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Diamond Scrap Yard
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SF/BRS

CERCLA
Integrated Site Assessment

Illinois Environmental Protection Agency

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CERCLA INTEGRATED SITE ASSESSMENT INSPECTION REPORT

FOR

DIAMOND SCRAP YARD

ILO 001093509

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1. INTRODUCTION

On September 30, 1994 the Illinois Environmental Protection Agency's CERCLA Site Assessment Program was tasked by the U.S. Environmental Protection Agency (USEPA) to conduct an Integrated Assessment of Diamond Scrap Yard. The site was located in an urban area on the east side of Waukegan Illinois, near the shoreline of Lake Michigan.

The site was initially placed on the Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) on June 24, 1994. The Illinois Environmental Protection Agency (IEPA) recommended this action because the owner of the property investigated the possibility of entering the site into the Voluntary Cleanup program but failed to sign a service agreement. Since no remedial action had occurred, CERCLA authority was initiated. The initial CERCLA investigation occurred at this site in October 1994 when the IEPA conducted an Integrated Assessment of the facility. The CERCLA Integrated Assessment (IA) workplan was submitted to Region V offices of U.S. EPA and it was determined the site would be sampled. Field activities for this site were conducted on October 25 and 26, 1994. The field activities portion of this IA included interviews with residents familiar with the site, one site reconnaissance inspection and the collection of 27 environmental samples. Telephone interviews with the current owner of the property were also conducted.

The purpose of the Integrated Assessment has been developed from USEPA directive and guidance information which outlines Site

Assessment program strategies. The information states:

> The Integrated Assessment will be conducted to: 1) Collect data which would satisfy both site assessment and remedial program activities. This would incorporate hazardous waste, surface water, air, and groundwater concerns. 2). The objectives of the assessment are to determine whether time or non time critical removals are warranted and to determine whether the site is National Priorities List (NPL) caliber. If the determination is made that the site is NPL caliber, additional data will likely be needed to complete the assessment. A sampling plan to accommodate removal and site assessment needs, as well as initial remedial needs should be developed. 3) Determination of site sampling needs will be accomplished with an understanding to assure adequate data for the removal assessment and the preparation of the Hazard Ranking System (HRS) score as well as the need for possible initial sampling for the remedial investigation. Based on the preliminary HRS score and removal program information, the site will then either be designated as No Further Action (NFA), or carried forward as an NPL listing candidate. Sites that are designated NFA or deferred to other statues are not candidates for an Integrated Assessment. 4) Upon completion of the data gathering, there will be a determination of whether the site should be forwarded within the Superfund process, either through the remedial or removal programs.
>
> The initial assessment of a site as it enters the Superfund program within Region V will be conducted by either a Regional On-Scene Coordinator (OSC) and a Site Assessment Manager (SAM) or by State personnel. An OSC and a SAM will be assigned for all new sites entering the Regional Superfund program. If an emergency is found to occur, USEPA or state emergency removal staff will be immediately contacted for action. If the site needs further Superfund activities, a Site Assessment Team (SAT), comprised of the State, the SAM, the Regional Project Manager (RPM), and an OSC will be formed. As necessary, additional data can be generated for the SAT to make a recommendation to the Regional Decision Team (RDT) for further possible action.
>
> The Integrated Assessment will address all the data requirements of the revised HRS using field screening and NPL level Data Quality Objectives (DQO's) prior to data collection. It will also provide needed data in a format to support remedial investigation workplan development. Only sites that appear to score high enough for NPL listing and that have not been deferred to another authority will receive an Integrated Assessment.

U.S. EPA have requested the IEPA to identify sites during the

Integrated Assessment that may require a CERCLA removal action to remediate an immediate human and \or environmental threat. Before the initiation of field activities a Removal Integrated Site Evaluation (RISE) form pertaining to site specific operations and waste characteristics was completed and forwarded to Region V offices.

During the field investigation portion of the Integrated Assessment a number of environmental samples were collected from the facility, and at points of potential pollutant migration. An analysis of these samples showed that established CERCLA Removal Action Levels (RALs) were exceeded in samples collected during the Integrated Assessment sampling event. However, a Region 5 On-Scene Coordinator (OSC) was not assigned to the Diamond Scrap Yard site.

During the Integrated Assessment a number of other Removal Action Criteria were also evaluated. These criteria included the presence of: contaminated drinking water supplies, hazardous substances stored in containers that may pose a threat of release, high level contamination at or near the surface in soils that may migrate, and a threat of fire or explosion.

Based on the information gathered over the course of the formal Integrated Assessment, the author has concluded that Diamond Scrap Yard does not pose enough of a threat to human health and\or the environment to warrant a time or non-time critical CERCLA removal action.

It should be stressed that the CERCLA removal status can be re-evaluated at such time that additional information suggests that

the site may be posing a threat to human health or the environment.

