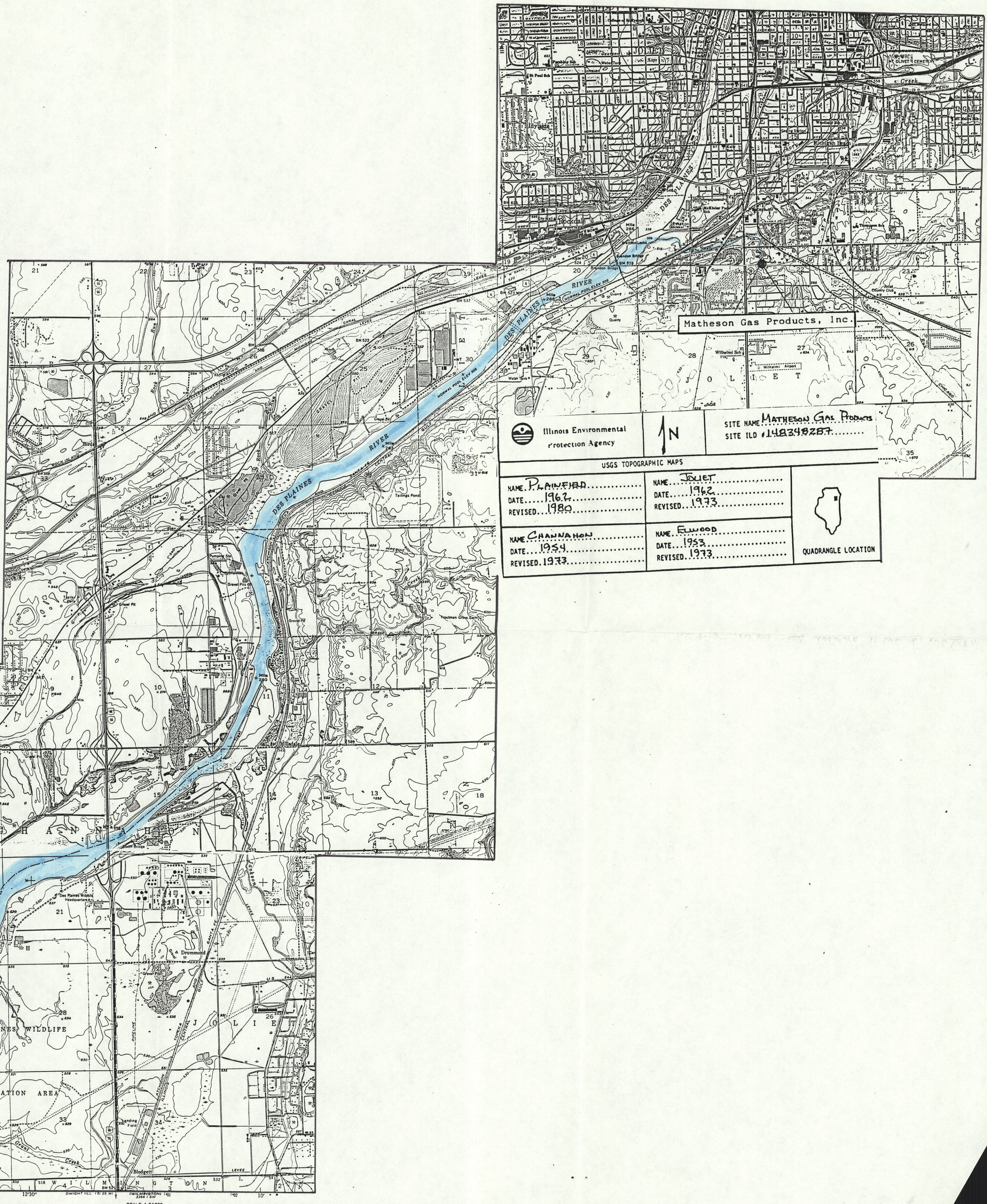
APPENDIX A

SITE 4-MILE RADIUS MAP


Illinois Environmental Protection Agency
N
SITE NAME MATHESON GAS PRODUCTS
SITE ILD # 1483980287
USGS TOPOGRAPHIC MAPS
NAME PLAINFIELD
DATE 1962
REVISED 1980
NAME JOLIET
DATE 1962
REVISED 1973
NAME CHANNAHON
DATE 1954
REVISED 1973
NAME ELWOOD
DATE 1953
REVISED 1973
QUADRANGLE LOCATION
MAP SCALE:
1
0
1 mile
Crest Hill
Rockdale Junction
South Lockport
Lockport Locks
Rockdale
JOLIET
Idylside
Cherry Hill
New Lenox
Wilhelmi Airport
DES PLAINES RIVER
Troutman Grove Cem
Eaton Sch
North Hills Sch
Brown Sch
Cedar Creek
Jackson Creek
Branch
PIPELINE
PIPELINES
ILLINOIS CENTRAL GULF
JOLIET AND EASTERN
CHICAGO MILWAUKEE ST PAUL AND PACIFIC
NORMAL POOL ELEV 505
LEVEE
CANAL
Tailings Pond
Gravel Pit
Quarry
Water Tank
Radio Tower
Trailer Park
Sewage Disposal
Pit
Golf Course
Drive-in Theater
Cemetery
Union
Coynes
Rock Run
Prairie Creek
Fraction Run
Prairie Run
Preston Run
Frankfort Sch
Hill Sch
Mt Calvary Cem
Holy Cross Cem
Holy Family Sch
Hufford Jr High Sch
Carl Sandburg Sch
St Paul Sch
Pembling Sch
Hospital
Arlington Stadium
Reformatory
County Farm Cem
St Jude Sch
Radio Tower
McKinley Sch
Nowell Park
Thornton Sch
Joliet Country Club
Wilhelmi Sch
J Offerman Sch
Water Tank
Gravel Pit
Tailings Pond
Troutman Grove Cem
Eaton Sch
North Hills Sch
Brown Sch
Cherry Hill
Providence High Sch
Gougars
Ingalls Park
Highbrook
Woods
Elwood
Elgin
Joliet
Rockdale
Crest Hill
Lockport
Frankfort
New Lenox
Channahon
Plainfield

APPENDIX B

SITE 15-MILE SURFACE WATER MAP


Matheson Gas Products, Inc.
Illinois Environmental Protection Agency
N
SITE NAME MATHESON GAS PRODUCTS
SITE ILD #148348287
USGS TOPOGRAPHIC MAPS
NAME PLAINFIELD
DATE 1962
REVISED 1980
NAME JOLIET
DATE 1962
REVISED 1973
NAME CHANNAHON
DATE 1954
REVISED 1973
NAME ELWOOD
DATE 1953
REVISED 1973
QUADRANGLE LOCATION
JOLIET
DES PLAINES RIVER
Rockdale
Channahon
Drummond
Blodgett
Millsdale
Tailings Pond
Troutman Grove Cem
Wilhelmi Sch
Wilhelmi Airport
Joliet Country Club
Brandon Bridge
Brandon Locks
Des Plaines Wildlife Headquarters
DES PLAINES WILDLIFE
CONSERVATION AREA
Kankakee Cut-Off
Grant Creek
Landing Field
Pumping Sta
Gravel Pits
Water Tank
Quarry
Mile 286
Mile 283
Mile 280
NORMAL POOL ELEV 505
LEVEE
CANAL
PIPELINE
SCALE 1:24000
1 MILE
7000 FEET
1 KILOMETER
CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

APPENDIX C

USEPA FORM 2070-13

Site Inspection Report

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D148348287

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Matheson Gas Products	Manhattan Rd. and Richards Street

