955805

SCREENING SITE INSPECTION REPORT
FOR
U.S. STEEL CORPORATION, JOLIET WORKS
JOLIET, ILLINOIS
U.S. EPA ID: ILD005454566
SS ID: NONE
TDD: F05-8905-029
PAN: FIL0333SA

OCTOBER 2, 1990

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International Specialists in the Environment

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1. INTRODUCTION

Ecology and Environment, Inc., Field Investigation Team (FIT) was tasked by the United States Environmental Protection Agency (U.S. EPA) to conduct a screening site inspection (SSI) of the U.S. Steel Corporation, Joliet Works (USSJW) site under contract number 68-01-7347.

The site was initially discovered by the Illinois Environmental Protection Agency (IEPA) on March 5, 1973, following an inspection of the facility that discovered that the facility had been operating without a proper air emissions permit (IEPA 1976).

The site was evaluated in the form of a preliminary assessment (PA) that was submitted to U.S. EPA. The PA was prepared by Richard Lange of IEPA and is dated September 7, 1984.

FIT prepared an SSI work plan for the (USSJW) site under technical directive document (TDD) F05-8703-410, issued on March 23, 1987. The SSI work plan was approved by U.S. EPA on May 12, 1989. The SSI of the USSJW site was conducted on October 25, 1989, under TDD F05-8905-029, issued on May 12, 1989.

The FIT SSI included an interview with site representatives, a reconnaissance inspection of the site, and the collection of eight soil/sediment samples.

The purposes of an SSI have been stated by U.S. EPA 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 to another authority will receive a listing SI. (U.S. EPA 1988)

U.S. EPA Region V has also instructed FIT to identify sites during the SSI that may require removal action to remediate an immediate human health or environmental threat.

2. SITE BACKGROUND

2.1 INTRODUCTION

This section presents information obtained from SSI work plan preparation, the site representative interview, and a reconnaissance inspection of the site.

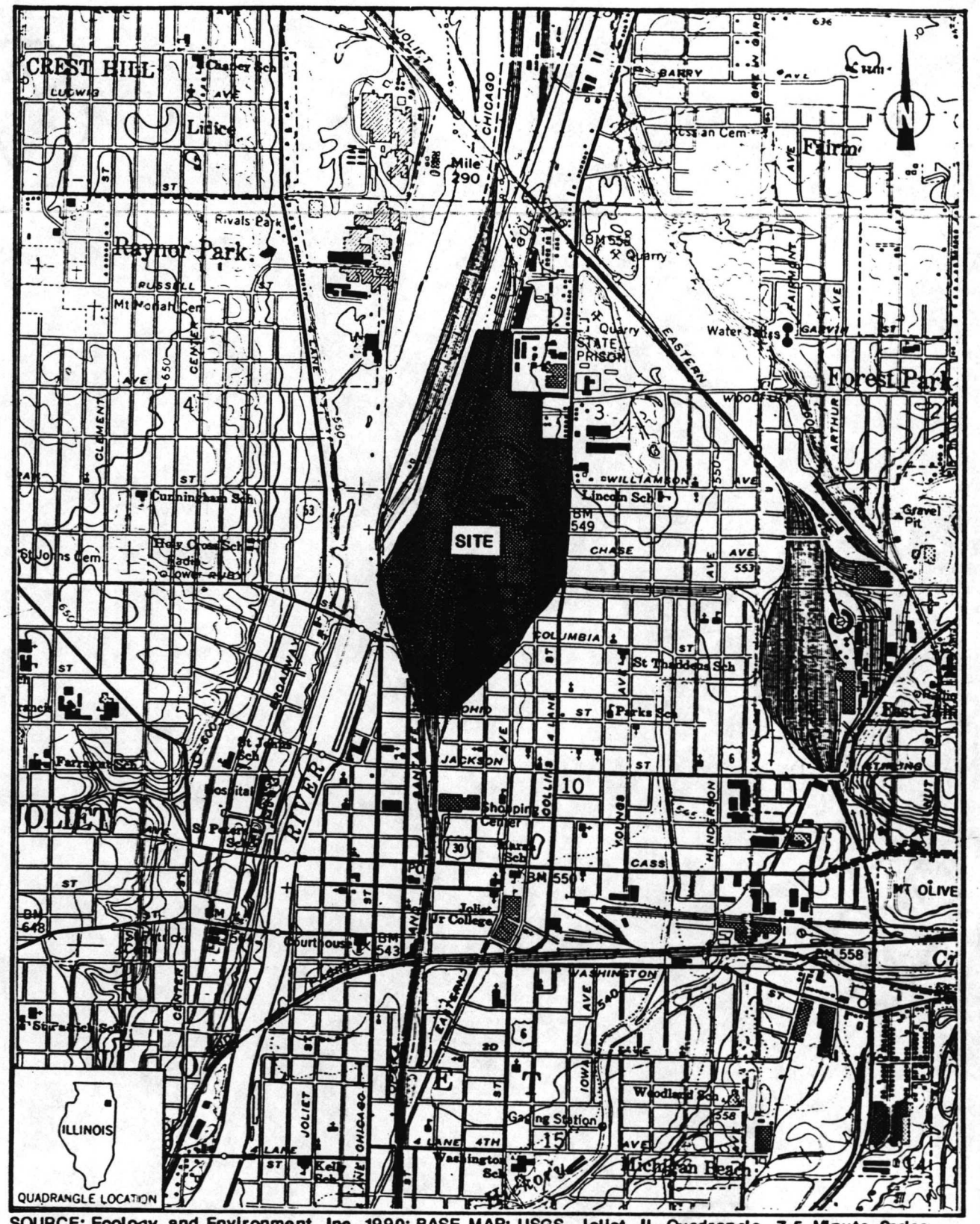
2.2 SITE DESCRIPTION

The USSJW site consists of approximately 180 acres and contains an active wire mill and approximately 20 other buildings. The site is located at 927 Collins Street, Joliet, Illinois, in Will County (SW1/4 sec. 3, NW1/4 sec. 10, T.35N., R.10E.). The site is bordered on the east and south by residential areas, on the west by the Illinois and Michigan Sanitary (I & M) Canal and the Des Plaines River, and on the north by the Joliet Correctional Center (see Figure 2-1 for site location).

A 4-mile radius map of the USSJW site is provided in Appendix A.

2.3 SITE HISTORY

The USSJW site is currently divided into 11 lots of various sizes (see Figure 2-2 for site property divisions). USX Corporation (USX) owns four lots and a portion of a fifth. These lots include lot 2 (approximately 6 acres), lot 8 (approximately 5 acres), lot 6 (approximately 49 acres), lot 11 (approximately 26 acres), and a portion of lot 4 (approximately 1/2 acre of the total 3 acres). American Steel & Wire Corporation (AS&W) of Cuyahoga Heights, Ohio, owns three lots, including lot 5 (approximately 10 acres), lot 7 (approximately 42 acres), and lot 9 (approximately 2 acres). Lot 7 and the majority of

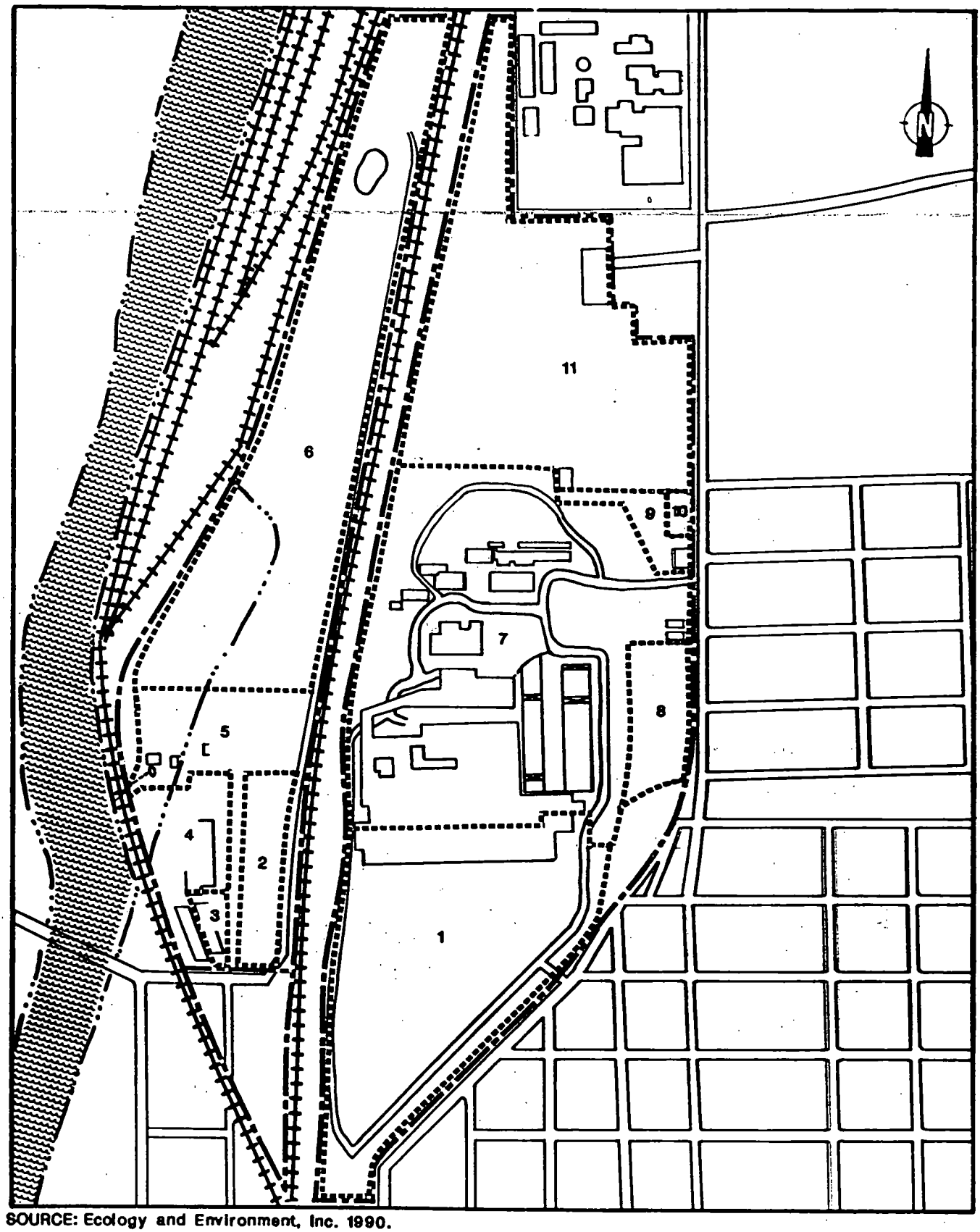


SOURCE: Ecology and Environment, Inc. 1990; BASE MAP: USGS, Joliet, IL Quadrangle, 7.5 Minute Series, 1962, Photorevised 1973.

SCALE

0 ½ 1 MILE

FIGURE 2-1 SITE LOCATION



SOURCE: Ecology and Environment, Inc. 1990.

SCALE

0 500 1,000 1,500 2,000 FEET

FIGURE 2-2 SITE PROPERTY DIVISIONS

lot 5 were purchased in 1986, and lot 9 and the remaining portion of lot 5 were purchased from USX in 1989. The remaining four lots are owned by four separate companies. Lot 1 (approximately 31 acres) is owned by a private realty company and was purchased in 1989. Lot 3 (approximately 1 acre) is owned by Graphics Paper of Joliet, and was purchased in 1988. The majority of lot 4 is owned by Webster Warehouse II, Inc., of Joliet, and was purchased in 1988. Lot 10 (approximately 1/2 acre) is owned by the Joliet Federal Credit Union and was purchased from USX in 1989 (Zaborske 1989).

U.S. Steel Corporation (USS) had owned the entire site since at least the 1860s, when a steel plant was constructed on-site (IEPA 1975a; Moniot 1989). USS became a part of USX in July 1986, and the site was divided into lots and put up for sale by USX (Zaborske 1989). Prior to the sale of any of the property, a site assessment was conducted by Engineering Science, Inc. (ES), an environmental consulting company from Oak Brook, Illinois. The assessment found only one area of contamination on-site, an old drum storage area located on the north-central portion of lot 7, where waste solvents had been stored. ES excavated an unknown quantity of the contaminated soil from this area from the end of 1988 to early 1989 (Moniot 1989).

AS&W currently operates a wire mill (the "facility") and a wastewater treatment plant (WWTP) on its portion of the site. The company uses steel billets (4 inches by 4 inches by 34 feet), which are produced by other companies and trucked to the facility, to produce a variety of fasteners (Keltz 1989). The billets are run through a reheat furnace and drawn into steel rods, ground, and cut to appropriate sizes before the final product is produced (Price 1989).

Waste that is currently produced by AS&W includes used industrial oils and lubricants, sludge from the WWTP, swarf (steel sawdust), and scale (small flakes of steel). According to site representatives, none of this waste is considered hazardous. The waste industrial oils and lubricants, the swarf, and the scale are all sold to off-site companies. The WWTP sludge is landfilled off-site as a special waste. All wastewater produced is recycled in the facility process (Price 1989).

AS&W has three operating permits that were passed on to it from USX following AS&W's purchase of its portion of the site and the facility.

These permits include National Pollutant Discharge Elimination System (NPDES) permit number IL0002674 for the discharge of cooling tower blowdown into the Des Plaines River, air emissions permit number 197045 ABT for operating emission sources and air pollution equipment, and city of Joliet permit number J1500 for domestic sewage (Keltz 1989).

Graphic Paper and Webster Warehouse II both have small storage buildings on their portions of the site. Contents stored in these are unknown. There are no current operations on the lots owned by the private realty company or the Joliet Federal Credit Union (Zaborske 1989).

USS operated a steel plant on-site from the 1860s until the 1930s. A variety of steel products were manufactured during this period (Moniot 1989). Wire production was introduced to the site in the 1940s, which involved the production of rods, wire, woven fence, barbed wire, nails, concrete reinforcing mesh, and other miscellaneous wire products (IEPA 1975b). The USS wire facility operated until AS&W took over the facility; however, production decreased greatly from 1979 to 1986 (Moniot 1989).