2. SITE BACKGROUND

2.1 INTRODUCTION

Information in this section includes documentation collected over the course of the formal CERCLA Integrated Assessment and previous Illinois Environmental Protection Agency activities involving this site. Specific activities included an internal file search and a series of site representative interviews.

2.2 SITE DESCRIPTION

The Diamond Scrap Yard property was approximately 12 acres in size and was located in the east-central portion of Waukegan Township, in Lake County, Illinois, in Sections 21 and 28 of Township 45 North, Range 12 East of the Third Principal Meridian. The center of the property was approximately 42 degrees 1 minute 41 seconds north latitude and 87 degrees 42 minutes 23 seconds west longitude. Several parcels of land which were arranged into a long narrow strip of land constitute the property under investigation. This property can be found between Market Street and the Elgin, Joliet and Evanston (EJ& E) Railroad. (Figure 2)

Diamond Scrap Yard was located on the east side of Market Street, with EJ& E Railroad to the east, East Water Street to the north, and South Street to the south. One discontinuous parcel was located near the corner of Market and East Water Streets. The entire facility was estimated at approximately 3000 feet along the

north-south axis and less than 250 feet wide along the east-west axis. Topography of the property was generally flat with no visual route of surface water drainage except the area in the immediate vicinity of the Waukegan River. Moisture deposited on the property via rainfall appeared to enter subsurface soils rather than leave the facility through overland flow.

Diamond Scrap Yard was located in an area which consisted of industrial, commercial, and residential properties. Neighboring properties are mainly manufacturing facilities, undeveloped land, vacant buildings, railroad properties, and residences. The Waukegan Warehouse was previously located near the southern portion of the Diamond Scrap property. Approximately one quarter mile south of the facility lies a USX Steel plant. The Great Lakes Naval Training Center was located south of the USX Steel plant. Residences are located toward the southwest end of the facility, west of Market Street. A recently constructed highway (Sheridan Road) was located west of Market Street. The Metra rail line lies beyond the residences and east of Sheridan Road.

As recent as 1992, eight buildings were located on the site. During a previous investigation by WESTON, some of the vacant buildings in the southern portion of the site were used by local and\or transient populations for shelter and wire burning operations. However, the only building present during the 1994 site reconnaissance was the Nelson Machine Shop, located in the northern most portion of the site in Block 28. This building was a single story, with a metal frame and metal sides on a

concrete slab that consisted of approximately 6,500 square feet. Previously, this structure contained a machine shop. Currently the building is being used as a boat repair facility.

Large amounts of surficial debris were observed on the portion of the property south of where the scrap yard was located. Materials encountered include broken glass, large piles of scrap metal, crushed drums, a large old wooden boat and numerous miscellaneous items. Along Market Street there were appliances and trash which may be a result of midnight dumping. A sign, "Warning No Dumping Violators will be prosecuted", was posted on the property. Remaining portions of a chain link fence were still intact around the perimeter of the property although large sections were missing and holes were cut in the existing portions.

The southern portion of the property was more heavily vegetated with ground vegetation and large deciduous trees. Areas north of the large deciduous trees had sparse ground vegetation with exposed soil.

2.3 SITE HISTORY

Historically, Diamond Scrap Yard operations were initiated sometime in the 1930's. The entire property had been owned and operated by the Diamond Scrap Yard (Diamond) as a scrap metal reclamation facility. The center most portion of the property is believed to be the location of the oldest part of the Diamond operations, with parcels to the north and south being purchased later. Portions of the site were owned by several other entities

prior to the scrap yard operations. The former uses of these parcels reportedly included other scrap yard operations (automobile and drum scrapping, wire\transformer burning), bulk petroleum and coal storage, iron and steel production. A brief description of the prior owners and operators of the various blocks of the site is provided below. Historical information is based primarily from interviews conducted by WESTON INC. with Mr. Burton Diamond.

Figure 3 illustrates the following Block's.

Block 28

This block was previously owned by Nelson Machine Shop. Diamond purchased the parcel in 1971.

Block 29

This block was formerly Kimmel Iron and Metal, which was in operation since 1922. Sometime in the late 1920's, Kimmel reportedly built a dike on the Waukegan River which flowed through his property. The area to the west of the dike was backfilled at this time. The Waukegan River currently flows through a culvert under this parcel's northern section. Diamond purchased this property in 1959. A portion of the southwest corner of this block is not owned by Diamond.

Block 1

This block was formerly owned by City Auto Parts, an auto salvage junkyard operation. This section was purchased by Diamond in 1979.

Block 42

The southern section of this block was formerly the Hadelman

Junkyard. Also, an unnamed coal company reportedly operated in this area during this time. Mr. Diamond's grandfather purchased this property in the 1940's.

Block 9

The northern section of this block was owned by Sinclair Oil and operated as an aboveground bulk storage tank farm. The purchase date by Diamond is unknown.