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Joliet	Il	60434	Will	197	04

09 COORDINATES LATITUDE	LONGITUDE	10 TYPE OF OWNERSHIP (Check one)
41 30 00.0	088 04 35.3	☒ A. PRIVATE ☐ B. FEDERAL ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
06 / 4 / 5 / 91 (MONTH DAY YEAR)	☒ ACTIVE ☐ INACTIVE	1946 / Present (BEGINNING YEAR / ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)

☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☒ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) ☐ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Alan Kirwan	Environmental Protection Spec.	IEPA	(309) 693-5462

09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
Greg Dunn	"	"	(217) 782-6760
Judy Triller	"	"	( ) "
Hank Konzelman	"	"	( ) "
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Casey Von Swol	Plant Manager		( )
David Rifkind	legal counsel	2000 One Logan Square Philadelphia, PA 19103	(215) 963-5017
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	9:30 Am	sunny, temp. 75° F, 10 mph winds

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Casey Von Swol	Matheson Gas Products	(815) 727-4848

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Alan Kirwan	IEPA	Pre-Remedial Unit	(309) 693-5462	09 / 24 / 91 (MONTH DAY YEAR)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D1483482 87

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 independent)*

TONS _____
CUBIC YARDS UNKNOWN
NO. OF DRUMS _____

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		
SOL	SOLVENTS			
PSD	PESTICIDES	UNKNOWN		
OCC	OTHER ORGANIC CHEMICALS			
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
	SEE TABLE 4-1				

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 files
6/4,5/91 SSI conducted by IEPA

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D148348287

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 7,169 — 04 NARRATIVE DESCRIPTION

A potential for groundwater contamination of the relatively shallow Silurian dolomite aquifer exists due to the fact that oil refinery waste was disposed of in an old quarry area, and the burial disposal of used gas cylinders also occurred at the site.

01 ☒ B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: 6-4-91) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0 — 04 NARRATIVE DESCRIPTION

SSI sample analysis shows off-source contamination leading from disposal area to Sugar Run creek via a former creek bed. Sugar Run creek empties into Desplaines River. There are no water intakes within 15 miles downstream of the facility

01 ☒ C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 78,014 — 04 NARRATIVE DESCRIPTION

potential exists for contaminated particulate matter to become airborne

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

Potential for contact exists because oil refinery disposal areas are not completely fenced.

01 ☒ F. CONTAMINATION OF SOIL — 02 ☐ OBSERVED (DATE: 6-4-91) — ☐ POTENTIAL — ☒ ALLEGED
03 AREA POTENTIALLY AFFECTED: unknown (Acres) — 04 NARRATIVE DESCRIPTION

SSI sample results show off-source contamination of soil by compounds attributable to old quarry pits

01 ☒ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 7,169 — 04 NARRATIVE DESCRIPTION

See "A." above - SSI sample results show a unknow semi-volatile present in on-site well at a concentration of 1.8 ppb (estimated)

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	0148348287

II. HAZARDOUS CONDITIONS AND INCIDENTS *(Continued)*

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

none documented or observed

01 ☒ K. DAMAGE TO FAUNA — 02 ☒ OBSERVED (DATE: 1988) ☐ POTENTIAL ☒ ALLEGED
04 NARRATIVE DESCRIPTION *(Include name(s) of species)*

A dog died on June 23, 1988 after wandering onto a past disposal area on the western part of the site

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: 6-4-91) ☐ POTENTIAL ☒ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 78,014 — 04 NARRATIVE DESCRIPTION

Waste from pit area has been observed to have traveled off-site via a low-lying former creek bed

01 ☒ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

See "M" above

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: 1981) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

In the middle 1960's gas cylinders were buried on-site, just west of the quarry pond.

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

III. TOTAL POPULATION POTENTIALLY AFFECTED: 78,014

IV. COMMENTS

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

IEPA files
SSI of 6-4-91

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	0148348287

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES	IL0062A618			
☐ B. UIC				
☐ C. AIR	197809AAX			
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☒ I. OTHER (Specify) Land	1981-59-OP			
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☒ A. SURFACE IMPOUNDMENT	Unknown	
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☒ D. TANK, ABOVE GROUND	2-5000	gallon
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify)		

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

05 OTHER
- ☒ A. BUILDINGS ON SITE

06 AREA OF SITE: 5.44 (Acres)

07 COMMENTS

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

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

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

The two 5000 gallon tanks have a concrete dike surrounding them.
The surface impoundment consists of a old quarry pit of unknown depth that had oil refinery waste disposed in it. No known barriers were placed in the pit prior to disposal.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☒ YES ☐ NO

02 COMMENTS Although a snow fence has been placed around a pit, other areas containing tar-like waste are easily accessible through a wooded area.

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

IEPA Land Division files
IEPA Water Pollution files

EPA

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

I. IDENTIFICATION

01 STATE: FL | 02 SITE NUMBER: D148348287

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)

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

02 STATUS

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

03 DISTANCE TO SITE
A. 0.25 (mi)
B. <400 ~~(mi)~~ feet

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

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

02 POPULATION SERVED BY GROUND WATER 7,169

03 DISTANCE TO NEAREST DRINKING WATER WELL <400 ~~(mi)~~ feet

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
25 (ft)	UNKNOWN	25 (ft)	UNKNOWN (gpd)	☐ YES ☒ NO

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

Private and public wells in the area obtain water from the Silurian Dolomite aquifer. Approximately 20 public wells and 674 private wells serve 7,169 residents within four miles.

10 RECHARGE AREA		11 DISCHARGE AREA	
☐ YES	COMMENTS	☐ YES	COMMENTS
☐ NO		☐ NO	

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

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

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
Sugar Run Creek	☐	on-site (mi)
Desplaines River	☐	one (mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 8000	B. 18,000	C. 60,000
NO. OF PERSONS	NO. OF PERSONS	NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION <400 ~~(mi)~~ feet

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE 6000

04 DISTANCE TO NEAREST OFF-SITE BUILDING 100 ~~(mi)~~ feet

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

The area within a 4-mile radius is densely populated. The immediate area surrounding the site is populated by subdivisions and commercial business and some light industry. North of the site the area is densely populated with most of the city of Joliet falling into that area. The city of Joliet has a population of 76,836.

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D148348287

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE *(Check one)*

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

02 PERMEABILITY OF BEDROCK *(Check one)*

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

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH
12 (ft)	unknown (ft)	unknown

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
+3.0 (in)	(in)	~5 %	South and west	%

09 FLOOD POTENTIAL

SITE IS IN 100 YEAR FLOODPLAIN

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

11 DISTANCE TO WETLANDS *(5 acre minimum)*

ESTUARINE: A. _____ (mi)

OTHER: B. _____ (mi)