USS was granted a permit by IEPA to construct the WWTP in March 1970. Construction was completed and the WWTP was put into operation in December 1971 (IEPA 1975a). In March 1974, USS was given permission by IEPA to bypass the WWTP in order to install the final phases of their plant upgrading. Company officials had informed the IEPA that the upgrading would be completed within one week. During the period that the WWTP was bypassed, wastewater was discharged directly into Penitentiary Ditch, which runs through the site before entering the Des Plaines River (IEPA 1974). Wastewater was routinely discharged to Penitentiary Ditch prior to construction of the WWTP (IEPA 1975a). IEPA officials visited the site during the period that the WWTP was bypassed and observed an oily iridescence and black, oil-like globules on the surface of the ditch. A water sample was collected from the ditch at the point of entry of USS's wastewater flow. The sample was analyzed and found to contain low concentrations of heavy metals, the primary contaminants analyzed for (IEPA 1974). USS received NPDES permit number IL0002674 in September 1974 for discharge of the WWTP effluent into I & M Canal (IEPA 1985b). Currently, the WWTP discharges only

blowdown from the cooling system portion of the facility; this discharge occurs approximately once a month. Wastewater is now recycled in the facility (Keltz 1989; Price 1989).

In November 1980, USS submitted a RCRA Part A application for generation and storage of hazardous wastes on-site (U.S. EPA 1989). The primary hazardous waste generated was waste pickle liquor, which was produced from the process of cleaning iron rods. The waste was stored on-site in a 30,000-gallon storage tank prior to being shipped off-site (IEPA 1982). In April 1985, USS notified IEPA that the pickling operation had been discontinued and the facility was no longer generating or storing hazardous wastes (USS 1985). In January 1986, USS withdrew its application for a Part A permit for the facility (USS 1986).

A U.S. EPA Notification of Hazardous Waste Site form was submitted by USS for its Joliet Works facility in May 1981. The form identified a small landfill, of approximately 3,800 cubic feet, located on-site in which acids, used pickling liquor, and material from plant spills had been deposited from 1972 to 1980 (U.S. EPA 1981). Sludge from the WWTP was also disposed of in the landfill (Moniot 1989).

USS had a history of violations of U.S. EPA air emission standards during the 1970s and early 1980s. The violations involved operating a number of processes without proper operating permits, including nail galvanizing lines, steel grinders, and a cleaning house (IEPA 1974, 1975a, 1975b, 1976, 1985a). USS had applied for the required operating permits for these processes in 1974 and again in 1975, but the applications were denied by IEPA because of an excessive amount of potential particulate release from these processes (IEPA 1976). IEPA officials also observed air emission violations during site inspections. These violations included dense black smoke emitted from one of the operating splice bar mills (where splices for railroad tracks were produced), excessive particulates emitted from the galvanizing lines, and excessive sulfuric acid emitted from the cleaning house (IEPA 1974, 1975a, 1975b, 1975c). A complaint against USS for violating air pollution regulations was filed with the Illinois Pollution Control Board (IPCB) in 1975 by the State of Illinois and U.S. EPA (IPCB 1975). No additional information on these or other violations is known to FIT.

An IEPA inspection of the AS&W operations at the site in July 1987 found that the facility was in compliance with current operating permits (IEPA 1987). The IEPA Maywood Office does a compliance inspection for the air emissions permit and the NPDES permit once a year (Price 1989). According to state and federal file information, no regulatory actions involving the facility are currently pending.

3. SCREENING SITE INSPECTION PROCEDURES AND FIELD OBSERVATIONS

3.1 INTRODUCTION

This section outlines procedures and observations of the SSI of the USSJW site. Individual subsections address the site representative interview, reconnaissance inspection, and sampling procedures. Rationales for specific FIT activities are also provided. The SSI was conducted in accordance with the U.S. EPA-approved work plan, with only minor modifications in the proposed sample plan brought about by observations made during the site reconnaissance inspection. As stated in the proposed sample plan, eight soil samples were collected; however, all samples were collected at the surface instead of below the surface because of site observations made by FIT. FIT observed foundary sand and slag on-site. FIT believed these to be present at depth as well as at the surface. Also, only one potential background sample was collected, not two. The potential background sample was collected from an on-site location, rather than off-site as suggested in the work plan.

The U.S. EPA Potential Hazardous Waste Site Inspection Report (Form 2070-13) for the USSJW site is provided in Appendix B.

3.2 SITE REPRESENTATIVE INTERVIEW

Ted Nehrkorn, FIT team leader, conducted an interview with representatives from USX, USS, and AS&W, current and past owners and operators of the USSJW site. USX was represented by John M. Zaborske, Midwest Regional Manager for USX Realty Development. USS was represented by J. David Moniot, Director, Plant Environmental Projects and Environmental Affairs. AS&W was represented by Elaine A. Price,

Manager, Executive Programs, and Charles H. Keltz, Manager, Maintenance. The interview took place on October 25, 1989, at 10:00 a.m. in a conference room in the AS&W main office building. Also present at the interview was Jeffrey Dickson, of FIT. The interview was conducted to gather information that would aid FIT in conducting SSI activities.

3.3 RECONNAISSANCE INSPECTION

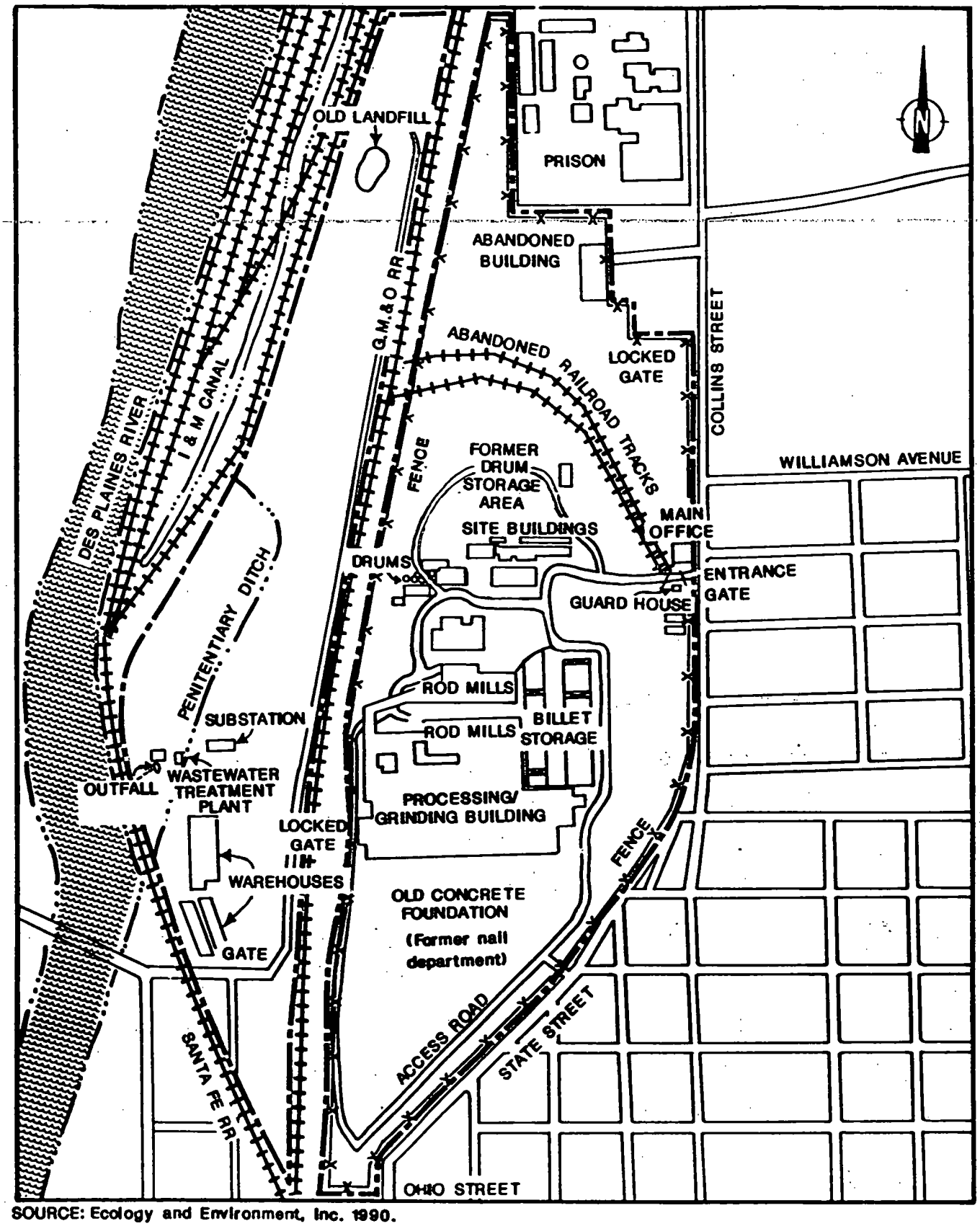
Following the site representative interview, FIT conducted a reconnaissance inspection of the USSJW site and surrounding area in accordance with Ecology and Environment, Inc. (E & E), health and safety guidelines. The reconnaissance inspection began at 11:40 a.m. and included a walk-through of the site to determine appropriate health and safety requirements for conducting on-site activities and to make observations to aid in characterizing the site. FIT also determined sampling locations during the reconnaissance inspection. FIT was accompanied by Zaborske, Moniot, Price, and Keltz during the reconnaissance inspection.

Reconnaissance Inspection Observations. The USSJW site is located on the east side of Joliet, Illinois. The site is bordered by the Joliet Correctional Center and commercial property to the north, Collins Street and State Street to the east, Ohio Street to the south, and a Santa Fe Railroad line, the Des Plaines River, and I & M Canal to the west (see Figures 3-1 and 3-2 for locations of site features and detail of the outfall area).

Active railroad lines owned by Chicago and Alton Railroad run north and south through the site, dividing the site into east and west portions. The east portion contains lot 1 and lots 7 through 11; the west portion contains lots 2 through 6 (see Figure 2-2).

The perimeter of the east portion of the site is completely fenced. Electrically controlled gates are located at the main entrance to the site and all other gates are locked (Keltz 1989).

Lot 1, the southernmost lot in the east portion, contains old concrete foundations. These foundations are the remains of the former USS nail production operation. The majority of lot 8 was occupied by concrete foundations, marking the location of the former USS splice bar mill.



SOURCE: Ecology and Environment, Inc. 1990.

SCALE

0 500 1,000 1,500 2,000 FEET

FIGURE 3-1 SITE FEATURES

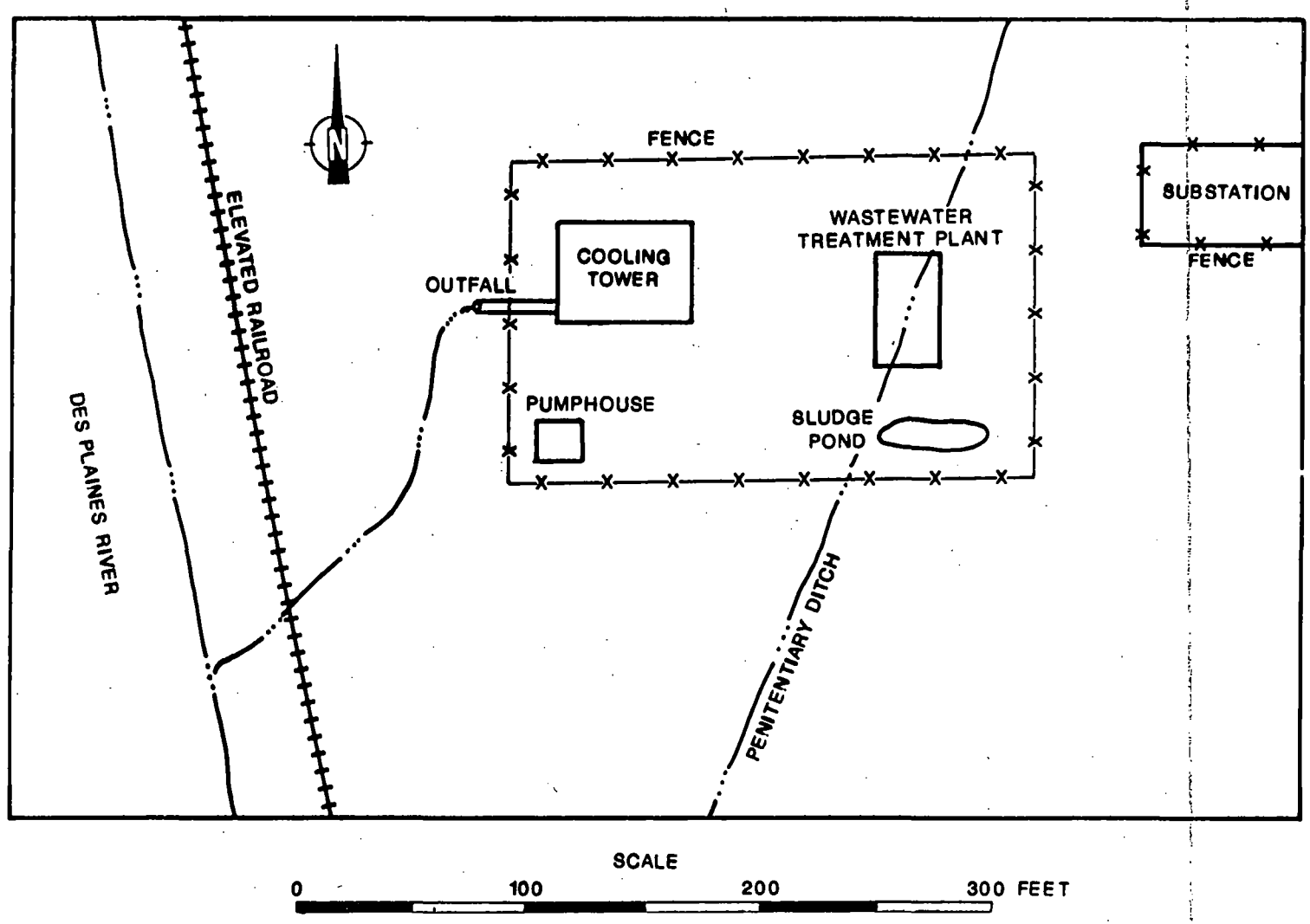


FIGURE 3-2 DETAIL OF OUTFALL AREA

Lots 7 and 9, located in the central part of the east portion, contain the active AS&W wire mill and the majority of the approximately 25 on-site buildings (Zaborske 1989). The main office building, which houses both AS&W and USX Realty Development offices, was the primary structure located on lot 9. A small guardhouse, where a security guard is present 24 hours a day, was located on lot 7 near the electronically controlled access gate. The process buildings were all located on lot 7. The process buildings included the rod mills and the billet process/grinding and storage building. The billet storage area was located east of the rod mills. A number of buildings used for a variety of plant operations were located north of the rod mills. Approximately 300 drums were observed on the west side of these buildings in an unpaved area. The majority of these drums were empty; however, some contained waste materials including scale, oils, lubricants, and synthetic hydraulic fluids. Some of these drums were tipped on their sides, and some material had leaked out onto the ground. The majority of this area of lot 7, excluding the area containing the drums, was paved. North of this area were dirt and grass. This area was the former drum storage area in which used waste solvents had been stored (Moniot 1989). A dirt road ran from the main on-site road starting at a point just east of the buildings, encircling the former drum storage area, to the west side of the buildings near the area containing the drums.