Block 10-A

The northwest section of this block is currently owned by Slater's BBQ restaurant, and was never part of the Diamond Facility. The middle section of this block formerly housed the Globe Department Store, which later became the Durkin Warehouse. The nature of this operation and the date of purchase by Diamond is unknown.

Blocks 2 and 19

No former owner\operators of significance were reported during historical investigations or conversations with Mr. Diamond, regarding either block.

2.4 APPLICABILITY OF OTHER STATUES

Diamond Scrap Yard property was owned by the Bank of Waukegan at the time this CERCLA investigation was conducted. Due to the nature of the recycling operation, it was not subject to RCRA corrective action activities. The site was also not subject to regulation under jurisdiction of: Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), Atomic Energy Act (AEA), Uranium Mill

Tailing Radiation Control Act (UMTRCA).

3. SITE INSPECTION ACTIVITIES AND ANALYTICAL RESULTS

3.1 INTRODUCTION

Information within this section outlines procedures utilized and observations made during the CERCLA Integrated Assessment Inspection conducted at the Diamond Scrap Yard site. Individual subsections address the site representative interview, reconnaissance inspection field sampling procedures, analytical results and key sample summary. The Integrated Assessment Inspection for Diamond Scrap Yard was conducted in accordance with the U.S. EPA approved site inspection work plan, which was developed and submitted to the USEPA Region V Offices prior to the initiation of field activities.

The U.S Environmental Protection Agency Potential Hazardous Waste Site Inspection Report (Form 2070-13) for Diamond Scrap Yard is provided in Appendix B of this report.

3.2 SITE REPRESENTATIVE INTERVIEW

Prior to the CERCLA sampling event a number of telephone interviews were conducted between Mr. Brad S. Taylor with the IEPA, and Mr. Fred Abdula with the Bank of Waukegan. The interviews were conducted to gather information on past and present activities at the site. An explanation of the CERCLA Site Assessment process and sampling plans occurred at that time. Mr. Abdula was given the option of receiving split samples, collected during the CERCLA

Integrated Assessment Inspection sampling event. Specific sampling dates, and site access requirements were discussed. Mr. David Miller with RUST ENVIRONMENTAL & INFRASTRUCTURE contacted Mr. Brad Taylor on October 11, 1994 to make arrangements in order to receive split samples. RUST ENVIRONMENTAL is a private consulting firm representing a potential development company, with the cooperation of the Bank of Waukegan, interested in developing the Diamond Scrap Yard property.

The previous owner of the property, Mr. Bert Diamond, was supposedly bankrupt at the time of this CERCLA investigation. Mr. Diamond was not available, nor did IEPA personnel attempt to inform him that an environmental assessment was intended for the Scrap Yard property.

3.3 RECONNAISSANCE INSPECTION

A reconnaissance inspection was conducted on October 4-5, 1994 by Mr. Brad Taylor, with the IEPA. This site visit consisted of a visual inspection to locate potential areas of concern and establish a sampling plan. Health and safety concerns were noted during the reconnaissance in order to insure that the field sampling team was properly equipped to perform sample collection activities. Site boundaries were identified using available maps and aerial photography. The area around the property under investigation was also observed and consisted of industrial, commercial, and residential properties.

During this site visit, an employee of the Larsen Marine

Company was available on Block 28. A conversation occurred with this employee concerning the use of this parcel during the period of time when Diamond Scrap was in operation. The employee commented that he thought this parcel of property was used for equipment storage during the operation of Diamond Scrap. There were also some underground storage tanks which were assumed to have been used for gasoline and diesel fuel along the north side of the Larsen Marine building. These tanks have not been used since 1988 when Diamond Scrap went bankrupt, according to the Larsen Marine employee.

A local resident was questioned on previous operations of the Diamond facility. According to this source Diamond Scrap property had been extensively used for smelting of scrap metal on Block 10-A. The concrete foundation of the aluminum smelter was the only portion remaining at the time of the site visit.

Monitoring wells installed by EJ & E Railroad were found along the fence which separated the Diamond property from the railroad. Four IEPA installed monitoring wells, located in two clusters, were noted along the east side of EJ & E Railroad property (Figure 3).

3.4 SOIL/SEDIMENT AND GROUNDWATER SAMPLING

The sampling team arrived at the site on October 25, 1994 at 11:00 A.M. and met Mr. John Geiyer and Mr. David Miller, with RUST ENVIRONMENTAL & INFRASTRUCTURE. Mr. Geiyer, consultant representing the potential buyer for the Diamond property, accompanied IEPA personnel during the field sampling event and received split samples. The IEPA sampling team consisted of Brad Taylor, Pete

Sorensen, Ken Corkill and Robert Casper.