12 DISTANCE TO CRITICAL HABITAT *(of endangered species)*

13 (mi) downstream

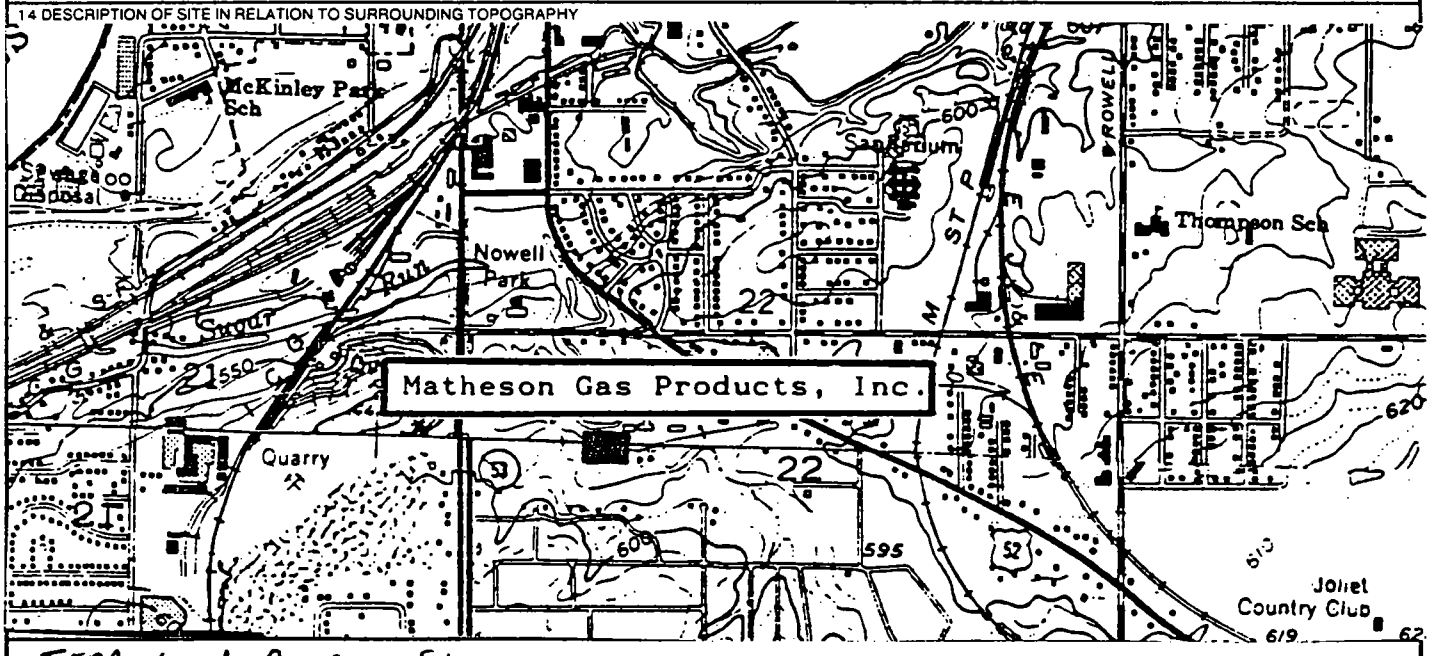
ENDANGERED SPECIES: Pied-billed Grebe, Corn Salad (Valerianella chenopodifolia)

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A. 100 ~~(mi)~~ feet	B. <400 ~~(mi)~~ feet	C. <1/4 (mi)	D. <1/4 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY



IEPA Land Division files
USGS topographic Quad maps

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	3	IEPA LAB- SPRINGFIELD (ORGANICS) IEPA LAB- CHAMPAIGN (INORGANICS)	August 1991
SURFACE WATER			
WASTE	3	IEPA LAB - SPRINGFIELD (ORGANICS) IEPA LAB- CHAMPAIGN (INORGANICS)	August 1991
AIR			
RUNOFF			
SPILL			
SOIL	6	IEPA LAB -SPRINGFIELD (ORGANICS) IEPA LAB - CHAMPAIGN (INORGANICS)	August 1991
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
PHOTO - IONIZATION DETECTOR (HNU)	NO READINGS SIGNIFICANTLY OVER BACKGROUND

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☐ AERIAL

02 IN CUSTODY OF IEPA - LPC
(Name of organization or individual)

03 MAPS ☒ YES ☐ NO

04 LOCATION OF MAPS IEPA - LPC

V. OTHER FIELD DATA COLLECTED *(Provide narrative description)*

Temperature, pH and conductivity measurements were taken of all groundwater samples during purging and prior to sampling.

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

IEPA SSI of June 4th and 5th, 1991

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D148348287

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
Matheson Gas Products		30 Seaview Drive		Secaucus	NJ	07094

PARENT COMPANY (If applicable)

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

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

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
UGI, Inc. (50% ownership)				Pennsylvania		
G. D. Searle						

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

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

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

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D148348287

II. CURRENT OPERATOR *(Provide if different from owner)*

01 NAME	02 D+B NUMBER
Matheson Gas Products	

03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	04 SIC CODE
Manhattan Rd. & Richards Street	

05 CITY	06 STATE	07 ZIP CODE
Joliet	IL	60434-

08 YEARS OF OPERATION	09 NAME OF OWNER
45	

OPERATOR'S PARENT COMPANY *(If applicable)*

10 NAME	11 D+B NUMBER
Nippon - Sansu	

12 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE
Tokyo, Japan		

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

01 NAME	02 D+B NUMBER

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

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

PREVIOUS OPERATORS' PARENT COMPANIES *(If applicable)*

10 NAME	11 D+B NUMBER

12 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

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

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

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

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

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

IEPA Land Pollution Control files

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
FL	D148348287

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
N/A	

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

05 CITY	06 STATE	07 ZIP CODE

III. OFF-SITE GENERATOR(S)

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

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

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

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

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

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

IV. TRANSPORTER(S)

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

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

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

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

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

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

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

FEPA Land Files

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
FL	D148348287

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ C. PERMANENT WATER SUPPLY PROVIDED 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ D. SPILLED MATERIAL REMOVED 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ E. CONTAMINATED SOIL REMOVED 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ F. WASTE REPACKAGED 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ G. WASTE DISPOSED ELSEWHERE 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ H. ON SITE BURIAL 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ I. IN SITU CHEMICAL TREATMENT 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ J. IN SITU BIOLOGICAL TREATMENT 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ K. IN SITU PHYSICAL TREATMENT 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ L. ENCAPSULATION 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ M. EMERGENCY WASTE TREATMENT 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ N. CUTOFF WALLS 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ P. CUTOFF TRENCHES/SUMP 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ Q. SUBSURFACE CUTOFF WALL 04 DESCRIPTION	02 DATE	03 AGENCY

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D148348287

II PAST RESPONSE ACTIVITIES *(Continued)*

01 ☐ R. BARRIER WALLS CONSTRUCTED 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ S. CAPPING/COVERING 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ T. BULK TANKAGE REPAIRED 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ U. GROUT CURTAIN CONSTRUCTED 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ V. BOTTOM SEALED 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ W. GAS CONTROL 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ X. FIRE CONTROL 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ Y. LEACHATE TREATMENT 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ Z. AREA EVACUATED 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ 1. ACCESS TO SITE RESTRICTED 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ 2. POPULATION RELOCATED 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ 3. OTHER REMEDIAL ACTIVITIES 04 DESCRIPTION	02 DATE	03 AGENCY

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

IEPA Land files

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D148348287

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☐ NO

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

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

APPENDIX D

TARGET COMPOUND LIST

TARGET COMPOUND LIST

Volatile Target Compounds

Compound	Water CRDL	Soil/Solid CRDL
1. chloromethane	10 ug/l	10 ug/kg
2. bromomethane	10	10
3. vinyl chloride	10	10
4. chloroethane	10	10
5. methylene chloride	5	5
6. acetone	10	10
7. carbon disulfide	5	5
8. 1,1-dichloroethene	5	5
9. 1,1-dichloroethane	5	5
10. 1,2-dichloroethene (total)	5	5
11. 1,2-dichloropropane	5	5
12. chloroform	5	5
13. 1,2-dichloroethane	5	5
14. 2-butanone	10	10
15. 1,1,1-trichloroethane	5	5
16. carbon tetrachloride	5	5
17. vinyl acetate	10	10
18. dichlorobromomethane	5	5
19. c-1,3-dichloropropene	5	5
20. trichloroethene	5	5
21. benzene	5	5
22. chlorodibromomethane	5	5
23. 1,1,2-trichloroethane	5	5
24. t-1,3-dichloropropene	5	5
25. bromoform	5	5
26. 2-hexanone	10	10
27. 4-methyl-2-pentanone	10	10
28. 1,1,2,2-tetrachloroethane	5	5
29. tetrachloroethene	5	5
30. toluene	5	5
31. chlorobenzene	5	5
32. ethylbenzene	5	5
33. styrene	5	5
34. total xylenes	5	5

CRDL - Contract Required Detection Limit

DRINKING WATER SAMPLES -- In the case of drinking water samples, the Lab can be requested to report the instrument detection limit which is lower than the CRDL for VOC analysis. This request must be made at the time of scheduling since more samples will be required by the Lab. (See footnote on previous page).