The majority of lot 11 was grass covered with a small tree line along the east side. The only structures observed on lot 11 were approximately three abandoned buildings. A number of abandoned railroad lines were also observed running through lot 11. Lot 10 did not have any structures, and was mostly grass covered.

The former landfill, the WWTP and Penitentiary Ditch are all located on the west portion of the site. The landfill is located on the northern portion of lot 6. The landfill area was completely covered with vegetation.

The WWTP is located on lot 5 and includes a treatment facility building and a cooling tower. A sludge pit containing treatment sludge is located just south of the treatment facility building. These facilities are completely surrounded by a fence with a locked gate. A

pump house used to pump water from the Des Plaines River is located inside the fence, south of the cooling tower. The outfall discharges into a small ditch which empties into I & M Canal.

Penitentiary Ditch is a water-containing ditch that runs from the central portion of lot 6, through lot 5, and discharges into the Des Plaines River in lot 4. The ditch was not continuous through the entire route, because the WWTP was built over the ditch. The water in the ditch upstream of the WWTP was green and did not appear to be flowing. The water downstream of the WWTP was muddy and also was not flowing. An underground tunnel leading from the direction of the wire mill facility connected to Penitentiary Ditch approximately 50 feet south of the WWTP. There did not appear to be anything being discharged into the ditch from this tunnel.

An electrical substation is located east of the WWTP facilities. The substation is completely surrounded by a fence with a locked gate, separate from the WWTP facilities. The fences surrounding the WWTP facilities and the substation were the only fences observed on the western portion of the site.

Warehouses were observed on lots 3 and 4. Site representatives did not know whether their warehouses were currently being used and if so, for what purposes. No structures were observed on lot 2. A dirt road ran along the eastern border of the west portion of the site from lot 2 to just north of the former landfill.

Photographs of the USSJW site are provided in Appendix C.

3.4 SAMPLING PROCEDURES

Samples were collected by FIT at locations selected during the reconnaissance inspection to determine whether U.S. EPA Target Compound List (TCL) compounds or Target Analyte List (TAL) analytes were present at the site. The TCL and TAL are included with corresponding quantitation/detection limits in Appendix D.

On October 25, 1989, FIT collected eight soil/sediment samples, including one potential background soil sample. Portions were offered to the site representatives and were accepted by AS&W but declined by USX (USS). The samples that were shared with AS&W were those collected from its property: samples S4, S5, S6, and S7.

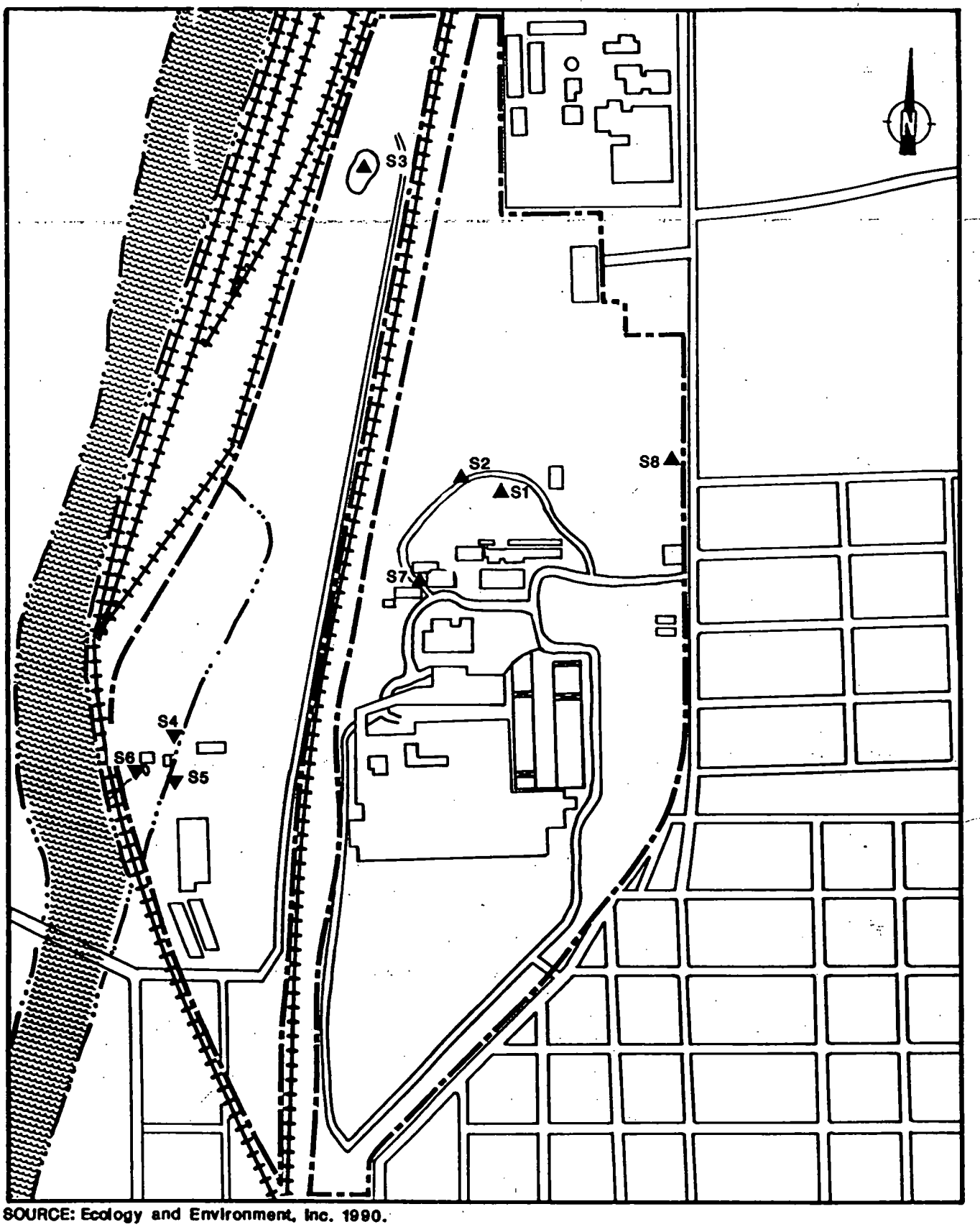
Soil/Sediment Sampling Procedures. Soil samples S1 and S2 were grab surface samples collected from the former drum storage area (see Figure 3-2 for soil/sediment sampling locations). These soil sampling locations were chosen to determine whether TCL compounds or TAL analytes were still present in the ground following the remedial work done at this location. Soil sample S3 was a grab surface sample collected from the former landfill. This sampling location was selected to determine whether TCL compounds or TAL analytes were present in the former landfill.

Samples S4, S5, and S6 were grab surface sediment samples. Sample S4 was collected from Penitentiary Ditch just upstream of the WWTP facility. This sampling location was chosen to determine the chemical characteristics of the ditch upstream from the former discharge point of the USS facility. Sample S5 was collected from Penitentiary Ditch downstream of the former discharge point. This sampling location was chosen to determine whether TCL compounds or TAL analytes were present in the ditch from past discharges by the facility. Sample S6 was collected near the outfall from the WWTP to the ditch. This sampling location was selected to determine whether TCL compounds or TAL analytes had been discharged from the facility.

Soil sample S7 was a surface soil sample collected from an area of stained soil near the drum storage area. This sampling location was selected to determine whether TCL compounds or TAL analytes had entered the ground in this area.

Soil sample S8, a potential background sample, was a grab surface soil sample collected in a wooded area along the eastern border of the east portion of the site. The sampling location was chosen because it appeared to be a relatively undisturbed area and no hazardous wastes were known to have been stored or disposed of in the vicinity. Sample S8 was collected to determine the representative chemical content of the soil in the area of the site.

Standard E & E decontamination procedures were adhered to during the collection of all soil/sediment samples. The procedures included the scrubbing of all equipment (e.g., trowels) with a solution of detergent (Alconox) and distilled water, and triple-rinsing the equipment with distilled water before the collection of each sample



SOURCE: Ecology and Environment, Inc. 1990.

SCALE

0 500 1,000 1,500 2,000 FEET

LEGEND

▲ SOIL SAMPLE ▼ SEDIMENT SAMPLE

FIGURE 3-3 SOIL/SEDIMENT SAMPLING LOCATIONS

(E & E 1987). All soil/sediment samples were packaged and shipped in accordance with U.S. EPA-required procedures.

As directed by U.S. EPA, all soil/sediment samples were analyzed using the U.S. EPA Contract Laboratory Program (CLP) for TCL compounds by Southwest Laboratories of Oklahoma, of Broken Arrow, Oklahoma, and for TAL analytes by Weyerhaeuser of Federal Way, Washington.

4. ANALYTICAL RESULTS

4.1 INTRODUCTION

This section presents results of the chemical analysis of FIT-collected soil/sediment samples for TCL compounds and TAL analytes.

4.2 RESULTS OF CHEMICAL ANALYSIS OF FIT-COLLECTED SAMPLES

Soil/Sediment Samples. Chemical analysis of FIT-collected soil/sediment samples revealed substances from the following groups of TCL compounds and TAL analytes: halogenated hydrocarbons, aromatics, phenols, polyaromatic hydrbcarbons (PAHs), aromatic amines, hydrocarbons, pesticides, heavy metals, metals, common laboratory artifacts (methylene chloride, acetone, and bis[2-ethylhexyl]phthalate), and soil constituents common to the area of the site; cyanide was also detected (see Table 4-1 for complete chemical analysis results of FIT-collected soil/sediment samples).

Quantitation/detection limits used in the analysis of soil/sediment samples are provided in Appendix D.

The analytical data for the chemical analysis of soil/sediment samples collected for this SSI have been reviewed by U.S. EPA and FIT for compliance with terms of the FIT contract, and the review has been approved by U.S. EPA. Any additions, deletions, or changes to the data have been incorporated in the chemical analysis results tables presented in this section.

Table 4-1
RESULTS OF CHEMICAL ANALYSIS F
FIT-COLLECTED SOIL/SEDIMENT SAMPLES

Sample Collection Information and Parameters	Sample Number S1	S2	S3	S4	S5	S6	S7	S8
Date	10/25/89	10/25/89	10/25/89	10/25/89	10/25/89	10/25/89	10/25/89	10/25/89
Time	1415	1425	1445	1500	1540	1550	1630	1700
CLP Organic Traffic Report Number	EFJ12	EFJ13	EFJ14	EFJ15	EFJ16	EFJ17	EFJ18	EEA67
CLP Inorganic Traffic Report Number	MEDH33	MEDH34	MEDH35	MEDH36	MEDS09	MEFE97	MEFE98	MEFE99
Compound Detected (values in µg/kg)								
Volatile Organics								
methylene chloride	400J	510J	--	--	--	--	370J	--
acetone	--	--	4J	280	130J	240J	--	--
1,2-dichloroethene (total)	--	--	--	--	5J	--	--	--
trichloroethene	1,200	540J	--	--	8J	--	--	--
toluene	190J	1,600	17	10J	9	4J	2,100	52
chlorobenzene	--	--	--	--	--	--	--	11
xylenes (total)	--	--	3J	--	--	--	--	--
Semivolatile Organics								
phenol	--	--	--	--	--	--	1,400	--
naphthalene	--	1,300	--	--	750J	720J	--	--
4-chloroaniline	--	--	950J	--	--	--	--	--
2-methylnaphthalene	250J	2,800	--	--	--	490J	270J	--
acenaphthylene	--	940	--	--	--	530J	--	--
acenaphthene	--	--	--	--	3,800	--	--	--
dibenzofuran	--	1,000	--	--	1,800J	--	--	--
fluorene	--	890	--	--	3,300	560J	--	--
n-nitrosodiphenylamine	--	--	--	--	--	--	480J	--
phenanthrene	900	6,200	720J	770J	27,000	2,800	960	--
anthracene	--	1,200	190J	140J	6,000	1,300J	--	--
fluoranthene	540J	5,900	1,400	1,100	33,000	5,000	350J	--
pyrene	450J	5,600	1,100	790J	27,000	4,600	550J	--
benzo[a]anthracene	350J	4,300	850J	450J	22,000	3,700	--	--
chrysene	510J	5,200	870J	530J	25,000	4,400	--	--
bis(2-ethylhexyl)phthalate	--	--	1,100	--	--	3,000	3,100	--
benzo[b]fluoranthene	610J	7,700	--	820J	26,000	6,300	--	--
benzo[k]fluoranthene	--	--	--	--	19,000	--	--	--
benzo[a]pyrene	310J	4,500	890J	520J	25,000	4,600	--	--
indeno[1,2,3-cd]pyrene	330J	2,800	660J	410J	17,000	2,600	--	--
dibenzo[a,h]anthracene	--	--	--	--	7,600	--	--	--
benzo[g,h,i]perylene	310J	2,800	850J	400J	15,000	2,400	--	--
Pesticides/PCBs								
Aldrin	26	250	30	--	250	45	28	--
Heptachlor epoxide	19	240	--	--	--	--	55	--
Endosulfan I	--	--	--	--	63	--	--	--

Table 4-1 (Cont.)