Sampling plans involved the collection of 24 soil and sediment samples and three monitoring well samples. Soil samples were collected by use of a stainless steel trowel at various locations and depths to determine if contamination was present at the site and characterize the nature of the waste. Sediment samples were collected from the Waukegan River with either a stainless steel auger or a stainless steel trowel in order to get into the bottom of the stream bed. Water samples were collected from two of the deeper monitoring wells installed by IEPA personnel located on property east of Diamond Scrap Yard, which was owned by EJ & E Railroad. A third IEPA monitoring well sampled was located up on the bluff, west of Diamond Scrap Yard. All monitoring wells were sampled with a teflon bailer.

On October 25-26, 1994, IEPA personnel collected five sediment samples, and nineteen soil samples. All soil, sediment and groundwater samples were analyzed for compounds on the Target Compound List. Shallow soil samples from the southern end of the Diamond property were sampled and analyzed for Dioxins in addition to target compounds. The Target Compound List (TCL) is provided in Appendix C of this IA report. RUST received split samples for all the soil samples taken from the property and sediment samples collected from the Waukegan River. RUST did not collect duplicate samples from the three monitoring wells IEPA sampled. Figure 3 indicates the locations of all samples collected. Table 3-1 gives a brief description of each sample.

The twenty-four soil and sediment samples were collected to determine if surficial and\or subsurface contamination existed at the Diamond Scrap Yard site or had impacted the Waukegan River which emptied into Lake Michigan. Samples from each sampling point were placed into their respective glass containers in the following fashion: volatile jar filled first, semi-volatile organic jar second, and inorganic jar third. After sampling each location, all sample containers were capped and placed in coolers. An HNU meter with a 10.2ev lamp was used during sample collection to monitor ambient air conditions in the breathing zone of sampling team members.

Sediment Sampling

On October 25, 1994 five sediment samples were collected from the Waukegan River which flowed through the north end of the Diamond Scrap property toward Lake Michigan. Figure 3 illustrates the approximate location of each sediment in relation to the scrap yard property. Each sample was collected in the order described below, with downstream samples collected first and upstream samples last.

Sample X205 was the first sample collected from the Waukegan River near the point of outfall into Lake Michigan. The sample location chosen was approximately 43 feet upstream of a large concrete structure located at the point of where the river meets Lake Michigan. This concrete structure was a junction manhole for the sewer system of Waukegan Illinois and was approximately five feet above the surrounding ground surface. Sediments were collected

from a depth of 0-4 inches using a stainless steel hand trowel.

Sample X203, and duplicate X204, were collected from the south bank of the Waukegan River. This location was approximately the midway point between the EJ & E Railroad trussel and the confluence of the Waukegan River with Lake Michigan. The sample was taken approximately six feet from the river bank in approximately 2 feet of water. A stainless steel hand auger was used to collect the sediment at a depth of 4-6 inches. Prior to filling sample containers, sediments were placed in a stainless steel tray and mixed thoroughly.

Sample X202 was collected from the east, downriver, side of the EJ & E Railroad trussel. This railroad trussel supported the Diamond Scrap Yard office when Diamond Scrap was in operation. The sample location was approximately 30 feet east of the railroad trussel along the south bank of the Waukegan River. The sample was taken approximately 8-12 inches deep with approximately six inches of water over the sample point. A stainless steel auger was used to collect sample X202.

Sample X201 was collected upstream, west, of where the Waukegan River flowed through the railroad trussel where the Diamond Scrap Yard was previously located. The sample was collected approximately 2 feet west of the Chicago and Northwestern railroad bridge along the south bank of the Waukegan River. Sediments were collected using a stainless steel hand trowel at a depth of 0-4 inches. Sample X201 was collected upstream of the Diamond Scrap Yard property and therefore believed not to be affected by surface

drainage from the Diamond Scrap property.

The purpose of collecting sediment samples X202, X203\X204, and X205 was to document whether hazardous contaminants have entered the surface water drainageway.

Groundwater Sampling

Diamond Scrap Yard property did not have any monitoring wells on-site. However, the EJ & E Railroad property located east of the Diamond Scrap Yard fence contained previously installed monitoring wells. Access to the railroad property was obtained prior to the field inspection and Tom Weigel, representing EJ & E Railroad, was present on October 25, 1994. There were four monitoring wells which were installed by the railroad along the east fenceline of Diamond Scrap Yard. Mr. Weigel provided a key to access these monitoring wells. However, IEPA sampling team encountered groundwater recharge problems during bailing of the monitoring wells toward the southern end of Diamond Scrap Yard. Since the remaining three railroad wells were all approximately 14 feet below ground surface and recharge problems were encountered in the first well, these monitoring wells were not suitable for sampling purposes. Thus, samples from EJ & E Railroad monitoring wells were not collected.