Base/Neutral Target Compounds

Compound	Water CRDL	Soil/Solid CRDL
1. Hexachloroethane	10 ug/l	330 ug/kg
2. Bis (2-chloroethyl) ether	10	330
3. Benzyl Alcohol	10	330
4. Bis (2-chloroisopropyl) ether	10	330
5. N-nitrosodi-n-propylamine	10	330
6. Nitrobenzene	10	330
7. Hexachlorobutadiene	10	330
8. 2-Methylnaphthalene	10	330
9. 1,2,4-trichlorobenzene	10	330
10. Isophorone	10	330
11. Naphthalene	10	330
12. 4-Chloroaniline	10	330
13. Bis (2-chloroethoxy) methane	10	330
14. Hexachlorocyclopentadiene	10	330
15. 2-chloronaphthalene	10	330
16. 2-Nitroaniline	50	1600
17. Acenaphthylene	10	330
18. 3-Nitroaniline	50	1600
19. Acenaphthene	10	330
20. Dibenzofuran	10	330
21. Dimethylphthalate	10	330
22. 2,6-Dinitrotoluene	10	330
23. Fluorene	10	330
24. 4-Nitroaniline	50	1600
25. 4-Chlorophenyl-phenyl ether	10	330
26. 2,4-Dinitrotoluene	10	330
27. Diethylphthalate	10	330
28. N-Nitrosodiphenylamine	10	330
29. Hexachlorobenzene	10	330
30. Phenanthrene	10	330
31. 4-Bromophenyl-phenyl ether	10	330
32. Anthracene	10	330
33. Dibutylphthalate	10	330
34. Fluoranthene	10	330
35. Pyrene	10	330
36. Butyl benzyl phthalate	10	330
37. Bis (2-ethylhexyl) phthalate	10	330
38. Chrysene	10	330
39. Benzo (a) anthracene	10	330
40. 3,3'-Dichlorobenzidene	20	660
41. Di-n-octyl phthalate	10	330
42. Benzo (b) fluoranthene	10	330
43. Benzo (k) fluoranthene	10	330
44. Benzo (a) pyrene	10	330
45. Indeno (1,2,3-cd) pyrene	10	330
46. Dibenzo (a,h) anthracene	10	330
47. Benzo (g,h,i) perylene	10	330
48. 1,2-Dichlorobenzene	10	330
49. 1,3-Dichlorobenzene	10	330
50. 1,4-Dichlorobenzene	10	330

Acid Target Compounds

Compound	Water CRDL	Soil/Solid CRDL
1. Benzoic Acid	50 ug/l	1600 ug/kg
2. Phenol	10	330
3. 2-chlorophenol	10	330
4. 2-nitrophenol	50	1600
5. 2-methylphenol	10	330
6. 2,4-dimethylphenol	10	330
7. 4-methylphenol	10	330
8. 2,4-dichlorophenol	10	330
9. 2,4,6-trichlorophenol	10	330
10. 2,4,5-trichlorophenol	50	1600
11. 4-chloro-3-methylphenol	10	330
12. 2,4-dinitrophenol	50	1600
13. 2-methyl-4,6-dinitrophenol	50	1600
14. Pentachlorophenol	50	1600
15. 4-nitrophenol	50	1600

Pesticide Target Compounds

Compound	Water CRDL	Soil/Solid CRDL
1. alpha-BHC	.05 ug/l	8.0 ug/kg
2. beta-BHC	.05	8.0
3. delta-BHC	.05	8.0
4. Lindane (gamma-BHC)	.05	8.0
5. Heptachlor	.05	8.0
6. Aldrin	.05	8.0
7. Heptachlor epoxide	.05	8.0
8. Endosulfan I	.05	8.0
9. 4,4'-DDE	.10	16.0
10. Dieldrin	.10	16.0
11. Endrin	.10	16.0
12. 4,4'-DDD	.10	16.0
13. Endosulfan II	.10	16.0
14. 4,4'-DDT	.10	16.0
15. Endrin aldehyde	.10	16.0
16. Endosulfan sulfate	.10	16.0
17. Methoxychlor	.50	80.0
18. alpha-Chlorodane	.5	80.0
19. gama chlorodane	.5	80.0
20. Toxaphene	.50	80.0
21. Arochlor-1016	1.0	160.0
22. Arochlor-1221	.50	80.0
23. Arochlor-1232	.50	80.0
24. Arochlor-1242	.50	80.0
25. Arochlor-1248	.50	80.0
26. Arochlor-1254	1.0	160.0
27. Arochlor-1260	1.0	160.0

Inorganic Target Compounds

Metals Analyses (CRDL)-ug/l*	
Aluminum	200
Antimony	60
Arsenic	10
Barium	200
Beryllium	5
Cadmium	5
Calcium	5000
Chromium	10
Cobalt	50
Copper	25
Iron	100
Lead	5
Magnesium	5000
Manganese	15
Mercury	0.2
Nickel	40
Potassium	5000
Selenium	5
Silver	10
Silver	5000
Thallium	10
Vanadium	50
Zinc	20

Other Inorganics
Cyanide
Sulfide
Phenols
Nitrogen-Ammonia
Nitrogen, Total Kjeldahl
Nitrogen-Nitrate
Boron
pH
Sulfate
Chloride

*Any analytical method specified in the Quality Assurance Project Plan (QAPP) may be utilized as long as the documented instrument or method detection limits meet the Contract Required Detection Level requirements. Higher detection levels may only be used in the following circumstance:

If the sample concentration exceeds two times the detection limit of the instrument or method in use, the value may be reported even though the instrument or method detection limit may not equal the CRDL. This is illutrated in the example below:

For lead:

Method in use -- ICP
Instrument Detection Limit (IDL) = 40
Sample Concentration = 85
Contract Required Detection Level (CRDL) = 5

The value of 85 may be reported even though instrument detection limit is greater than required detection level. The instrument or method detection limit must be documented as described in Form IIIX.

These CRDL are the instrument detection limits obtained in pure water that must be met using ICP/Flame AA or Furnace AA. The detection limits for samples may be considerably higher depending on the sample matrix.