Sample Collection Information and Parameters	Sample Number S1	S2	S3	S4	S5	S6	S7	S8
Dieldrin	--	--	82	--	--	--	43	--
4,4'-DDE	--	--	--	--	62	--	--	--
Endosulfan II	--	--	130	--	--	--	--	--
4,4'-DDT	--	--	370	--	--	--	--	--
alpha Chlordane	--	120J	86J	--	--	--	--	--
gamma Chlordane	--	200	110J	--	220J	--	--	--
Analyte Detected (values in mg/kg)								
aluminum	2,320	14,300	15,200	7,020	2,750	3,380	4,950	6,870
antimony	--	29.8	--	3.0B	--	5.2B	--	30.7
arsenic	4.3	77.5	9.2	11.6	3.0	14.9	13.8J	41.1
barium	18.1B	86.1	124	135	45.6	55.3	72.6	164
beryllium	--	2.8	0.88JB	1.6	0.23JB	0.86JB	1.4	--
cadmium	--	9.2	4.9	--	0.81JB	--	1.5J	13.4
calcium	151,000	43,100	44,300	30,800	2,970	7,720B	7,980	21,500
chromium	16.2	129	95.3	14.8	8.7	14.3	13.2	390
cobalt	2.5B	17	11.4B	7.4B	2.3B	8.7B	11.2	20.7
copper	21.2JE	146JE	175JE	49.9JE	13.6JE	58.9JE	93.2JE	298JE
iron	18,300JE	273,000JE	33,100JE	39,700JE	6,490JE	110,000JE	42,300JE	320,000JE
lead	41.5	2,470	182	63	56.6	164	116	1,360
magnesium	81,800	9,040	25,300	12,900	1,380	2,370	2,260	8,360
manganese	365JE	1,000JE	569JE	712JE	151JE	1,700JE	1,990JE	2,400JE
mercury	6.34JN	1.9JN	1.9JN	0.39JN	--	0.63JN	4.0JN	0.86JN
nickel	9.5	90	68.9	25.1	7.3B	21	30	222
potassium	670JB	797JB	2,670	620JB	1,120J	507JB	693JB	1,350J
selenium	0.41JNB	0.92JN+	0.95JNB	0.84JNB	0.39JNB	--	1.3JNM	0.57JWNB
silver	--	3.8	1.5JB	0.35JB	--	0.89JB	--	8.7
sodium	314JEB	822JEB	521JEB	557JEB	182JEB	288JEB	314JEB	231JEB
thallium	--	0.49B	--	--	--	0.54B	0.46B	0.69B
vanadium	9.1B	30.9	33.1	18.7	10.2	25.5	24.5	31.5
zinc	224JNE	48,200JNE	463JNE	247JNE	131JNE	218JNE	422JNE	2,360JNE
cyanide	--	--	--	--	--	--	--	4.9JN

-- Not detected.

Table 4-1 (Cont.)

COMPOUND QUALIFIER	DEFINITION	INTERPRETATION
J	Indicates an estimated value.	Compound value may be semiquantitative.

ANALYTE QUALIFIERS	DEFINITION	INTERPRETATION
E	Estimated or not reported due to interference. See laboratory narrative.	Analyte or element was not detected, or value may be semiquantitative.
N	Spike recoveries outside QC protocols, which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
+	Correlation coefficient for standard additions is less than 0.995. See review and laboratory narrative.	Data value may be biased.
B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
J	Value is above CRDL and is an estimated value because of a QC protocol.	Value may be semiquantitative.
M	Duplicate injection precision not met.	Value may be semiquantitative.
W	Post-digestion spike for furnace AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semiquantitative.

Source: Ecology and Environment, Inc. 1990.

5. DISCUSSION OF MIGRATION PATHWAYS

5.1 INTRODUCTION

This section presents discussions of data and information pertaining to potential migration pathways and targets of TCL compounds and TAL analytes that are possibly attributable to the USSJW site.

The five migration pathways of concern discussed are groundwater, surface water, air, fire and explosion, and direct contact.

5.2 GROUNDWATER

Groundwater sampling was not conducted at the USSJW site because no wells are located downgradient of the site. Groundwater flow is assumed to be west toward the Des Plaines River.

However, a potential exists for TCL compounds and TAL analytes to migrate from the site to groundwater in the vicinity of the site. A number of on-site factors exist that increase the potential for the migration to occur, including the following.

- A large number of TCL compounds, including trichloroethene, toluene, phenol, a number of pesticides, and a number of PAHs were detected in on-site soil/sediment samples at concentrations greater than in the background sample, S8.

- A large number of TAL analytes were detected at elevated concentrations in on-site soil/sediment samples, including the background sample.

- There does not appear to be any type of low permeability material protecting the aquifer of concern (AOC). The absence of such material may allov the TCL compounds and TAL analytes detected on-site to migrate to groundwater in the vicinity.

Chemical analysis of the FIT-collected on-site soil/sediment samples revealed the presence of a number of TCL compounds at concentrations above concentrations in the background sample. Samples containing elevated concentrations include soil samples S1 and S2, collected from the former drum storage area, where remedial cleanup had already been completed according to the site representative (Moniot 1989). Elevated concentrations were also detected in soil sample S7, collected from the present drum storage area; in sediment sample S5, collected from Penitentiary Ditch; and in sediment sample S6, collected near the WWTP outfall structure.

A review of area well logs and geologic literature of the area surrounding the USSJW site indicates the presence of three major underground water-bearing units. The three aquifers, in descending order, are: a sand and gravel Quaternary drift deposit, a Silurian dolomite bedrock formation, and a sequence of hydraulically connected formations of dolomites and sandstones of Ordovician and Cambrian age, collectively called the Cambrian-Ordovician aquifer system (Woller and Sanderson 1983).

The Maquoketa shale formation, a known aquitard, lies between the Silurian dolomite bedrock formation and the Cambrian-Ordovician aquifer system (Woller and Sanderson 1983).

The Quaternary drift deposit ranges in thickness from 1 to 112 feet, and is composed of interbedded till units, lacustrine clay deposits, and water-bearing outwash units of sand and gravel. The Silurian dolomite formation ranges in thickness from 155 to 315 feet. The Maquoketa shale formation ranges in thickness from 80 to 250 feet. The Cambrian-Ordovician aquifer system is found at depths ranging from 260 to 575 feet (Appendix E; Woller and Sanderson 1983).

The Quaternary drift aquifer and the Silurian dolomite aquifer appear to be hydraulically connected because of the lack of a confining

layer separating the two units, and together form the AOC (Voller and Sanderson 1983).

The AOC is the primary water-bearing formation utilized by private residential wells in the vicinity of the site (Voller and Sanderson 1983). These wells draw from depths ranging from 40 to 198 feet, while the water table is found at depths as shallow as 25 feet (see Appendix E for area well logs). The city of Crest Hill operates five municipal wells that draw from the AOC. Four of these wells are located within a 3-mile radius of the site. Water from all of the wells is blended before distribution (Djerf 1986). The city of Rockdale operates three municipal wells located within a 3-mile radius of the site. Two of these wells draw from the AOC. Water from the three wells is blended prior to distribution (Duffield 1988). Two subdivisions, Ridgewood and Ingall's Park, located on the east side of the city of Joliet, also operate wells that draw from the AOC within a 3-mile radius of the site (Voller and Sanderson 1983). The city of Joliet operates five municipal wells that draw from the AOC; however, these wells are all located outside of the 3-mile radius (Duffield 1988; Voller and Sanderson 1983). The closest well to the site drawing from the AOC is a private residential well approximately 1 mile east of the site (United States Geological Survey [USGS] 1953, 1954, 1962, 1963).

A majority of the municipal wells operated by the city of Joliet (a total of approximately 16) draw from the Cambrian-Ordovician aquifer, and six of these wells are located within a 3-mile radius of the site. The Joliet Correctional Center and the Statesville Correctional Center both operate wells that are located within a 3-mile radius of the site and draw from the Cambrian-Ordovician aquifer (Voller and Sanderson 1983). The city of Lockport also operates municipal wells that draw from the Cambrian-Ordovician aquifer and are all located outside of the 3-mile radius (McCluskey 1986).

Targets within a 3-mile radius of the site potentially affected by TCL compounds and TAL analytes in the AOC include a total of approximately 15,500 persons. This population figure was calculated by adding the people served by the Crest Hill municipal water system

(approximately 7,500), the Rockdale municipal water system (approximately 1,900), the Ridgewood Subdivision water system (approximately 300), and the Ingall's Park Subdivision water system (approximately 800), to the approximately 5,000 persons who draw water from private residential wells within a 3-mile radius of the site. The population using private residential wells was calculated based on USGS topographic maps of the area that indicate that approximately 1,650 homes with private wells are located within the 3-mile radius of the site (USGS 1953, 1954, 1962, 1963). Using a figure of 3.07 persons per household for Will County (U.S. Bureau of the Census 1982), multiplied by the approximately 1,650 homes, the population of approximately 5,000 was calculated.

5.3 SURFACE WATER

Surface water and sediment samples that could show an observed release to surface water near the USSJW site were not collected. Attribution to the site would be difficult to prove at the SSI stage because of the degraded water quality of the surface water bodies nearest the site, I & M Canal and the Des Plaines River, which border the site on the west.

A high potential exists for TCL compounds and TAL analytes detected in on-site soil/sediment samples to migrate off-site into the Des Plaines River or I & M Canal for the following reasons.

- TCL compounds were detected in sediment samples collected from an on-site ditch that leads to the Des Plaines River (S5), and from near the WWTP outfall (S6), at concentrations above the background concentration.

- TAL analytes were detected in elevated concentrations in all on-site soil/sediment samples.

- An approximately 10% slope is found along the west boundary of the site, which adjoins I & M Canal and the Des Plaines River.

Surface water is not used for drinking water in the area of the site. The Des Plaines River and I & M Canal are used recreationally for fishing in the area (Mathews 1989).

5.4 AIR

A release of TCL compounds or TAL analytes to the air was not documented during the SSI of the USSJW site. During the reconnaissance inspection, FIT site-entry instruments (OVA 128, hydrogen cyanide detector, and radiation detector) did not detect levels above background concentrations at the site. In accordance with the U.S. EPA-approved work plan, further air monitoring was not conducted by FIT.

A potential does exist for TCL compounds and TAL analytes to migrate from the site via windblown particulates. This potential is based on the following information. TCL compounds and TAL analytes were detected in on-site soil samples collected in areas lacking any vegetative cover.

The target population within a 4-mile radius of the site is approximately 102,000 persons. This population was calculated in the same manner as described in Subsection 5.2

5.5 FIRE AND EXPLOSION

During the SSI of the USSJW site, FIT observations and monitoring equipment readings (explosimeter and oxygen meter) indicated that no apparent potential for fire or explosion existed on-site. File information indicates that there has been no observed incident of fire or explosion on-site in the past.

5.6 DIRECT CONTACT

According to federal, state, and local file information reviewed by FIT, observations made during the SSI, and the interview with the site representatives, no incidents of direct contact with TCL compounds or TAL analytes at the USSJW site have been documented.

There is a potential that the public and on-site workers may come into contact with the TCL compounds and TAL analytes detected on-site. The potential for direct contact is based on the following information.

- TCL compounds and TAL analytes were detected in on-site surface soil/sediment samples.

- Access to the west side of the site is not restricted because this portion of the site is not completely fenced.

The population within a 1-mile radius of the site potentially affected through direct contact with TCL compounds and TAL analytes at the site is approximately 22,000 persons. This population was calculated by counting houses outside city limits within a 1-mile radius of the site on a USGS topographic map (USGS 1962) and multiplying this number by a persons-per-household value of 3.07 (U.S. Bureau of the Census 1982), and adding to this those portions of the populations of Joliet and Crest Hill within 1 mile of the site. Approximately 25% of Joliet (approximate population 80,000) and 5% of Crest Hill (approximate population 7,500) are within the 1-mile radius.

6. REFERENCES

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4788:8

APPENDIX A

SITE 4-MILE RADIUS MAP

STATESVILLE CORRECTIONAL CENTER BOUNDARY
LOCKPORT MUNICIPAL WATER BOUNDARY
LOCKPORT MUNICIPAL WELL #4
LOCKPORT MUNICIPAL WELL #2
LOCKPORT MUNICIPAL WELL #5
STATESVILLE CORRECTIONAL CENTER WELL #3
STATESVILLE CORRECTIONAL CENTER WELL # 5
STATESVILLE CORRECTIONAL CENTER WELL # 6
STATESVILLE CORRECTIONAL CENTER WELL # 4
STATESVILLE CORRECTIONAL CENTER BOUNDARY
CREST HILL MUNICIPAL WATER BOUNDARY
CREST HILL MUNICIPAL WELL #4
CREST HILL MUNICIPAL WELL #3
CREST HILL MUNICIPAL WELL #1
CREST HILL MUNICIPAL WELL #7
CREST HILL MUNICIPAL WELL #5
CREST HILL MUNICIPAL WATER BOUNDARY
JOLIET MUNICIPAL WATER BOUNDARY
LOCKPORT MUNICIPAL WATER BOUNDARY
JOLIET MUNICIPAL WELL #8D
T. 36 N.
T. 35 N.
WELL LOG # 5
JOLIET STATE PRISON WELL
WELL LOG # 1
JOLIET MUNICIPAL WELL # 4D
WELL LOG # 2
SITE
JOLIET MUNICIPAL WATER BOUNDARY
WELL LOG # 4
JOLIET MUNICIPAL WELL # 1D
WELL LOG # 3
RIDGEWOOD WELL
RIDGEWOOD WATER BOUNDARY
JOLIET MUNICIPAL WELL # 9D
JOLIET MUNICIPAL WELL # 5D
INGALLS PARK WATER BOUNDARY
JOLIET MUNICIPAL WELL # 2D
1 MILE
INGALLS PARK WELLS
JOLIET MUNICIPAL WELL # 3D
JOLIET MUNICIPAL WATER BOUNDARY
ROCKDALE MUNICIPAL WELLS
ROCKDALE MUNICIPAL WATER BOUNDARY
2 MILE
3 MILE
4 MILE
R. 9 E.
R. 10 E.
R. 10 E.
R. 11 E.