Prior to this inspection, IEPA had installed monitoring wells on EJ & E Railroad property, east of the Diamond Scrap property, near the shore of Lake Michigan. Two groundwater samples were selected from this area. In each of the locations selected there were two separate monitoring wells, one shallow and one deeper

well. The shallow wells at each location were approximately the same depth as the Railroad wells. Therefore, the deeper wells in each location were chosen in an attempt to get a better recharge rate and obtain a representative sample. Each well was unlocked by IEPA personnel and monitored with an HNU 10.2ev meter. There were no readings above background concentrations in any of the three monitoring wells sampled.

Sample point G103 was located toward the southeast end of Diamond Scrap Yard, east of Block 10-B (Figure 3). Sample G104 was collected from the deeper monitoring well located north of sample G103. In relation to Diamond Scrap Yard, G104 was east of the Baler foundation located on Block 2 (Figure 3). The final monitoring well sample was G101 with a duplicate G102 scheduled for this sample. Sample point G101 and G102 was located west of the Diamond Scrap Yard property, at 535 Sheridan Road. North Shore Printers were the current owners of the property where monitoring well G101 and G102 samples were collected. Ground surface elevation of monitor well G101\G102 was approximately 40 to 50 feet higher than Diamond Scrap Yard surface elevation.

Prior to sampling monitoring wells G101 and G102, G103, G104, well depth and water levels were measured with a water level indicator. The volume of water in the well was calculated, and the appropriate water volumes were purged from each of the wells. A-three-foot long teflon bailer and nylon retrieval cord was used to purge the monitoring well and collect the sample. The PH, conductivity, and temperature were measured after the first bailer

of water was removed from the well during the purging process. Each of the three monitoring wells were bailed October 25, 1994. Due to groundwater recharge failure each of the three monitoring wells were bailed dry before the required five volumes of water were obtained. On October 26, 1994 monitor well samples G101, G103, and G104 were collected. Sample G102, which was pre-designated to be a duplicate of G101, was not collected because the well water was depleted before the entire sample could be obtained. After the well was sampled the well lock was replaced by IEPA personnel. Total metals for each water sample were filtered in the field with a masterflex pump equipped a 5 micron filter. Preservatives were added to required bottles and then placed in IEPA sealed coolers for shipment to an IEPA contract laboratory.

Decontamination Procedures

Standard IEPA decontamination procedures were followed prior to collection of all samples. All sampling equipment had been previously decontaminated at the Illinois EPA's decontamination facilities prior to its transport to Diamond Scrap Yard. Decontamination procedures included the cleaning of all equipment with a liquid Alconox solution, rinsing with hot tap water, and with distilled water as a final rinse. All equipment was either dried with paper towels or air dried, then wrapped and stored in heavy duty aluminum foil.

TABLE 3-1

SAMPLE DESCRIPTIONS

SAMPLE	DEPTH	APPEARANCE	LOCATION
X101	0-4"	Alot of sand noted in the sample Below backround HNU concentration.	Taken 224 feet south of Monitoring Well G103 and 73 feet east of EJ & E. Railroad access road.
X102	12"	Below background HNU concentration.	Taken within the chain link fence where Larsen Marine is currently located. Sample taken 59 feet northwest of building.
X103	2-4"	Mainly sand with a small amount of light brown soil. Below background HNU concentration.	Surface soil taken from Block 42, 30 feet west of the east fence property line and 142 feet south of EJ & E. Railroad access road.
X104	3 feet	Fine to course sand with dark brown to tan color. Below background HNU concentration.	Soil taken from Block 42, approximately 36 feet west of the east fence property line and 142 feet south of EJ & E. Railroad access road.
X105	0-4"	Light brown soil with fine sand. Below background HNU concentration.	Taken from Block 9, 37 feet west of the east fence property line. Directly east of where Belvidere Street ends.
X106	12"	Fine sandy soil, dark brown color. large rocks found. HNU detection of 12.0 PPM	Taken from Block 9, 34 feet west of the east fence property line. Directly east of where Belvidere Street ends.
X107	1-4"	Light brown sandy loam. Alot of gravel present 1\2" to 2" diameter. Below background HNU concentration.	Taken from Block 9, 98 feet east of the west fence property line and 50 feet south of utility power pole along Market St. marked "M B-78 SPP 2-50 CECO".
X108	0-4"	Light brown sandy loam with a light gray substance present. Below background HNU concentration.	Taken from Block 10-A. 45 feet southeast of the Aluminum Smelter foundation and 136 feet west of Market Street.
X109	0-2"	Light brown loam, broken glass & rock in the soil. Below background HNU concentration.	Taken from Block 10-A, 57 feet north of Durkin Warehouse foundation and 66 feet east of "Garage" foundation.
X110	0-4"	Soil orange in color, alot of broken glass, rock and rusty metal found throughout this area. Below background HNU concentration.	Taken from Block 19, 28 feet north of Baler foundation and 66 feet west of the east fence property line.
X111	2 feet	Dark brown sandy soil. Soil is nearly uniform and appears to have been burned. HNU reading at 1 foot 1.1 PPM.	Taken from Block 19, 28 feet north of Baler building foundation and 66 feet west of east fence property line.
X112	0-3"	Light brown loam, slightly more powdery than previous samples. More organic content. Below background HNU concentration.	Taken from Block 10-B, 36 feet west of the east fence property line and 17 feet south of a concrete foundation which was presumed to be the wire incinerator.
X113	4 feet	Dark gray-black sand with 1\2" to 1 inch rock. Below background HNU concentration.	Taken from 10-B, 8 feet south of Metal Shear foundation and 73 feet west of the east fence property line.
X114	0-4"	Light brown loam with small pebbles present in sample. Below background HNU concentration.	Taken from southern end of Block 10-B, 105 feet west of the east fence property line and 95 feet south of Metal Shear foundation.