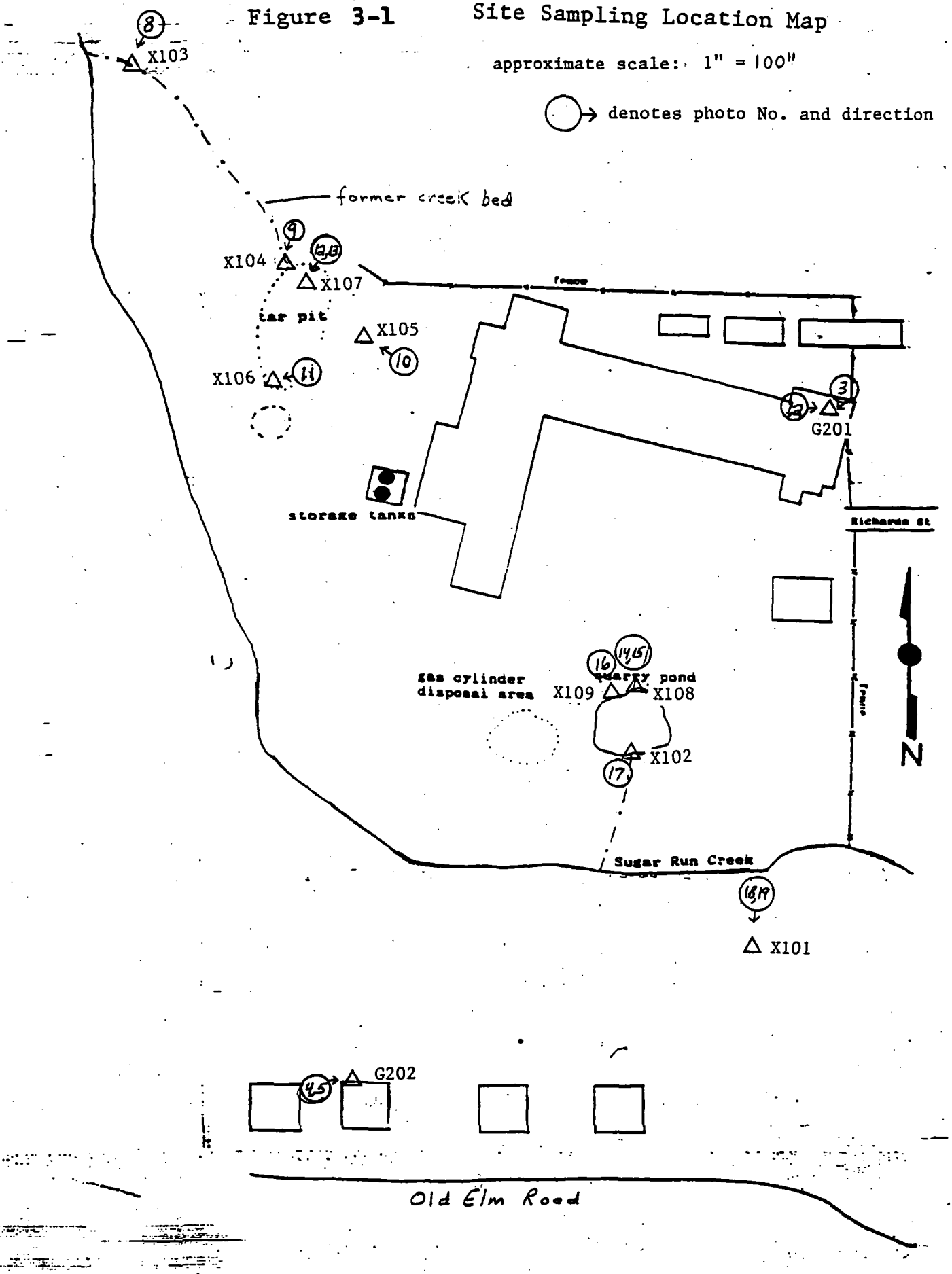
APPENDIX E

IEPA SITE PHOTOGRAPHS

Figure 3-1 Site Sampling Location Map

approximate scale: 1" = 100"

denotes photo No. and direction



Date: 6/5/91

Time: 9:15

otographed By:

AL Kirwan

Location:

LPC 1970450022

Matheson Gas

Will Co.

Comments: Photograph taken

toward the south

sample point X-101

background soil sample

Photograph Number: 19

Roll Number: 91-147-09

Date:

Time:

Photographed By:

Location:

LPC

Co.

Comments: Photograph taken

toward the

Photograph Number:

Roll Number:

NO photo

Date: 6/4/91

Time: 10:25A

Photographed By:

AL Kirwan

Location:

LPC 1970450022

Matheson Gas

Will Co.

Comments: Photograph taken

toward the east

showing sample point G-201,

the on-site well

Photograph Number: 1

Roll Number: 91-146-03

Date: 6/4/91

Time: 10:25A

Photographed By:

AL Kirwan

Location:

LPC 1970450022

Matheson Gas

Will Co.

Comments: Photograph taken

toward the east

showing sample point G-201

Photograph Number: 2

Roll Number: 91-146-04

Date: 6/4/91

Time: 10:25A

Photographed By:

AL Kirwan

Location:

LPC 1970450022

Matheson Gas

Will Co.

Comments: Photograph taken toward the southwest showing sample point G-201

Photograph Number: 3

Roll Number: 91-146-05

Date: 6/4/91

Time: 11:30A

Photographed By:

Judy Triller

Location:

LPC 1970450022

Matheson Gas

Will Co.

Comments: Photograph taken toward the east showing sample point G-202 h...dele residence private well

Photograph Number: 4

Roll Number: 91-146-06

Date: 6/4/91

Time: 11:30A

Photographed By:

Judy Triller

Location:

LPC 1990450022

Matheson Gas

Will Co.

Comments: Photograph taken

toward the east

showing sample point G-202

Hendele residence private well

Photograph Number: 5

Roll Number: 91-146-07

Date: 6/4/91

Time: 1:00P

Photographed By:

Judy Triller

Location:

LPC 1990450022

Matheson Gas

Will Co.

Comments: Photograph taken

toward the northwest

sample point G-203

Clarview Subdivision well no. 2

Photograph Number: 6

Roll Number: 91-146-08

Date: 6/4/91

Time: 1:00P

Photographed By:

Judy Triller

Location:

LPC. 1990450022

Matheson Gas

Will Co.

Comments: Photograph taken

toward the northwest

samplepoint G-203

Clearview Subdivision well no. 2

Photograph Number: 7

Roll Number: 91-146-09

Date: 6/4/91

Time: 2:15P

Photographed By:

Judy Triller

Location:

LPC 1990450022

Matheson Gas

Will Co.

Comments: Photograph taken

toward the southwest

samplepoint X-103 near

confluence of Sugar Run Creek and former creek bed of Sugar Run Creek

Photograph Number: 8

Roll Number: 91-146-10

Date: 6/4/91

Time: 2:25P

Photographed By:

Judy Triller

Location:

LPC 1970450022

Matheson Gas

Will Co.

Comments: Photograph taken toward the southwest sample point X-104 near "tar pit"

Photograph Number: 9

Roll Number: 91-146-11

Date: 6/4/91

Time: 3:30P

Photographed By:

AL Kirwan

Location:

LPC 1970450022

Matheson Gas

Will Co.

Comments: Photograph taken toward the northwest sample point X-105 in lot [illegible] where "tar" was oozing up from below

Photograph Number: 10

Roll Number: 91-147-00

Date: 6/4/91

Time: 4:10 P

Photographed By:

Judy Triller

Location:

LPC 1970450022

Matheson Gas

Will Co.

Comments: Photograph taken toward the west sample point X-106 at southern end of fenced "tar pit"

Photograph Number: 11

Roll Number: 91-147-01

Date: 6/4/91

Time: 4:15P

Photographed By:

Judy Triller

Location:

LPC 1970450022

Matheson Gas

Will Co.

Comments: Photograph taken toward the southwest sample point X-107 at southern end of fenced "tar pit"

Photograph Number: 12

Roll Number: 91-147-02

Date: 6/4/91

Time: 4:15 P

Photographed By:

Judy Triller

Location:

LPC 1970450022

Matheson Gas

Will Co.

Comments: Photograph taken toward the southwest sample point X-107 at north end of fenced "tar pit"

Photograph Number: 13

Roll Number: 91-147-03

Date: 6/5/91

Time: 8:30 A

Photographed By:

Judy Triller

Location:

LPC 1970450022

Matheson Gas

Will Co.

Comments: Photograph taken toward the east sample point X-108 at leachate seep on bank of quarry pond

Photograph Number: 14

Roll Number: 91-147-04

Date: 6/5/91

Time: 8:30A

Photographed By:

Judy Triller

Location:

LPC 1970450022

Matheson Gas

Will Co.