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SITE NAME U.S. STEEL CORP., JOLIET WORKS
U.S. EPA ID# ILD005454566

USGS TOPOGRAPHIC MAPS:

NAME FLAINFIELD, DATE 1962, REVISED 1973	NAME JOLIET, DATE 1962, REVISED 1973	NAME MOKENA, DATE 1963, REVISED 1973
NAME CHANNAHON, DATE 1954, REVISED 1973	NAME ELLWOOD, DATE 1953, REVISED 1973	NAME MANHATTAN, DATE 1953, REVISED 1973 & 1980

SCALE
1 MILE

ILLINOIS
QUADRANGLE LOCATION

APPENDIX B

U.S. EPA FORM 2070-13

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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	D005454566

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
U.S. Steel Corp., Joliet Works	927 Collins St.

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Joliet	IL	60432	Will	197	17

09 COORDINATES LATITUDE	LONGITUDE
41 32 24.0	088 04 47.0

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

III. INSPECTION INFORMATION

01 DATE OF INSPECTION (Month Day Year)	02 SITE STATUS	03 YEARS OF OPERATION (Beginning Year, Ending Year)
10 25 89	■ ACTIVE ☐ INACTIVE	~1869 / Present ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ■ B. EPA CONTRACTOR E&E (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.
Ted Nehrkorn	Environmental Engineer	E&E	(312) 663-9415

09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
Jeffrey R. Dickson	Geologist	E&E	(312) 663-9415
Karen M. Spangler	Environmental Engineer	E&E	(312) 663-9415
Tim Mayers	Geographer	E&E	(312) 663-9415
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Charles H. Keltz	Manager, Maint. ASW	American Steel & Wire Corp. 927 Collins St. Joliet, IL 60432	(815) 740-7222
J. David Monoit	Dir. Plant Env. Projects, Env. Affairs	USS Technical Center 4000 Tech. Center Drive Monroeville, PA 15146	(412) 825-2417
Elaine A. Price	Manager, Executive Programs	American Steel & Wire Corp. 4300 East 49th St. Cuyahoga Heights, OH 44125	(216) 883-3800
John M. Zaborske	Regional Manager Midwest	USX Realty Development 927 Collins St. Joliet, IL 60432	(815) 726-0221
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
■ PERMISSION ☐ WARRANT	1140	Mostly Sunny, mid 70's

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Tom Crause	IEPA	(217) 782-9848

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE (Month Day Year)
Ted Nehrkorn	US EPA/FIT	E&E	(312) 663-9415	2 23 90

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D005454566

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 ~300

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	Unknown		See Section 2.3 in
OLW	OILY WASTE	Unknown		Narrative
SOL	SOLVENTS	Unknown		
PSD	PESTICIDES	Unknown		
OCC	OTHER ORGANIC CHEMICALS	Unknown		
IOC	INORGANIC CHEMICALS	Unknown		
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
	For Specific Hazardous				
	Substances Found, Please				
	Refer to Table 4-1,				
	Chemical Analysis of				
	Soil Samples Summary				
	sheet.				

V. FEEDSTOCKS (See Appendix for CAS Numbers) N/A

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)

E&E - Chicago, Region V

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D005454566

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: ~15,500
04 NARRATIVE DESCRIPTION

See Section 5-2 of Narrative

01 ☒ B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: Ø
04 NARRATIVE DESCRIPTION

See Section 5-3 of Narrative

01 ☒ C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: ~102,000
04 NARRATIVE DESCRIPTION

See Section 5-4 of Narrative

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

See Section 5-5 of Narrative

01 ☒ E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: ~22,000
04 NARRATIVE DESCRIPTION

See Section 5-6 of Narrative.

01 ☒ F. CONTAMINATION OF SOIL — 02 ☒ OBSERVED (DATE: 10/25/88) — ☐ POTENTIAL — ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: ~50 (Acres)
04 NARRATIVE DESCRIPTION

See Table 4-1 Analytical Summary

01 ☒ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: ~13,500
04 NARRATIVE DESCRIPTION

See Section 5-2 of Narrative.

01 ☒ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: ~140
04 NARRATIVE DESCRIPTION

See Section 5-6 of Narrative

01 ☒ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: ~102,000
04 NARRATIVE DESCRIPTION

See Section 5 of Narrative

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D005454566

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

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

04 NARRATIVE DESCRIPTION

A potential exists for plant life to become affected by the intake of TCL compounds or TAL analytes through their root systems.

01 ■ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED

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

A potential exists for animal life in the area to be affected by TCL compounds and/or TAL analytes detected on site. A number of dogs were observed on site. Sediment samples leading into the Des Plaines River contained elevated conc.

01 ■ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION

A potential exists for food chain to be contaminated if people consume affected flora or fauna.

01 ■ M. UNSTABLE CONTAINMENT OF WASTES (Spills/Runoff/Standing liquids, Leaking drums) — 02 ■ OBSERVED (DATE: 10/25/89) ☐ POTENTIAL ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: ~22,000 — 04 NARRATIVE DESCRIPTION

TCL Compounds and TAL analytes were observed in on-site Surface Soil and Sediment Samples.

01 ■ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION

TCL Compounds and TAL analytes were observed in on-site Sediment samples from a ditch and near an outfall which discharge to the Des Plaines River

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION

None observed During SSI.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION

None Observed or Assumed

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

A landfill is located on-site into which pickle liquor, acids, material from spills, and WWTP sludge had been disposed

III. TOTAL POPULATION POTENTIALLY AFFECTED: ~102,000

IV. COMMENTS

U.S. Steel discharged process wastes into the penitentiary ditch prior to the installation of the WWTP facility. The penitentiary ditch eventually discharges into the Des Plaines River.

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

E & E - Chicago, Region V

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D005454566

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	IL0002674	9/20/74	5/1/90	Inspected 1/yr by IEPA
☐ B. UIC				
■ C. AIR	197045 ABT	7/25/74	9/3/90	Inspected 1/yr by IEPA
■ D. RCRA PART A	ILD005454566	11/80		Withdrew 1/86
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
■ H. LOCAL (Specify) City of Joliet WWTP	J1500	Unknown	Unknown	
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
■ C. DRUMS, ABOVE GROUND	unknown	55 gallon
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
■ F. LANDFILL	23870	ft3
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply): N/A
- ☐ 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: ~25

06 AREA OF SITE: ~180 (Acres)

07 COMMENTS: A former drum storage area is located on site. Waste solvents were stored here before being shipped off site. It is not clear how long this practice occured, or the quantity of waste which was stored.

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.: See Narrative Section 3.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ■ YES ☐ NO

02 COMMENTS: TCL compounds and TAL analytes were detected in on-site surface soil and sediment samples and the perimeter of the site is not completely fenced.

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

E&E-Chicago, Region V.

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D005454566

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)	SURFACE	WELL	02 STATUS	ENDANGERED	AFFECTED	MONITORED	03 DISTANCE TO SITE
COMMUNITY	A. ☐	B. ■		A. ☐	B. ☐	C. ■	A. ~1 (mi)
NON-COMMUNITY	C. ☐	D. ■		D. ☐	E. ☐	F. ☐ unknown	B. ~1 (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

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

02 POPULATION SERVED BY GROUND WATER ~15,500

03 DISTANCE TO NEAREST DRINKING WATER WELL ~1 (mi)

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

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

See Appendix E

10 RECHARGE AREA		11 DISCHARGE AREA	
☐ YES ■ NO	COMMENTS	■ YES ☐ NO	COMMENTS Located near Des Plaines River

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
Des Plaines River	☐	Borders Site (mi)
Illinois & Michigan Canal	☐	Borders Site (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. ~22,000 NO. OF PERSONS	B. ~54,000 NO. OF PERSONS	C. ~83,000 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION ~500 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE	04 DISTANCE TO NEAREST OFF-SITE BUILDING
~18,000	~500 (ft)

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)

See Section 3-4 of Narrative

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D005454566

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
0-112 (ft)	unknown (ft)	unknown

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
~2 (in)	~3.7 (in)	<3-10 %	W	3-5 %

09 FLOOD POTENTIAL	10
SITE IS IN 100 YEAR FLOODPLAIN	☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY N/A

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE: A. N/A (mi) OTHER: B. N/A (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

N/A (mi)

ENDANGERED SPECIES: N/A

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS PRIME AG LAND	AG LAND
A. on-site (mi)	B. <1/8 (mi)	C. N/A (mi)	D. ~1/2 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

See Appendix A

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

E&E - Chicago, Region V

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
IL	D005454566

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL	8	See Section 3.4 in Narrative	on File
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
OVA 128	No Readings Above Background Detected
Rad-Mini	No Readings Above Background Detected
Hydrogen Cyanide	No Readings Above Zero Detected
Oxygen Meter	ALL Readings were Within Normal Range
Explosimeter	No Readings Above Background Detected

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☐ AERIAL

02 IN CUSTODY OF Ecology & Environment, Inc - Chicago - Region V (Name of organization or individual)

03 MAPS ☒ YES ☐ NO

04 LOCATION OF MAPS Ecology & Environment, Inc - Chicago, IL, Region V

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

None

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

E&E - Chicago, Region V

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D005454566

II. CURRENT OWNER(S) See Narrative

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

PARENT COMPANY (if applicable)

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

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

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
US Steel		600 Grant Street		Pittsburgh	PA	15230

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)

E&E - Chicago - Region V

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	D005454566

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME: American Steel & Wire	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.): 927 Collins St.	04 SIC CODE: 60432
05 CITY: Joliet	06 STATE: IL
07 ZIP CODE:	
08 YEARS OF OPERATION: ~3	09 NAME OF OWNER: American Steel & Wire

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME: American Steel & Wire	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.): 4300 East 49th St.	13 SIC CODE:
14 CITY: Cuyahoga Heights	15 STATE: OH
16 ZIP CODE: 44125	

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

01 NAME: USsteel	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.): 927 Collins St.	04 SIC CODE:
05 CITY: Joliet	06 STATE: IL
07 ZIP CODE: 60432	
08 YEARS OF OPERATION: ~120	09 NAME OF OWNER DURING THIS PERIOD: USS - USX

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME: US Steel	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.): 600 Grant Street	13 SIC CODE:
14 CITY: Pittsburgh	15 STATE: PA
16 ZIP CODE: 15230	

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:	

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)

E&E - Chicago, Region V

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D005454566

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		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		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)

E & E - Chicago, Region V

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	000545 4566

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 N/A	02 DATE	03 AGENCY
01 ☐ C. PERMANENT WATER SUPPLY PROVIDED 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ D. SPILLED MATERIAL REMOVED 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ■ E. CONTAMINATED SOIL REMOVED 04 DESCRIPTION See Narrative Section 2	02 DATE 1988-1989	03 AGENCY Private Consultant
01 ☐ F. WASTE REPACKAGED 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ G. WASTE DISPOSED ELSEWHERE 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ H. ON SITE BURIAL 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ I. IN SITU CHEMICAL TREATMENT 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ J. IN SITU BIOLOGICAL TREATMENT 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ K. IN SITU PHYSICAL TREATMENT 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ L. ENCAPSULATION 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ M. EMERGENCY WASTE TREATMENT 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ N. CUTOFF WALLS 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ O. EMERGENCY DIKING SURFACE WATER DIVERSION 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ P. CUTOFF TRENCHES/SUMP 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ Q. SUBSURFACE CUTOFF WALL 04 DESCRIPTION N/A	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	D005454566

II. PAST RESPONSE ACTIVITIES (Continued)

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

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

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

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

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

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

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

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

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

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

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

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

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

E&E - Chicago, Region V

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D005454566

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☒ YES ☐ NO

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

See Narrative Section 2

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

E&E - Chicago, Region V

EPA FORM 2070-13 (7-81)

APPENDIX C

FIT SITE PHOTOGRAPHS

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: U.S. Steel Corporation Joliet Works PAGE 1 OF 16

U.S. EPA ID: ILD005459560 TDD: F05-8905-028 PAN: FTL03325A

DATE: 10/25/89

TIME: 1740

DIRECTION OF PHOTOGRAPH: N

WEATHER CONDITIONS: Sunny; 70's

PHOTOGRAPHED BY: J. Dickson

SAMPLE ID (if applicable):

DESCRIPTION: American Steel & Wire Sign at entrance of site.

DATE: 10/25/89

TIME: 1740

DIRECTION OF PHOTOGRAPH: W

WEATHER CONDITIONS: Sunny, 70's

PHOTOGRAPHED BY: J. Dickson

SAMPLE ID (if applicable):

DESCRIPTION: American Steel & Wire / USX main office building.

SI010(2/25/89)

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: U.S. Steel Corporation Joliet Works PAGE 2 OF 16

U.S. EPA ID: ILD005454566 TDD: F05-8905-029 PAN: FIL0333SA

DATE: 10/25/89

TIME: 1740

DIRECTION OF PHOTOGRAPH: W

WEATHER CONDITIONS: Sunny, 70's

PHOTOGRAPHED BY: J. Dickson

SAMPLE ID (if applicable):

DESCRIPTION: Entrance gate and guard house.

DATE: 10/25/89

TIME: 1620

DIRECTION OF PHOTOGRAPH: NE

WEATHER CONDITIONS: Sunny, 70's

PHOTOGRAPHED BY: J. Dickson

SAMPLE ID (if applicable):

DESCRIPTION: Southeast corner of AS&W property line. The billet process/grinding building is shown.