TABLE 3-1

CONTINUED (PAGE 2 OF 2)

SAMPLE DESCRIPTIONS

SAMPLE	DEPTH	APPEARANCE	LOCATION
X115	0-2"	Dark brown loam, small amount of sand present. Minimal amount of vegetation present. Below background HNU concentration.	Taken from mid-section of Block 12, 114 feet due east of the utility power pole at the northeast corner of Market and South Avenue.
X116	0-4"	Dark brown loam with sand present. Below background HNU concentration.	Taken from northeast part of resident's yard, 27 feet north of residence and 28 feet west of east property line fence.
X117	0-4"	Dark brown loam with sand present. Below background HNU concentration.	Taken from the southeast part of the residence's yard, 28 feet east of the sidewalk and 12 feet south of the southeast corner of the residence.
X118 (Duplicate of X117)			
X119	0-4"	Dark brown sandy loam. Soil is very dry. Below background HNU concentration.	Taken from southeast part of resident's yard 11 feet west of fence along Market St. and 54 feet north of fence along South Avenue.
X201	0-4"	Sediment was mostly sand with some silt present.	Taken from the south bank of the Waukegan River, 2 feet upstream (west) of the Chicago and Northwestern Railroad bridge.
X202	8-12"	Sediment consisted of primarily sand and gravel. More fine dark colored silt compared to downstream samples.	Taken from the south side of the Waukegan River, 30 feet downstream (east) of the EJ & E. Railroad Trussel.
X203	4-6"	Sediment was gray in color, very fine. Difficult to auger into the sediment at this location.	Taken downstream of X202. 92 feet due east of EJ & E. Railroad Tool Shed number 12& 1\2.
X204 (Duplicate of X204)			
X205	0-4"	Mostly sand with a small amount of silt at this sample location.	Taken 43 feet upstream of concrete structure which is a junction manhole for the sewer system. Near the point at which the Waukegan River empties into Lake Michigan.
G101	NA	Amber color to slight milky color with white bubbles on the water surface.	Located west of Diamond Scrap Yard up on the Bluff overlooking Market Street. This well is on the property of North Shore Printer.
G102	NA		This sample was initially intended to be a duplicate of G101, although there was not enough water in the well to collect G102 sample.
G103	NA	Initial water from the well was orange colored. Also water had a milky color after 3 gallons were removed. Below background HNU concentration.	Monitoring well was located on the east edge of EJ & E. Railroad property. Located east of southern portion of Block 10-B Diamond Scrap Yard.
G104	NA	Water appeared clear with a slight sheen on the surface. Below background HNU concentration.	Monitoring well was located on the east edge of EJ & E. Railroad property. Located east of Block 2 Diamond Scrap Yard. North of monitor well G103.

3.5 ANALYTICAL RESULTS

Chemical analysis of soil, sediment and groundwater samples collected by IEPA personnel during the CERCLA Integrated Assessment Inspection revealed quantified and estimated values of volatiles, semi-volatiles, pesticides, heavy metals, dioxins, common laboratory artifacts and common soil constituents. Sample analysis for organic and inorganic compounds were performed by American Analytical and Technical Services Inc. (AATSLA) and Quanterra Environmental Services (ITMO). A quality assurance review of sample analysis was performed by Lockeed corporation, who is an Environmental Science Team Contractor for USEPA Region V. Soil samples analyzed for dioxins were performed by Applied Research and Development Laboratory (ARDL inc.).

Reference Table 3-2 for the summary of soil and sediment sample chemical analysis results. Complete laboratory analytical data of Diamond Scrap Yard sample analysis are provided in Appendix E of this report.

Chemical analysis of soil samples collected by IEPA personnel revealed the presence of volatile, semi-volatile, pesticide, PCB's, dioxins, and inorganic constituents. Residential samples contained semi-volatiles, pesticides, PCB's, inorganics and dioxins. Sediment samples collected from the Waukegan River contained pesticides, and inorganic constituents. Groundwater samples from monitoring wells contained inorganic contaminants.

Several contaminants were detected above health based benchmarks cited in the Superfund Chemical Data Matrix (SCDM).