Comments: Photograph taken toward the south

Samplepoint X-108-area of quarry pond

Photograph Number: 15

Roll Number: 91-147-05

Date: 6/5/91

Time: 8:40

Photographed By:

AL Kirwan

Location:

LPC 1970450022

Matheson Gas

Will Co.

Comments: Photograph taken toward the west

sample point X-109 at base of fall of NPDES discharge into quarry pond

Photograph Number: 16

Roll Number: 91-147-06

Date: 6/5/91

Time: 9:10 A

tographed By:

AL Kirwan

Location:

LPC 1970450022

Matheson Gas

Will Co.

Comments: Photograph taken

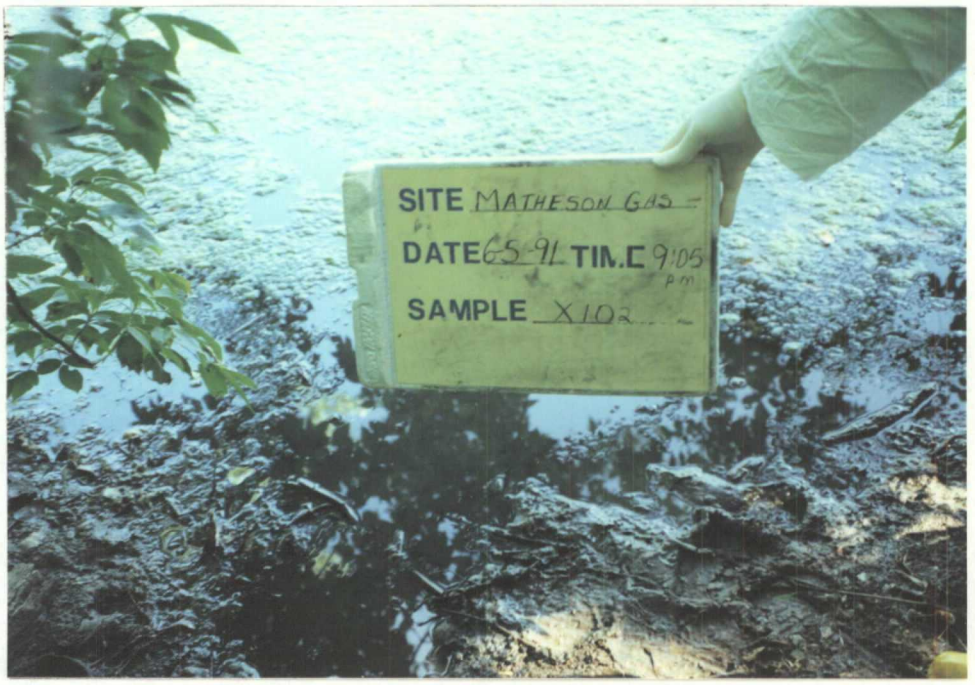
toward the north

sample point X-102

where quarry pond overflow drains to Sugar Run Creek

Photograph Number: 17

Roll Number: 91-147-07



Date: 6/5/91

Time: 9:15 A

Photographed By:

AL Kirwan

Location:

LPC 1970450022

Matheson Gas

Will Co.

Comments: Photograph taken

toward the south

sample point X-101

background soil sample

Photograph Number: 18

Roll Number: 91-147-08

APPENDIX F

ISWS WELL LOGS

hite Copy – Ill. Dept. of Public Hea
ellow Copy – Well Contractor
lue Copy – Well Owner

INSTRUCTIONS TO DRILLE

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 66 ft.
   Curb material _____. Buried Slab: Yes____ No____
   b. Driven _____. Drive Pipe Diam. 5 in. Depth 57 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 20 Ft. Seepage Tile Field 75'
   Cess Pool _____ Sewer (non Cast iron) _____
   Privy _____ Sewer (Cast iron) _____
   Septic Tank 50' Barnyard _____
   Leaching Pit _____ Manure Pile _____
3. Is water from this well to be used for human consumption?
   Yes X No _____
4. Date well completed 1-10-72
5. Permanent Pump Installed? Yes X No _____
   Manufacturer JACUZZI Type SUBMERSIBLE
   Capacity 10 gpm. Depth of setting 42 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 _____ No X

REMARKS:

IDPH 4.065
10/68

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner [redacted] Well No. 1
    Address [redacted]
    Driller [illegible] License No. 110
11. Permit No. 16333 Date 1-11-72
12. Water from LIMESTONE Formation 13. County [illegible]
    at depth 57 to 66 ft.
14. Screen: Diam. _____ in.
    Length: _____ ft. Slot _____

Sec. 38.16
Twp. 35N
Rge. 10E
Elev. _____

SHOW LOCATION IN SECTION PLAT
NE SE SE

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5"	A-53 15lbs	0'	57'

16. Size Hole below casing: 5 in.
17. Static level 50 ft. below casing top which is +1 ft. above ground level. Pumping level 50 ft. when pumping at 10 gpm for 1 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
TOP SOIL	3'	3'
CLAY	37'	40'
SHALE & GRAVEL	17'	57'
LIMESTONE	9	66'

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED [illegible] DATE 2-23-72

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 125 ft.
   Curb material _____. Buried Slab: Yes____ No____
   b. Driven _____. Drive Pipe Diam. 5 in. Depth 57 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 25 Ft. Seepage Tile Field 75'
   Cess Pool _____ Sewer (non Cast iron) _____
   Privy _____ Sewer (Cast iron) _____
   Septic Tank 50' Barnyard _____
   Leaching Pit _____ Manure Pile _____
3. Well furnishes water for human consumption? Yes X No____
4. Date well completed 5-13-83
5. Permanent Pump Installed? Yes____ Date _____ No X
   Manufacturer _____ Type _____ Location _____
   Capacity _____ gpm. Depth of Setting _____ Ft.
6. Well Top Sealed? Yes X No____ Type Vermin-Proof (Wms.)
7. Pitless Adapter Installed? Yes X No____
   Manufacturer Williams Model Number B-50AC
   How attached to casing? _____
8. Well Disinfected? Yes X No____
9. Pump and Equipment Disinfected? Yes X No____
10. Pressure Tank Size 42 gal. Type #202 Well-X-Trol
    Location house
11. Water Sample Submitted? Yes____ No X

REMARKS:

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner [redacted] Well No. 1
    Address [redacted]
    Driller Charles Fykes License No. 23
11. Permit No. 107055 Date 5-6-83
12. Water from Limestone (Formation)
    at depth 81 to 125 ft.
13. County Will
    Sec. 26 NW
    Twp. 35N
    Rge. 10E
    Elev. _____

		X	

SHOW LOCATION IN SECTION PLAT
SW SE NW

14. Screen: Diam. _____ in.
    Length: _____ ft. Slot _____
15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5"	Sch 40 PVC	0	57
	1120-NSF 2.87#		

16. Size Hole below casing: 5 in.
17. Static level (-) 30 ft. below casing top which is +1 ft. above ground level. Pumping level 50 ft. when pumping at 10 gpm for 1 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Top Soil	2'	2'
Clay	55'	57'
Gray Limestone	13'	70'
Shale	10'	80'
White Limestone	45'	125'