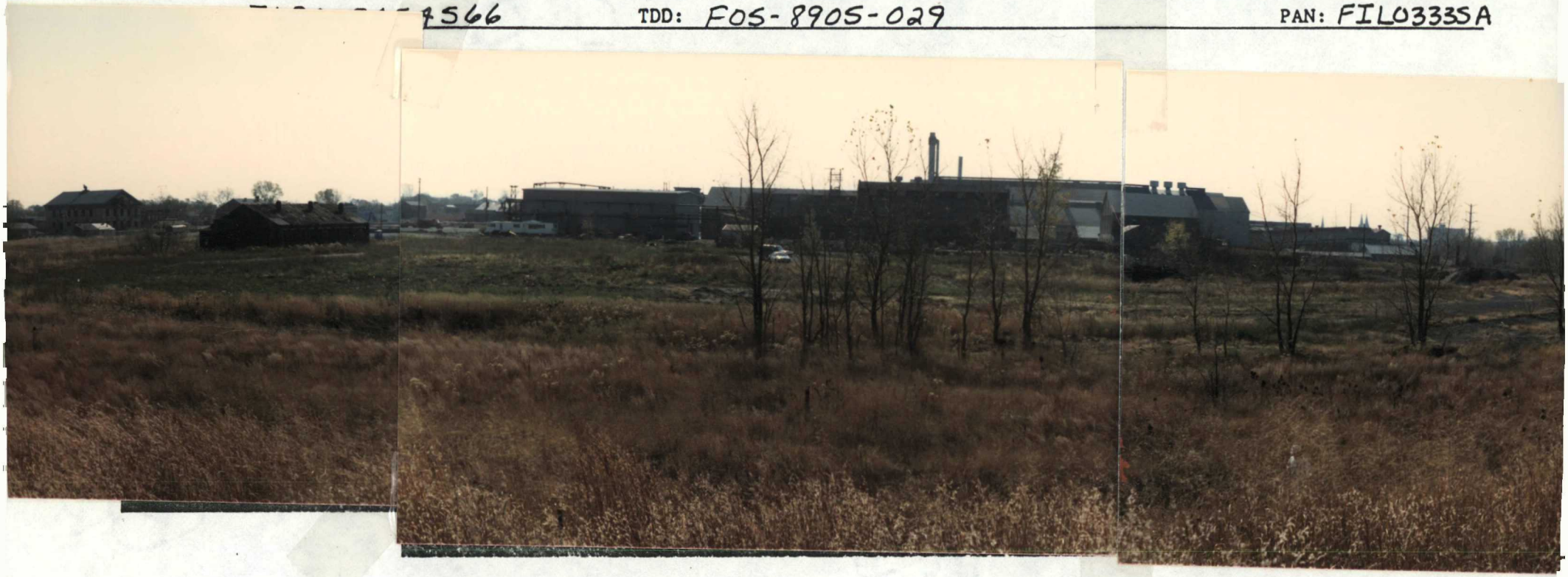
FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: U.S. Steel Corporation Joliet Works

PAGE 3 OF 16

[illegible]566 TDD: F05-8905-029

PAN: FIL0333SA



DATE: 10/25/89 TIME: 1155 DIRECTION OF PHOTOGRAPH: S PHOTOGRAPHED BY: J. Dickson

WEATHER CONDITIONS: Sunny, 70's SAMPLE ID (if applicable):

DESCRIPTION: Northern portion of AS&W operating wire mill. The former drum storing area is located just west of the vehicles.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: U.S. Steel Corporation Joliet Works PAGE 4 OF 16

U.S. EPA ID: ILD005454566 TDD: F05-8905-029 PAN: FIL0333SA

DATE: 10/25/89

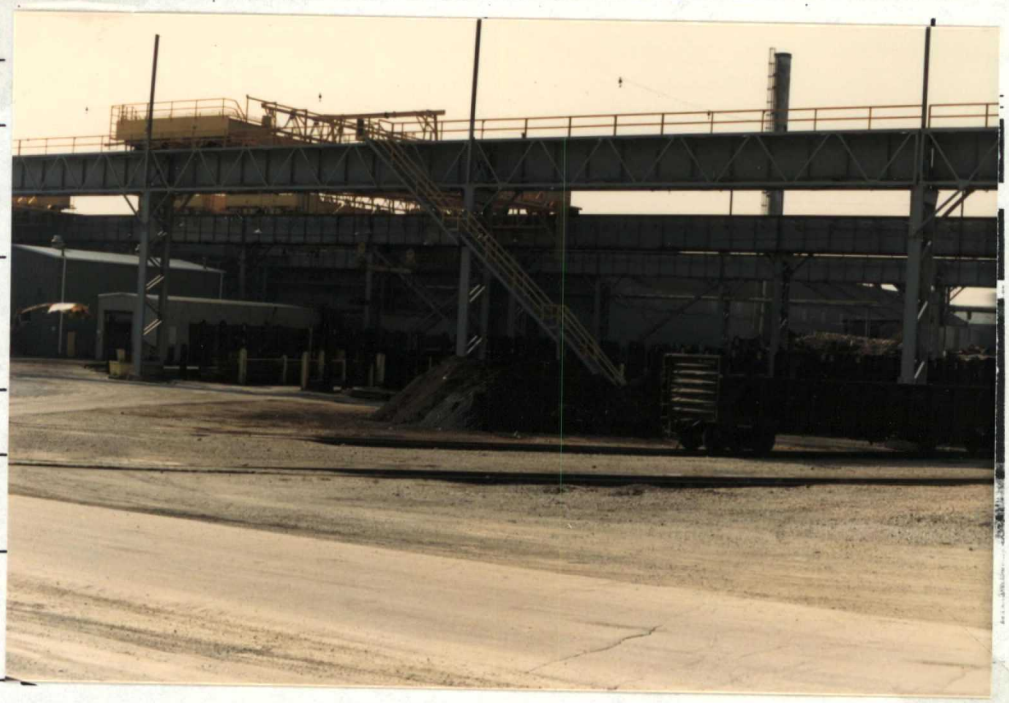
TIME: 1315

DIRECTION OF PHOTOGRAPH: W

WEATHER CONDITIONS: Sunny, 70's

PHOTOGRAPHED BY: J. Dickson

SAMPLE ID (if applicable):



DESCRIPTION: Billet storage area. A pile of swarf is located near the rail car.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: U.S. Steel Corporation Joliet Works PAGE 6 OF 16

U.S. EPA ID: ILD005454566 TDD: F05-8905-029 PAN: FIL0333SA

DATE: 10/25/89

TIME: 1605

DIRECTION OF PHOTOGRAPH: NE

WEATHER CONDITIONS: Sunny, 70's

PHOTOGRAPHED BY: J. Dickson

SAMPLE ID (if applicable):

DESCRIPTION: The cooling tower portion of the WWTP facility.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: U.S. Steel Corporation Joliet Works PAGE 5 OF 16

U.S. EPA ID: ILD005454566 TDD: F05-8905-029 PAN: FIL0333SA

DATE: 10/25/89

TIME: 1315

DIRECTION OF PHOTOGRAPH: S

WEATHER CONDITIONS: Sunny, 70's

PHOTOGRAPHED BY: J. Dickson

SAMPLE ID (if applicable):

DESCRIPTION: Lot #8. The splice bar mill was located here.

DATE: 10/25/89

TIME: 1300

DIRECTION OF PHOTOGRAPH: NW

WEATHER CONDITIONS: Sunny, 70's

PHOTOGRAPHED BY: J. Dickson

SAMPLE ID (if applicable):

DESCRIPTION: The I&M canal along the west border of the site. Photograph was taken from the former landfill.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: U.S. Steel Corporation Joliet Works PAGE 7 OF 16

U.S. EPA ID: ILD005454566 TDD: F05-8905-029 PAN: FIL0333SA

DATE: 10/25/89

TIME: 1545

DIRECTION OF PHOTOGRAPH: N

WEATHER CONDITIONS: Sunny, 70's

PHOTOGRAPHED BY: J. Dickson

SAMPLE ID (if applicable):

DESCRIPTION: WWTP sludge at the treatment building.

DATE: 10/25/89

TIME: 1610

DIRECTION OF PHOTOGRAPH: E

WEATHER CONDITIONS: Sunny, 70's

PHOTOGRAPHED BY: J. Dickson

SAMPLE ID (if applicable):

DESCRIPTION: Sludge pit near the WWTP facility.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: U.S. Steel Corporation Joliet Works PAGE 8 OF 16

U.S. EPA ID: ILD005454566 TDD: F05-8905-029 PAN: FIL0333SA

DATE: 10/25/89

TIME: 1605

DIRECTION OF PHOTOGRAPH: NW

WEATHER CONDITIONS: Sunny, 70's

PHOTOGRAPHED BY: J. Dickson

SAMPLE ID (if applicable):

DESCRIPTION: Pump House located near the WWTP facility.

DATE: 10/25/89

TIME: 1615

DIRECTION OF PHOTOGRAPH: E

WEATHER CONDITIONS: Sunny, 70's

PHOTOGRAPHED BY: J. Dickson

SAMPLE ID (if applicable):

DESCRIPTION: The Substation located on lot #5.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: U.S. Steel Corporation Joliet Works PAGE 9 OF 16

U.S. EPA ID: ILD005454566 TDD: F05-8905-029 PAN: FIL0333SA

DATE: 10/25/89

TIME: 1415

DIRECTION OF PHOTOGRAPH: E

WEATHER CONDITIONS: Sunny, 70's

PHOTOGRAPHED BY: J. Dickson

SAMPLE ID (if applicable): S1

DESCRIPTION: Close up view of soil sample S1. location

DATE: 10/25/89

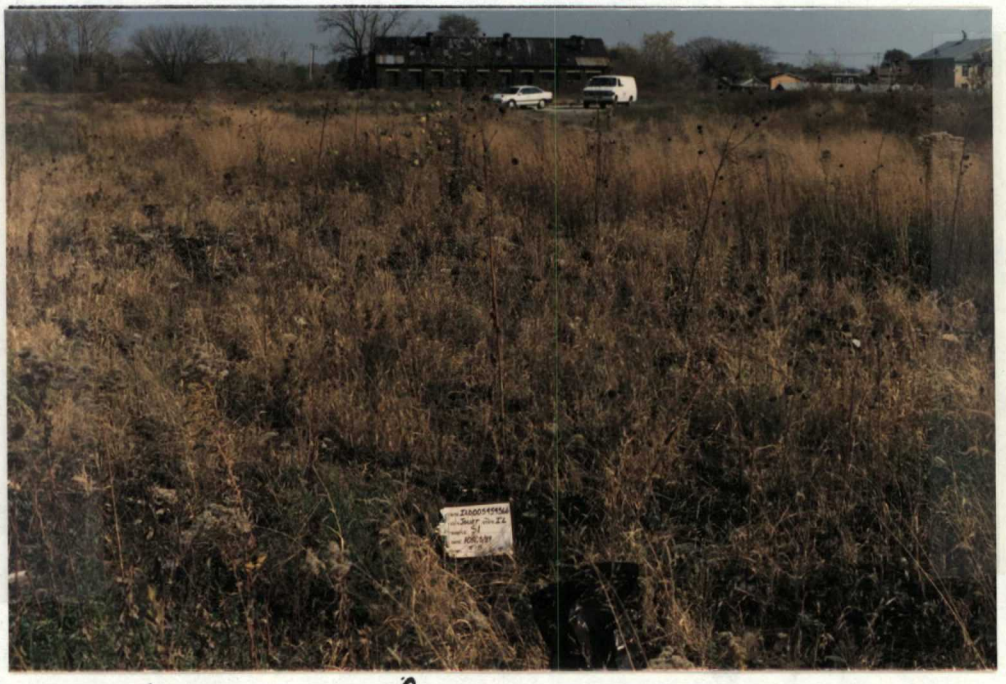
TIME: 1415

DIRECTION OF PHOTOGRAPH: E

WEATHER CONDITIONS: Sunny, 70's

PHOTOGRAPHED BY: J. Dickson

SAMPLE ID (if applicable): S1



DESCRIPTION: Perspective view of soil sample S1 location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: U.S. Steel Corporation Joliet Works PAGE 10 OF 16

U.S. EPA ID: ILD005454566 TDD: F05-8905-029 PAN: FIL0333SA

DATE: 10/25/89

TIME: 1425

DIRECTION OF PHOTOGRAPH: N

WEATHER CONDITIONS: Sunny, 70's

PHOTOGRAPHED BY: J. Dickson

SAMPLE ID (if applicable): S2

DESCRIPTION: Close up view of soil sample S2 location

DATE: 10/25/89

TIME: 1425

DIRECTION OF PHOTOGRAPH: N

WEATHER CONDITIONS: Sunny, 70's

PHOTOGRAPHED BY: J. Dickson

SAMPLE ID (if applicable): S2

DESCRIPTION: Perspective view of soil sample S2 location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: U.S. Steel Corporation Joliet Works PAGE 12 OF 16

U.S. EPA ID: ILD005454566 TDD: F05-8905-029 PAN: FIL03335A

DATE: 10/25/89

TIME: 1500

DIRECTION OF PHOTOGRAPH: N

WEATHER CONDITIONS: Sunny, 70's

PHOTOGRAPHED BY: J. Dickson

SAMPLE ID (if applicable): S4

DESCRIPTION: Close up view of sediment sample S4 location.

DATE: 10/25/89

TIME: 1500

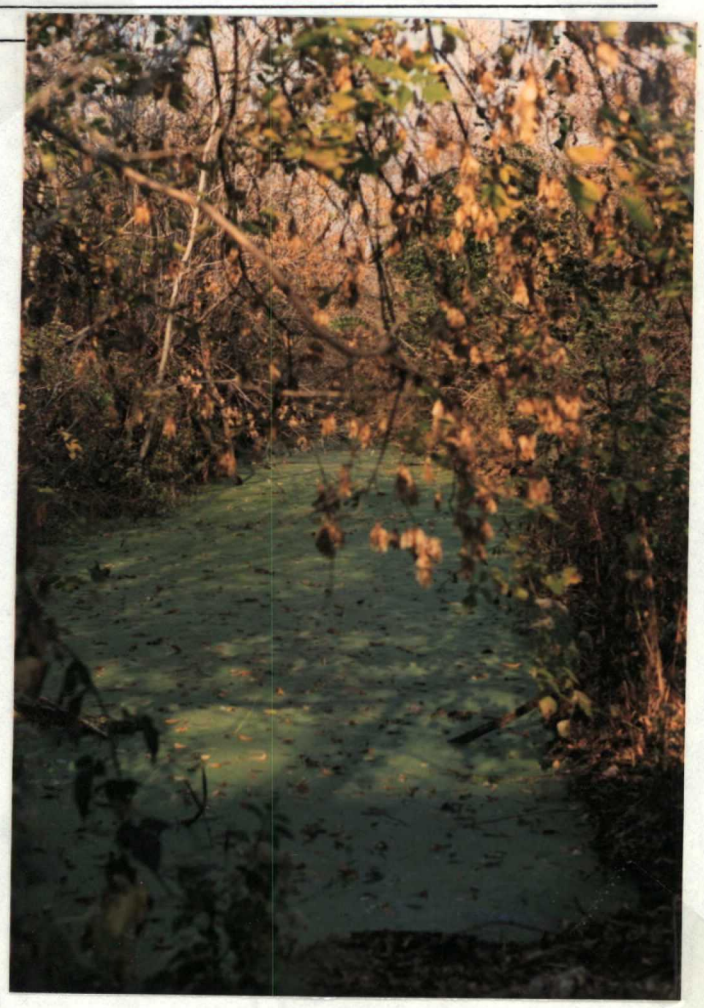
DIRECTION OF PHOTOGRAPH: N

WEATHER CONDITIONS: Sunny, 70's

PHOTOGRAPHED BY: J. Dickson

SAMPLE ID (if applicable): S4

DESCRIPTION: Perspective view of sediment sample S4 location.



FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: U.S. Steel Corporation Joliet Works PAGE 13 OF 16

U.S. EPA ID: ILD005454566 TDD: F05-8905-029 PAN: FIL0333SA

DATE: 10/25/89

TIME: 1530

DIRECTION OF PHOTOGRAPH: NE

WEATHER CONDITIONS: Sunny, 70's

PHOTOGRAPHED BY: J. Dickson

SAMPLE ID (if applicable): S5

DESCRIPTION: Close up view of sediment sample S5 location.

DATE: 10/25/89

TIME: 1530

DIRECTION OF PHOTOGRAPH: NE

WEATHER CONDITIONS: Sunny, 70's

PHOTOGRAPHED BY: J. Dickson

SAMPLE ID (if applicable): S5

DESCRIPTION: Perspective view of sediment sample S5 location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: U.S. Steel Corporation Joliet Works PAGE 14 OF 16

U.S. EPA ID: ILD005454566 TDD: F05-8905-029 PAN: FIL0333SA

DATE: 10/25/89

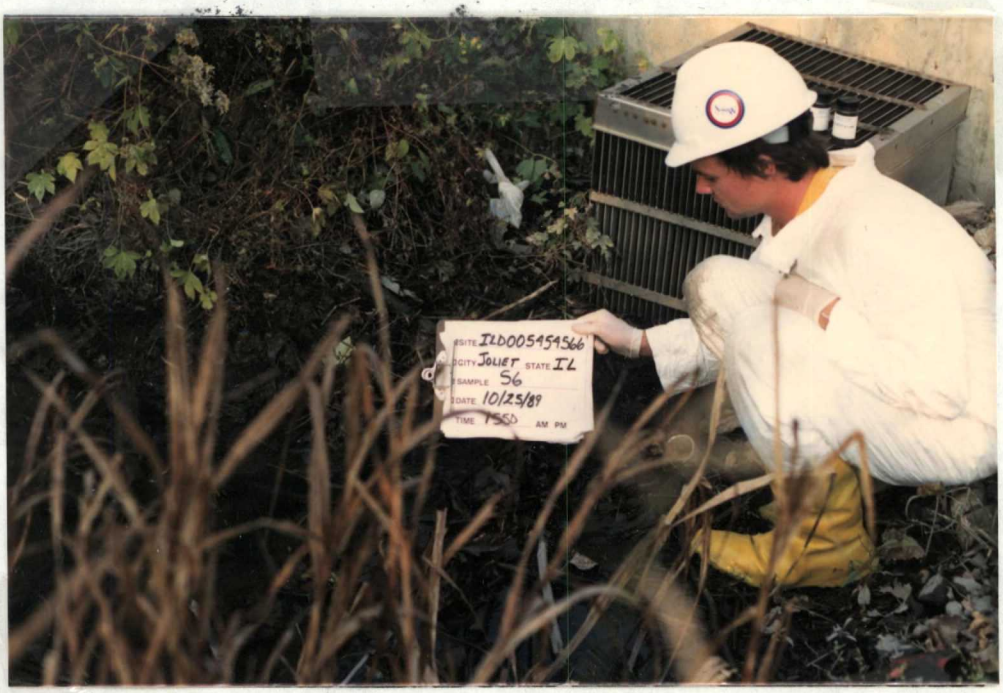
TIME: 1550

DIRECTION OF PHOTOGRAPH: NE

WEATHER CONDITIONS: Sunny, 70's

PHOTOGRAPHED BY: J. Dickson

SAMPLE ID (if applicable): S6



DESCRIPTION: Close up view of sediment sample S6 location.

DATE: 10/25/89

TIME: 1550

DIRECTION OF PHOTOGRAPH: NE

WEATHER CONDITIONS: Sunny, 70's

PHOTOGRAPHED BY: J. Dickson

SAMPLE ID (if applicable): S6

DESCRIPTION: Perspective view of sediment sample S6 location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: U.S. Steel Corporation Joliet Works PAGE 15 OF 16

U.S. EPA ID: ILD005454566 TDD: F05-8905-029 PAN: FIL0333SA

DATE: 10/25/89

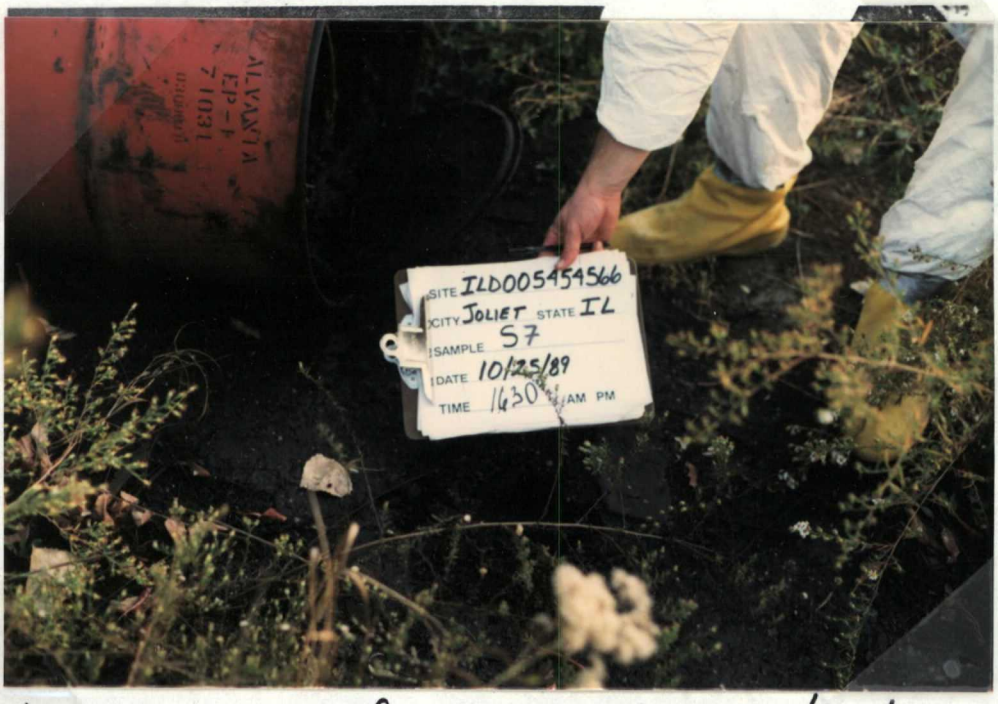
TIME: 1630

DIRECTION OF PHOTOGRAPH: SW

WEATHER CONDITIONS: Sunny, 70's

PHOTOGRAPHED BY: J. Dickson

SAMPLE ID (if applicable): S7



DESCRIPTION: Close up view of soil sample S7 location.

DATE: 10/25/89

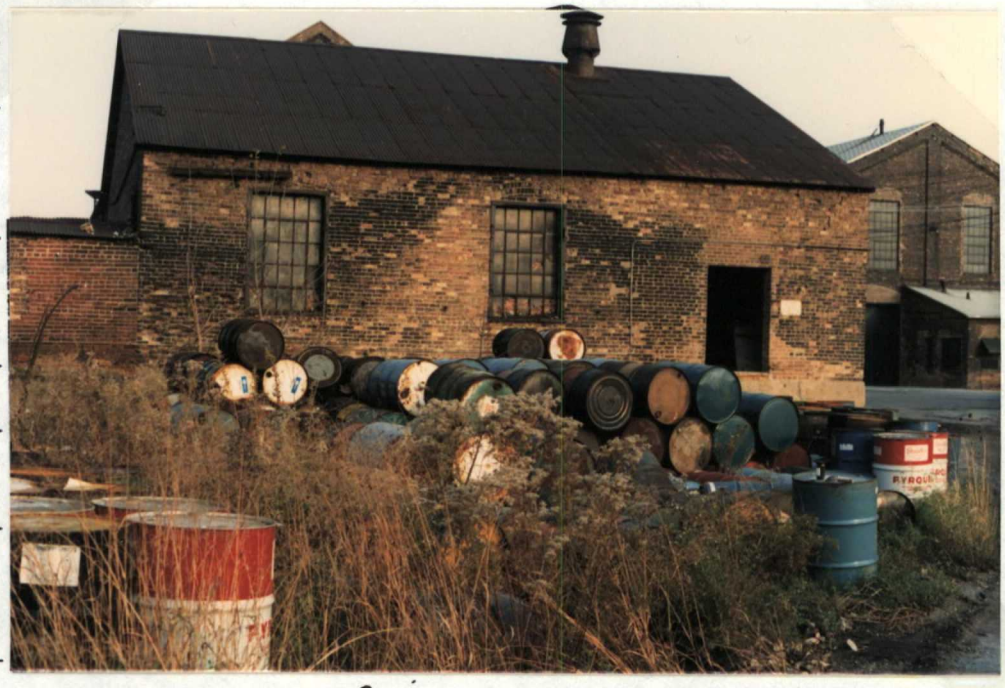
TIME: 1630

DIRECTION OF PHOTOGRAPH: E

WEATHER CONDITIONS: Sunny, 70's

PHOTOGRAPHED BY: J. Dickson

SAMPLE ID (if applicable): S7



DESCRIPTION: Perspective view of soil sample S7 location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: U.S. Steel Corporation Joliet Works PAGE 16 OF 16

U.S. EPA ID: ILD005454566 TDD: F05-8905-029 PAN: FIL0333SA

DATE: 10/25/89

TIME: 1700

DIRECTION OF PHOTOGRAPH: W

WEATHER CONDITIONS: Sunny, 70's

PHOTOGRAPHED BY: J. Dickson

SAMPLE ID (if applicable): S8

DESCRIPTION: Close up view of soil sample S8 location.

DATE: 10/25/89

TIME: 1700

DIRECTION OF PHOTOGRAPH: W

WEATHER CONDITIONS: Sunny, 70's

PHOTOGRAPHED BY: J. Dickson

SAMPLE ID (if applicable): S8

DESCRIPTION: Perspective view of soil sample S8 location.

APPENDIX D

U.S. EPA TARGET COMPOUND LIST AND TARGET ANALYTE LIST QUANTITATION/DETECTION LIMITS

ADDENDUM A

ROUTINE ANALYTICAL SERVICES
CONTRACT REQUIRED DETECTION AND QUANTITATION LIMITS

Contract Laboratory Program
Target Compound List
Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SEDIMENT SLUDGE
Chloromethane	74-87-3	10 ug/L	10 ug/Kg
Bromomethane	74-83-9	10	10
Vinyl chloride	75-01-4	10	10
Chloroethane	75-00-3	10	10
Methylene chloride	75-09-2	5	5
Acetone	67-64-1	10	5
Carbon disulfide	75-15-0	5	5
1,1-dichloroethene	75-35-4	5	5
1,1-dichloroethane	75-34-3	5	5
1,2-dichloroethene (total)	540-59-0	5	5
Chloroform	67-66-3	5	5
1,2-dichloroethane	107-06-2	5	5
2-butanone (MEK)	78-93-3	10	10
1,1,1-trichloroethane	71-55-6	5	5
Carbon tetrachloride	56-23-5	5	5
Vinyl acetate	108-05-4	10	10
Bromodichloromethane	75-27-4	5	5
1,2-dichloropropane	78-87-5	5	5
cis-1,3-dichloropropene	10061-01-5	5	5
Trichloroethene	79-01-6	5	5
Dibromochloromethane	124-48-1	5	5
1,1,2-trichloroethane	79-00-5	5	5
Benzene	71-43-2	5	5
Trans-1,3-dichloropropene	10061-02-6	5	5
Bromoform	75-25-2	5	5
4-Methyl-2-pentanone	108-10-1	10	10
2-Hexanone	591-78-6	10	10
Tetrachloroethene	127-18-4	5	5
Tolene	108-88-3	5	5
1,1,2,2-tetrachloroethane	79-34-5	5	5
Chlorobenzene	108-90-7	5	5
Ethyl benzene	100-41-4	5	5
Styrene	100-42-5	5	5
Xylenes (total)	1330-20-7	5	5

Table A
Contract Laboratory Program
Target Compound List
Semivolatiles Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SEDIMENT SLUDGE
Phenol	108-95-2	10 ug/L	330 ug/Kg
bis(2-Chloroethyl) ether	111-44-4	10	330
2-Chlorophenol	95-57-8	10	330
1,3-Dichlorobenzene	541-73-1	10	330
1,4-Dichlorobenzene	106-46-7	10	330
Benzyl Alcohol	100-51-6	10	330
1,2-Dichlorobenzene	95-50-1	10	330
2-Methylphenol	95-48-7	10	330
bis(2-Chloroisopropyl) ether	108-60-1	10	330
4-Methylphenol	106-44-5	10	330
N-Nitroso-di-n-dipropylamine	621-64-7	10	330
Hexachloroethane	67-72-1	10	330
Nitrobenzene	98-95-3	10	330
Isophorone	78-59-1	10	330
2-Nitrophenol	88-75-5	10	330
2,4-Dimethylphenol	105-67-9	10	330
Benzoic Acid	65-85-0	50	1600
bis(2-Chloroethoxy) methane	111-91-1	10	330
2,4-Dichlorophenol	120-83-2	10	330
1,2,4-Trichlorobenzene	120-82-1	10	330
Naphthalene	91-20-3	10	330
4-Chloroaniline	106-47-8	10	330
Hexachlorobutadiene	87-68-3	10	300
4-Chloro-3-methylphenol	59-50-7	10	330
2-Methylnaphthalene	91-57-6	10	330
Hexachlorocyclopentadiene	77-47-4	10	330
2,4,6-Trichlorophenol	88-06-2	10	330
2,4,5-Trichlorophenol	95-95-4	50	1600
2-Chloronaphthalene	91-58-7	10	330
2-Nitroaniline	88-74-4	50	1600
Dimethylphthalate	131-11-3	10	330
Acenaphthylene	208-96-8	10	330
2,6-Dinitrotoluene	606-20-2	10	330
3-Nitroaniline	99-09-2	50	1600
Acenaphthene	83-32-9	10	330
2,4-Dinitrophenol	51-28-5	50	1600
4-Nitrophenol	100-02-7	50	1600
Dibenzofuran	132-64-9	10	330
2,4-Dinitrotoluene	121-14-2	10	330
Diethylphthalate	84-66-2	10	330
4-Chlorophenyl-phenyl ether	7005-72-3	10	330