Heptachlor, heptachlor epoxide, dieldrin, 4,4'DDT, PCB's, and dioxins found in on-site soils exceeded the cancer risk level for the soil exposure level cited in SCDM. PCB's, arsenic, cadmium, chromium, copper, lead, and barium detected in on-site soil exceeded U.S. EPA CERCLA Removal Action Levels (RALs). PCB's were the substances detected in residential soil which exceeded both the RAL level as well as the cancer risk level cited in SCDM. Delta BHC, cadmium, chromium, copper, lead, manganese, nickel and zinc detected in the Waukegan River exceeded the lowest effect level cited in the Ontario Sediment Standards. Manganese and arsenic were the only contaminants of concern detected in monitoring wells near Diamond Scrap Yard.

SITE NAME: DIAMOND SCRAP YARD

ILO 001093509

SOIL SAMPLE SUMMARY

TABLE 3-2

SAMPLING POINT	X101	X102	X103	X104	X105	X106	X107	X108	X109	X110
PARAMETER	soil background									
VOLATILES UG\KG (PPB)										
Vinyl Chloride	--	--	--	--	--	--	--	--	--	--
Methylene Chloride	44.0	27.0	15.0	21.0	35.0	24.0 J	--	36.0	32.0	32.0
Acetone	--	--	--	--	--	25.0 J	--	--	--	45.0
Carbon Disulfide	--	--	--	--	--	3.0 J	--	--	--	--
1,1-Dichloroethane	--	--	--	--	--	--	--	--	--	--
Chloroform	--	--	--	--	--	6.0 J	--	--	--	--
2-Butanone (MEK)	--	--	--	--	--	--	--	--	--	--
Benzene	--	--	--	--	--	17.0 J	--	--	--	--
Toluene	--	3.0 J	--	--	5.0 J	5.0 J	--	--	--	5.0 J
Ethylbenzene	--	--	--	--	--	--	--	--	--	--
Xylene(total)	--	--	--	--	--	21.0 J	--	--	--	--
SEMIVOLATILES UG\KG (PPB)										
Naphthalene	--	--	--	98.0 J	78.0 J	510.0 J	130.0 J	--	380.0	--
2-Methylnaphthalene	--	--	--	84.0 J	190.0 J	550.0 J	280.0 J	--	440.0	5800.0 J
Dimethylphthalate	--	--	--	--	--	--	140.0 J	--	--	--
Acenaphthylene	84.0 J	--	--	140.0 J	--	--	--	--	240.0 J	--
Acenaphthene	--	--	--	--	--	440.0 J	--	110.0 J	--	--
Dibenzofuran	--	--	--	--	--	--	--	--	180.0 J	--
Diethylphthalate	--	--	--	--	--	--	--	--	--	--
Fluorene	--	--	--	--	--	710.0 J	--	93.0 J	210.0 J	--
Phenanthrene	960.0	3900.0	140.0 J	360.0 J	850.0 J	3100.0	480.0	1100.0	6600.0 E	--
Anthracene	280.0 J	860.0 J	--	130.0 J	83.0 J	630.0 J	160.0 J	250.0 J		--
Carbazole	83.0 J	290.0 J	--	--	--	440.0 J	--	160.0 J	780.0	--
Di-n-Butylphthalate	--	--	73.0 J	130.0 J	500.0	--	520.0	110.0 J	1300.0	--
Fluoranthene	1800.0	5500.0	240.0 J	970.0	830.0	3500.0	520.0	1900.0	6300.0 E	1500.0 J
Pyrene	1900.0	4700.0	190.0 J	510.0	560.0	3100.0	1100.0	920.0	6800.0 E	2200.0 J
Butylbenzylphthalate	--	--	140.0 J	940.0	8400.0 E	920.0 J	2400.0	800.0	950.0	3500.0 J
Benzo(a)anthracene	1800.0	2900.0	110.0 J	500.0	250.0 J	1200.0 J	770.0	670.0	2400.0	--
Chrysene	1500.0	3200.0	130.0 J	600.0	340.0 J	1500.0 J	400.0 J	810.0	1100.0	--
bis(2-Ethylhexyl)phthalate	--	--	140.0 J	160.0 J	1100.0	5600.0	1300.0	1500.0	2300.0	28000.0 B
Di-n-Octylphthalate	--	--	--	--	73.0 J	510.0 J	100.0 J	--	--	--
Benzo(b)fluoranthene	1100.0	2400.0	120.0 J	650.0	520.0	1400.0 J	980.0	920.0	3000.0 E	2300.0 J
Benzo(k)fluoranthene	820.0	1800.0	100.0 J	310.0 J	--	1000.0 J	--	480.0	1300.0	1700.0 J
Benzo(a)pyrene	1400.0	2400.0	100.0 J	430.0	330.0 J	1100.0 J	470.0	710.0	1700.0	--
Indeno(1,2,3-cd)pyrene	740.0	1300.0	88.0 J	220.0 J	310.0 J	650.0 J	700.0	260.0 J	2000.0	3100.0 J
Dibenz(a,h)anthracene	440.0	750.0 J	--	--	160.0 J	--	170.0 J	140.0 J	350.0 J	--
Benzo(g,h,i)perylene	840.0	1300.0	93.0 J	220.0 J	500.0	640.0 J	410.0	800.0 J	2500.0	3200.0 J