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Charles Fykes DATE 7-28-83

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 REQUIRED 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 150 ft.
   Curb material _____. Buried Slab: Yes____ No____
   b. Driven _____. Drive Pipe Diam. 5 in. Depth 45 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 30 Ft. Seepage Tile Field 75'
   Cess Pool _____ Sewer (non Cast iron) _____
   Privy _____ Sewer (Cast iron) _____
   Septic Tank 50' Barnyard _____
   Leaching Pit _____ Manure Pile _____
3. Well furnishes water for human consumption? Yes X No____
4. Date well completed 10-2-84
5. Permanent Pump Installed? Yes X Date 11-28-84 No____
   Manufacturer Webtrol Type Subm. Location Well
   Capacity 12 gpm. Depth of Setting 120 Ft.
6. Well Top Sealed? Yes X No____ Type Vermin-Proof (Wms.)
7. Pitless Adapter Installed? Yes X No____
   Manufacturer Williams Model Number 501TC
   How attached to casing? Compression Gasket Connection
8. Well Disinfected? Yes X No____
9. Pump and Equipment Disinfected? Yes X No____
10. Pressure Tank Size 82 gal. Type #203 Well-X-Trol
    Location basement
11. Water Sample Submitted? Yes____ No X

REMARKS:

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner [redacted] Well No. 1
    Address [redacted]
    Driller Charles Fykes License No. 23
11. Permit No. 115107 Date 10-2-84
12. Water from Limestone (Formation) at depth 45 to 150 ft.
13. County Will
    Sec. 23.2e
    Twp. 35N
    Rge. 10E
    Elev. _____

			/
		X	

14. Screen: Diam. _____ in.
    Length: _____ ft. Slot _____
15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5"	A-53 15 lbs.	0	45

SHOW LOCATION IN SECTION PLAT
SW SE NE

16. Size Hole below casing: 5 in.
17. Static level 30 ft. below casing top which is +1 ft. above ground level. Pumping level 75 ft. when pumping at 12 gpm for 1 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Top Soil	5'	5'
Clay	40'	45'
Limestone	105'	150'

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Charles Fykes DATE 11-29-84

IDPH 4.065
1/74 – KNB-1

White C –
Ill. D 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, BUREAU OF ENVIRONMENTAL HEALTH, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62701. 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 205 ft.
   Curb material _____. Buried Slab: Yes_____ No_____
   b. Driven_____. Drive Pipe Diam. 5 in. Depth 42 ft.
   c. Drilled X. Finished in Drift_____. In Rock X.
   Tubular_____. Gravel Packed_____.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)
Cement	-5'	42

2. Distance to Nearest:
   Building 30 Ft. Seepage Tile Field 75'
   Cess Pool _____ Sewer (non Cast iron) _____
   Privy _____ Sewer (Cast iron) _____
   Septic Tank 50' Barnyard _____
   Leaching Pit _____ Manure Pile _____
3. Is water from this well to be used for human consumption?
   Yes X No_____
4. Date well completed 2-10-76
5. Permanent Pump Installed? Yes X No_____
   Manufacturer Barnes Type Submersible
   Capacity 10 gpm. Depth of setting 60 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_____ No X

REMARKS:

IDPH 4.065
10-72
KNB-1

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner [redacted] Well No. 1
    Address _____
    Driller Charles Fykes License No. 102-23
11. Permit No. 44243 Date 1-14-76
12. Water from Limestone (Formation) 13. County Will
    at depth 25 to 205 ft. Sec. 22, 4a
    14. Screen: Diam._____in. Twp. 35N
    Length:_____ft. Slot_____ Rge. 10E
    Elev._____

			X

SHOW LOCATION IN SECTION PLAT
SW SW SE

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5"	A-53 15 lbs.	0	42

16. Size Hole below casing: 5 in.
17. Static level 40 ft. below casing top which is +1 ft. above ground level. Pumping level 40 ft. when pumping at 10 gpm for 1 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Clay	10'	10'
Gravel	8'	18'
Shale	7'	25'
Limestone	180'	205'

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Charles Fykes DATE 9-20-79

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 100 ft.
   Curb material _____. Buried Slab: Yes____ No____
   b. Driven _____. Drive Pipe Diam. 5 in. Depth 62 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 30 Ft. Seepage Tile Field 75'
   Cess Pool _____ Sewer (non Cast iron) _____
   Privy _____ Sewer (Cast iron) _____
   Septic Tank 50' Barnyard _____
   Leaching Pit _____ Manure Pile _____
3. Well furnishes water for human consumption? Yes X No____
4. Date well completed 2-28-86
5. Permanent Pump Installed? Yes X Date 4-8-86 No____
   Manufacturer Webtrol Type Subm. Location Well
   Capacity 12 gpm. Depth of Setting 60 Ft.
6. Well Top Sealed? Yes X No____ Type Vermin-Proof (Wms.)
7. Pitless Adapter Installed? Yes X No____
   Manufacturer Williams Model Number 501TC
   How attached to casing? Compression Gasket Connection
8. Well Disinfected? Yes X No____
9. Pump and Equipment Disinfected? Yes X No____
10. Pressure Tank Size 82 gal. Type #203 Well-X-Trol
    Location basement
11. Water Sample Submitted? Yes____ No X

REMARKS: County #27295

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Aaron Builders Well No. 1
    Address Lot #35; 7S770 Creek Drive., Hobson Greene Sub.
    Driller Charles Fykes License No. 102-23
11. Permit No. 122355 Date 2-19-86
12. Water from Limestone (Formation) 13. County DuPage
    at depth 62 to 100 ft. Sec. 22.4a
    14. Screen: Diam. _____ in. Twp. 35N
    Length: _____ ft. Slot _____ Rge. 10E
    Elev. _____

X		X	

SHOW LOCATION IN SECTION PLAT
Lot #35, Hobson Greene Sub'd SW SW SE

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5"	A-53 15 lbs.	0	62

16. Size Hole below casing: 5 in.
17. Static level 45 ft. below casing top which is +1 ft. above ground level. Pumping level 50 ft. when pumping at 12 gpm for 1 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Clay	6'	6'
Clay & Rocks	11'	17'
Gravel	13'	30'
Sand	9'	39'
Broken limestone	5'	44'
Sand	5'	49'
Broken limestone	13'	62'
Limestone	38'	100'

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Charles Fykes DATE April 9, 1986

IDPH 4.065
1/74 – KNB-1

Whi Pink Copies:
Il. ept. of Public Health
Yel Copy: Well Contractor
Gol. Copy: Well Owner

Well Construction Report

RECEIVED
JAN 20 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

1. Type of Well
   a. Bored____ Hole Diam. 5 in. Depth 105 ft
      Buried Slab: Yes___ No___
   b. Driven____ Drive Pipe Diam. 5 in. Depth 42 ft
   c. Drilled X Finished in Drift____ In Rock X
   d. Grout:

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

2. Well furnishes water for human consumption? Yes X No___
3. Date well drilled 8-12-88
4. Permanent pump installed? Yes X Date 12-21-88 No___
   Manufacturer Webtrol Type Subm.
   Location Well
   Capacity 10 gpm. Depth of setting 80 ft.
5. Well top sealed? Yes X No___ Type Vermin-Proof (Wms.)
6. Pitless adapter installed? Yes X No___
   Manufacturer Williams Model No. 501TC
   How attached to casing? Compression Gasket Connection
7. Well disinfected? Yes X No___
8. Pump and equipment disinfected Yes X No___

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. Disclosiure 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

Co #30804

GEOLOGICAL AND WATER SURVEYS WELL RECORD

9. Driller [redacted] License No. 102-0002[redacted]9
10. Well Site Address [redacted]
11. Property Owner Art Thompson Well No. 1
12. Permit No. 006832 Date Issued 10-14-88
13. Location: County Will
    Sec. 22 ~~33~~ 3c
    Twp. 35N
    Rge. 10E

	X		
			X

Show location in section plat

SE NW SE

14. Water from Limestone at depth 40 ft to 105 ft

15. Casing and Liner Pipe

Diam.(in)	Kind and Weight	From (ft)	To (ft)
5	A-53 15 lbs.	0	42

16. Screen: Diam.___in, Length___in, Slot Size___
17. Size hole below casing 5 in. 18. Ground Elev.___ ft msl.
19. Static level 35 ft below casing top which is +1 ft. above ground level. Pumping level 60 ft, pumping gpm for 1 hours.