Table A
Contract Laboratory Program
Target Compound List
Semivolatiles Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SLUDGE SEDIMENT
Fluorene	86-73-7	10 ug/L	330 ug/Kg
4-Nitroaniline	100-01-6	50	1600
4,6-Dinitro-2-methylphenol	534-52-1	50	1600
N-nitrosodiphenylamine	86-30-6	10	330
4-Bromophenyl-phenylether	101-55-3	10	330
Hexachlorobenzene	118-74-1	10	330
Pentachlorophenol	87-86-5	50	1600
Phenanthrene	85-01-8	10	330
Anthracene	120-12-7	10	330
Di-n-butylphthalate	84-74-2	10	330
Fluoranthene	206-44-0	10	330
Pyrene	129-00-0	10	330
Butylbenzylphthalate	85-68-7	10	330
3,3'-Dichlorobenzidine	91-94-1	20	660
Benzo(a)anthracene	56-55-3	10	330
Chrysene	218-01-9	10	330
bis(2-Ethylhexyl)phthalate	117-81-7	10	330
Di-n-octylphthalate	117-84-0	10	330
Benzo(b)fluoranthene	205-99-2	10	330
Benzo(k)fluoranthene	207-08-9	10	330
Benzo(a)pyrene	50-32-8	10	330
Indeno(1,2,3-cd)pyrene	193-39-5	10	330
Dibenz(a,h)anthracene	53-70-3	10	330
Benzo(g,h,i)perylene	191-24-2	10	330

Table A
Contract Laboratory Program
Target Compound List
Pesticide and PCB Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SEDIMENT SLUDGE
alpha-BHC	319-84-6	0.05 ug/L	8 ug/Kg
beta-BHC	319-85-7	0.05	8
delta-BHC	319-86-8	0.05	8
gamma-BHC (Lindane)	58-89-9	0.05	8
Heptachlor	76-44-8	0.05	8
Aldrin	309-00-2	0.05	8
Heptachlor epoxide	1024-57-3	0.05	8
Endosulfan I	959-98-8	0.05	8
Dieldrin	60-57-1	0.10	16
4,4'-DDE	72-55-9	0.10	16
Endrin	72-20-8	0.10	16
Endosulfan II	33213-65-9	0.10	16
4,4'-DDD	72-54-8	0.10	16
Endosulfan sulfate	1031-07-8	0.10	16
4,4'-DDT	50-29-3	0.10	16
Methoxychlor (Mariate)	72-43-5	0.5	80
Endrin ketone	53494-70-5	0.10	16
alpha-Chlordane	5103-71-9	0.5	80
gamma-chlordane	5103-74-2	0.5	80
Toxaphene	8001-35-2	1.0	160
AROCLOR-1016	12674-11-2	0.5	80
AROCLOR-1221	11104-28-2	0.5	80
AROCLOR-1232	11141-16-5	0.5	80
AROCLOR-1242	53469-21-9	0.5	80
AROCLOR-1248	12672-29-6	0.5	80
AROCLOR-1254	11097-69-1	1.0	160
AROCLOR-1260	11096-82-5	1.0	160

Table A (Cont.)

CONTRACT LABORATORY PROGRAM

TARGET ANALYTE LIST (TAL)

INORGANIC DETECTION LIMITS

Compound	Procedure	Detection Limits Water (µg/L)	Detection Limits Soil Sediment Sludge (mg/kg)
aluminum	ICP	200	40
antimony	furnace	60	2.4
arsenic	furnace	10	2
barium	ICP	200	40
beryllium	ICP	5	1
cadmium	ICP	5	1
calcium	ICP	5,000	1,000
chromium	ICP	10	2
cobalt	ICP	50	10
copper	ICP	25	5
iron	ICP	100	20
lead	furnace	5	1
magnesium	ICP	5,000	1,000
manganese	ICP	15	3
mercury	cold vapor	0.2	0.008
nickel	ICP	40	8
potassium	ICP	5,000	1,000
selenium	furnace	5	1
silver	ICP	10	2
sodium	ICP	5,000	1,000
thallium	furnace	10	2
tin	ICP	40	8
vanadium	ICP	50	10
zinc	ICP	20	4
cyanide	color	10	2

3767:1

APPENDIX E

WELL LOGS OF THE AREA OF THE SITE

TRU S T LE

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

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, ROOM 6 STATE OFFICE BUILDING, SPRINGFIELD, ILLINOIS, 62706. DO NOT DETACH GEOLOGICAL / WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

WELL LOG # 1

1/67

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug____. Bored____. Hole Diam. 5 in. Depth 40 ft.
   Curb material _____. Buried Slab: Yes____ No____
   b. Driven____. Drive Pipe Diam. 5 in. Depth 40 ft.
   c. Drilled ✓. Finished in Drift____. In Rock ✓.
   Tubular____. Gravel Packed____.
   d. Grout:

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

2. Distance to Nearest:
   Building 15 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 July 5, 1967
5. Permanent Pump Installed? Yes X No____
   Manufacturer Yeomans Type Submersible
   Capacity 700 gpm. Depth of setting 40 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:

GEOLOGICAL WATER SURVEYS WATER WELL RECORD

10. Dept. Mines and Minerals permit No. 2791 Year 19
11. [redacted]
    Driller Charles Ryker License No.
12. Water from [redacted] Formation
    at depth____ to____ft.
13. County
    Sec. 3
    Twp. 35N
    Rng. 10E
    Elev.____
14. Screen: Diam.____in.
    Length:____ft. Slot____
15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5"	Youngstown 15lb	0	40

SHOW LOCATION SECTION
Permit: SW SW

16. Size Hole below casing: 5 in.
17. Static level 25 ft. below casing top which is +8" above ground level. Pumping level 25 ft. when pumping at 7 gpm (3) for 1 hours.

18.

FORMATIONS PASSED THROUGH	THICKNESS	DEPTH BOTT
Top Soil	0	1
Slate	1½	
White Limestone	4	2
Brown Limestone	25	5
White Limestone	55	15
(CONTINUE ON SEPARATE SHEET IF NECESSARY)		

SIGNED Charles Ryker DATE 8-4-

WELL LOG # 2

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 175 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	41	40

2. Distance to Nearest:
   Building 90 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 9/6/74
5. Permanent Pump Installed? Yes X No____
   Manufacturer Berns Type Submersible
   Capacity 10 gpm. Depth of setting 100 ft.
6. ~~Well~~ Top Sealed? Yes X No____ Williams Vermin Proof
7. Pitless Adaptor Installed? Yes X No____ Williams attached to casing
8. Well Disinfected? Yes X No____ by compression gas fitting connection
9. Water Sample Submitted? Yes____ No X

REMARKS:

IDPH 4.065
10-72
KNB-1

GEOLOGICAL AND WATER SURVEYS WELL RECORD

non responsive

10. [redacted]
    Driller Charles Hyde License No. [illegible]
11. Permit No. 32937 Date 9/11/74
12. Water from Limestone Formation 13. County Will
    at depth 40 to 175 ft.
14. Screen: Diam. ____ in.
    Length: ____ ft. Slot ____
    Sec. 9.52 Twp. 35N Rge. 10E Elev. ____

	X	

SHOW LOCATION IN SECTION PLAT
NENESW

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5"	A53 15/lbs.	0'	40'

16. Size Hole below casing: 5 in.
17. Static level 25 ft. below casing top which is +1 ft. above ground level. Pumping level 25 ft. when pumping at 10 gpm for 1 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Top Soil	5'	5'
Limestone	170'	175

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Charles Hyde DATE 10/16/74
Lockport Well & Pump

WELL LOG # 3

Town Joliet Township Joliet Map No. 8
Company Sewell Well Co. No. R. 10E
Farm Joliet Citizens Brewing Co. T. 35 N Sec. 10
Authority Sample Study-E. Atherton
Elevation
Collector
Confidential Date Drilled Aug. 1938
900' S. line, 2700' W. line

10,462

No.	Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	155' E. of cen. line Collins St., 200' N. of cen. line of Van Buren St.				
	PLEISTOCENE SYSTEM				
	"Boulders and mud, yellow"	15		15	
	"Gravel, all colors"	8		23	
	SILURIAN SYSTEM				
	Dolomite, slightly silty, light gray, pinkish and greenish, very fine, slightly vesicular, pyritic	77		100	
	Dolomite, slightly glauconitic, cherty, light gray, very fine	25		125	
	Dolomite, cherty, argillaceous, gray, very fine, darker and less cherty toward base	60		185	
	Dolomite, light gray, very fine to fine, vesicular; at top little dolomite, very argillaceous, dark gray	35		220	
	ORDOVICIAN SYSTEM				
	Maquoketa formation				
	Shale, very dark brownish gray, weak to firm; little dolomite, very argillaceous, very dark brownish gray, very fine	75		295	
	Galena formation				
	Dolomite, calcareous, light gray to brown, brownish gray, very fine to fine, vesicular	145		440	
	Dolomite, very slightly cherty, brownish gray, dark gray and reddish coatings, very fine to fine,				

COUNTY Will INDEX NO.
DRILL RECORD Sample Set #2815 0810

(A32187—20M) ILLINOIS GEOLOGICAL SURVEY, URBANA (10-40)

(6)

Town Joliet Township Joliet R. 10E
Company L. Wilson Co. No.
Farm Joliet City-Ottawa St. No. T. 35 N Sec. 9.1d
Authority
Elevation
Collector
Confidential Date Drilled 1907
375' from N. line, 465' from E. line of SE

No.	Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	From sample study log by State Geological Survey.				
	SILURIAN SYSTEM				
	Niagaran and Alexandrian dolomite, water-bearing	218		218	
	ORDOVICIAN SYSTEM				
	Maquoketa shale	140		358	
	Galena-Platteville dolomite	360		718	
	St. Peter formation				
	Sandstone, water-bearing	410		1128	
	Shale and marl	59		1187	
	CAMBRIAN SYSTEM				
	Trempealeau dolomite, Franconia dolomite and sandstone, and Galesville sandstone	409		1596	
	Eau Claire shale	25		1621	

9.1d

COUNTY Will 9-35N-10E

(40430—20M) ILLINOIS GEOLOGICAL SURVEY, URBANA (3-43) 2

WELL LOG # 4

Town Joliet Township Joliet Map No. 8
Company Ohio Drilling Co. No. R. 10E
Farm Joliet City-Canal & Div. Sts. T. 35 N Sec. 9
Authority
Elevation 532
Collector
Confidential Date Drilled
2640' N. line, 1025' E. line

No.	Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	From sample study log by State Geological Survey				
	PLEISTOCENE SYSTEM				
	Glacial drift	3		3	
	SILURIAN SYSTEM				
	Niagaran & Alexandrian dolomite, water-bearing	212		215	
	ORDOVICIAN SYSTEM				
	Maquoketa formation				
	Dolomite	10		225	
	Shale, some dolomite	70		295	
	Galena-Platteville dolomite	325		620	
	St. Peter sandstone, water-bearing	200		820	
	Shakopee-Oneota dolomites	225		1045	
	CAMBRIAN SYSTEM				
	Jordan sandy dolomite	30		1075	
	Trempealeau dolomite	165		1240	
	Franconia sandstone and dolomite	90		1330	
	Galesville sandstone, water-bearing	185		1515	
	Eau Claire sandstone and dolomite	55		1570	

COUNTY Will INDEX NO. 0809
DRILL RECORD 9-35N-10E
(A33187—30M) ILLINOIS GEOLOGICAL SURVEY, URBANA (10-40) 3

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.

WELL LOG # 5

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. ____ in. Depth ____ ft.
   c. Drilled ____. Finished in Drift ____. In Rock ____.
   Tubular ____. Gravel Packed ____.
   d. Grout:

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

2. Distance to Nearest:
   Building ____ 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 8-21-76
5. Permanent Pump Installed? Yes X Date 8-22-76 No ____
   Manufacturer Barnes Type Subm Location well
   Capacity 10 gpm. Depth of Setting 54 Ft.
6. Well Top Sealed? Yes X No ____ Type ____
7. Pitless Adapter Installed? Yes X No ____
   Manufacturer Williams Model Number ____
   How attached to casing? Welded
8. Well Disinfected? Yes X No ____
9. Pump and Equipment Disinfected? Yes X No ____
10. Pressure Tank Size 42 gal. Type gal
    Location basement
11. Water Sample Submitted? Yes ____ No X

REMARKS:
Owner instructed to do so.

IDPH 4.065
1/74 – KNB-1

GEOLOGICAL AND WATER SURVEYS WELL RECORD

non responsive
[redacted]

Driller Rock Well Drilling License No. 102-29
11. Permit No. 51041 Date 8-17-76
12. Water from Rock Formation at depth 25 to 100 ft.
13. County Will
    Sec. 4
    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	Comp Sch 40	0	40

SHOW LOCATION IN SECTION PLAT
NESWN
to roc

16. Size Hole below casing: 25 in.
17. Static level ____ ft. below casing top which is 1 ft. above ground level. Pumping level 54 ft. when pumping at 10 gpm for 4 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Overburden	0	40
Rock formation	40	100

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Paul Kneiss DATE 8-23-76