20. Earth Materials Passed Through	Depth of Top	Depth of Bottom
Clay	0	35
Gravel	35	40
Limestone	40	105

Continue on separate sheet if necessary.

Signed Charles Fykes Date 1-17-89

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 235 ft.
   Curb material ____. Buried Slab: Yes ____ No ____
   b. Driven ____. Drive Pipe Diam. 5 in. Depth 42 ft.
   c. Drilled ✓. Finished in Drift ____. In Rock ✓.
   Tubular ____. Gravel Packed ____.
   d. Grout:

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

2. Distance to Nearest:
   Building 25 Ft. Seepage Tile Field 75
   Cess Pool ____ Sewer (non Cast iron) ____
   Privy ____ Sewer (Cast iron) ____
   Septic Tank 50 Barnyard ____
   Leaching Pit ____ Manure Pile ____
3. Is water from this well to be used for human consumption?
   Yes ✓ No ____
4. Date well completed 1-4-74
5. Permanent Pump Installed? Yes ✓ No ____
   Manufacturer Wiltrol Type Subm.
   Capacity 10 gpm. Depth of setting 42 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:

IDPH 4.065
10/68

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Ellington-Miller Co. Well No. 628
    Address Joliet, Ill.
    Driller Hart License No. 102-43
11. Permit No. 24879 Date 8-15-73
12. Water from Limestone Formation at depth 42 to 235 ft.
13. County Will
    Sec. 15
    Twp. 35N
    Rge. 10E
    Elev. ____
14. Screen: Diam. ____ in.
    Length: ____ ft. Slot ____
15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5	Black 15#	0	42

SHOW LOCATION IN SECTION PLAT

Lot #7
County Clerk's Survey
located in the above described section

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

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Clay & Gravel	0	42
Limestone	42	235

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Peter Rob DATE 5-27-74

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, BUREAU OF ENVIRONMENTAL HEALTH, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62701. 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 245 ft.
   Curb material _____. Buried Slab: Yes____ No____
   b. Driven _____. Drive Pipe Diam. 5 in. Depth 42 ft.
   c. Drilled X. Finished in Drift _____. In Rock X.
   Tubular _____. Gravel Packed _____.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)
Cemented	-5'	42'

2. Distance to Nearest:
   Building 30 Ft. Seepage Tile Field 75'
   Cess Pool _____ Sewer (non Cast iron) _____
   Privy _____ Sewer (Cast iron) _____
   Septic Tank 50' Barnyard _____
   Leaching Pit _____ Manure Pile _____
3. Is water from this well to be used for human consumption?
   Yes X No _____
4. Date well completed 3-28-77
5. Permanent Pump Installed? Yes X No _____
   Manufacturer Barnes Type Submersible
   Capacity 12 gpm. Depth of setting 140 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 _____ No X

REMARKS:

IDPH 4.065
10-72
KNB-1

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner [redacted] Well No. 1
    Address [redacted]
    Driller Charles Fykes License No. 23
11. Permit No. 57971 Date 3-21-77
12. Water from _____ Formation
    at depth 15 to 245 ft.
13. County Will
    Sec. 14 SW
    Twp. 35 N
    Rge. 10 E
    Elev. _____
14. Screen: Diam. _____ in.
    Length: _____ ft. Slot _____

			X

SHOW LOCATION IN SECTION PLAT
NW SE SE

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5	A-53 15 lbs.	0	42

16. Size Hole below casing: 5 in.
17. Static level 100 ft. below casing top which is +1 ft. above ground level. Pumping level 100 ft. when pumping at 12 gpm for 1 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Clay	15	15
Limestone	230	245

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Charles Fykes DATE 11-29-79

White Co[illegible]
Ill. D[illegible] f Public Health
Yellow [illegible] – Well Contractor
Blue Copy – Well Owner

INSTRUCTION DRILLERS

FILL IN ALL PERTINENT INFORMATION [illegible]JESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, ROOM [illegible], 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 180 ft.
   Curb material ____. Buried Slab: Yes ____ No ____
   b. Driven ____. Drive Pipe Diam. 5 in. Depth 40 ft.
   c. Drilled X. Finished in Drift ____. In Rock X.
   Tubular ____. Gravel Packed ____.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)
Cement	4'	40'

2. Distance to Nearest:
   Building 30 Ft. Seepage Tile Field 75'
   Cess Pool ____ Sewer (non Cast iron) ____
   Privy ____ Sewer (Cast iron) ____
   Septic Tank 50' Barnyard ____
   Leaching Pit ____ Manure Pile ____
3. Is water from this well to be used for human consumption?
   Yes X No ____
4. Date well completed 8-31-72
5. Permanent Pump Installed? Yes X No ____
   Manufacturer Barnes Type Submersible
   Capacity 10 gpm. Depth of setting 147 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 ____ No X

REMARKS:

IDPH 4.065
10/68

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owne[redacted] Well No. 1
    Address [redacted]
    Driller Lockport Well & Pump License No. 180
11. Permit No. 19750 Date 8-30-72
12. Water from Limestone (Formation) 13. County Will
    at depth 40 to 180 ft. Sec. 21
    Twp. 35N
    Rge. 10E
    Elev. ____
14. Screen: Diam. ____ in.
    Length: ____ ft. Slot ____

SHOW LOCATION IN SECTION PLAT
NW NW SE

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5'	A-53 15 lbs	0'	40

16. Size Hole below casing: 5 in.
17. Static level 140 ft. below casing top which is +1 ft. above ground level. Pumping level 140 ft. when pumping at 10 gpm for 1 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Top Soil	1'	1'
Gravel	4'	5'
Flagstone	20'	25'
Limestone	155'	180'

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Charles Fykes DATE 9-8-72

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 220 ft.
   Curb material _____. Buried Slab: Yes____ No____
   b. Driven____. Drive Pipe Diam. 5 in. Depth 40 ft.
   c. Drilled X. Finished in Drift____. In Rock X.
   Tubular____. Gravel Packed____.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)
Cement	4'	40'

2. Distance to Nearest:
   Building 20' Ft. Seepage Tile Field 75'
   Cess Pool____ Sewer (non Cast iron)____
   Privy____ Sewer (Cast iron)____
   Septic Tank 50' Barnyard____
   Leaching Pit____ Manure Pile____
3. Is water from this well to be used for human consumption?
   Yes x No____
4. Date well completed 3-25-71
5. Permanent Pump Installed? Yes x No____
   Manufacturer Reda Type Submersible
   Capacity 10 gpm. Depth of setting____ 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____ No x

REMARKS:

IDPH 4.065
10/68

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner [redacted] Well No. 1
    Address [redacted]
    Driller Lockport Well & Pump License No. 180
11. Permit No. 1:1929 Date 3-17-71
12. Water from Limestone Formation
    at depth 40 to 220 ft.
13. County Will
    Sec. 21, 5a
    Twp. 35N
    Rge. 10E
    Elev.____
14. Screen: Diam.____ in.
    Length:____ ft. Slot____

SHOW LOCATION IN SECTION PLAT
SE SE
5a

15. Casing and Liner Pipe

Diam. (In.)	Kind and Weight	From (Ft.)	To (Ft.)
5"	A-53 15lbs.	0'	40'

16. Size Hole below casing: 5 in.
17. Static level 40 ft. below casing top which is 0 ft. above ground level. Pumping level 40 ft. when pumping at 10 gpm for 1 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Top Soil	1'	1'
Clay	3'	4'
Lime	176'	180'
Shaley Lime	15'	195'
Lime	20'	215'
Shale	5'	220'

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Charles Lyons DATE 3-26-71