SITE NAME: DIAMOND SCRAP YARD

ILO 001093509

SOIL SAMPLE SUMMARY

TABLE 3-2

SAMPLING POINT / PARAMETER	X101 soil background	X102	X103	X104	X105	X106	X107	X108	X109	X110
PESTICIDES UG\KG (PPB)										
beta-BHC	--	--	--	14.0 P	--	--	47.0 P	31.0 P	--	180.0 P
gamma-BHC (Lindane)	--	--	4.5 J		--	--	--	--	--	--
Heptachlor	--	--	--	--	--	--	81.0	100.0 P	--	--
Aldrin	--	--	--	--	--	36.0	--	--	--	--
Heptachlor epoxide	--	--	--	--	--	--	--	75.0 P	--	--
Endosulfan I	--	--	5.3 J	--	--	15.0 P	--	--	--	--
Dieldrin	--	--	--	19.0 P	--	97.0 P	--	--	--	--
4,4'-DDE	--	--	28.0 J	72.0 P	29.0 P	--	--	490.0 P	690.0 P	570.0 P
Endrin	5.1 P	--	--	38.0 P	--	31.0 P	--	--	--	--
Endosulfan II	--	27.0 J	--	--	--	--	--	--	460.0 P	--
4,4'-DDD	--	--	--	--	--	--	--	--	--	--
4,4'-DDT	--	--	--	230.0	--	--	--	290.0 P	--	--
alpha-Chlorodane	--	--	--	--	--	--	--	--	150.0 P	170.0 P
gamma-Chlorodane	--	--	--	11.0 P	--	--	24.0 P	490.0	--	--
Aroclor-1242	--	--	--	--	--	--	--	--	--	--
Aroclor-1248	--	--	750.0 J	1000.0	300.0	830.0	6800.0 P	13000.0	12000.0 P	28000.0 P
Aroclor-1254	--	--	--	--	--	--	--	--	--	13000.0 P
Aroclor-1260	--	--	590.0 J	900.0 P	1200.0 P	1300.0	7000.0	8000.0	15000.0 P	--
INORGANICS MG\KG (PPM)										
Aluminum	1720.0	2160.0	3780.0	4750.0	6550.0	4730.0	5060.0	257000.0	23700.0	11400.0
Antimony	--	16.3 J	15.7 J	12.6 J	22.0 J	19.8 J	61.8 J	136.0 J	--	27.9 J
Arsenic	12.4	20.7	10.0	23.4	11.6	10.1	34.9	10.8	36.1 J	15.6 J
Barium	66.6	117.0	96.9	130.0	254.0	219.0	265.0	482.0	717.0	461.0
Beryllium	0.5 J	0.6 J	0.4 J	0.6 J	0.6 J	0.6 J	0.6 J	1.1 J	0.8 J	0.5 J
Cadmium	3.1	15.3	6.3	3.9	10.1	6.8	13.0	80.9	67.1	22.1
Calcium	16600.0	73200.0	55000.0	28300.0	60000.0	64300.0	68200.0	19600.0	43500.0	70700.0
Chromium	7.2	413.0	35.1	21.3	49.5	79.4	101.0	308.0	375.0	157.0
Cobalt	3.4 B	10.7 B	4.4 B	4.0 B	9.1 B	5.8 B	8.9 B	10.7 B	30.2 B	16.0
Copper	89.0	366.0	176.0	128.0	288.0	193.0	1810.0	15100.0	4380.0	29100.0
Iron	21800.0	128000.0	32700.0	33800.0	88800.0	49200.0	105000.0	46600.0	160000.0	100000.0
Lead	789.0	543.0	317.0	382.0	784.0	605.0	5250.0	4590.0	3160.0	2190.0
Magnesium	7590.0	20000.0	24900.0	13400.0	30700.0	34700.0	38200.0	19100.0	17400.0	38800.0
Manganese	219.0	2330.0	346.0	357.0	641.0	444.0	811.0	1450.0	1570.0	891.0
Mercury	0.4	0.5	1.5	0.8	1.1	0.4	1.5	2.5	17.4	8.2
Nickel	10.9	408.0	40.8	19.1	65.7	36.7	126.0	407.0	268.0 J	133.0 J
Potassium	479.0 B	646.0 B	--	737.0 B	797.0 B	582.0 B	742.0 B	--	--	--
Selenium	0.7 J	2.6 J	1.0 J	0.6 J	0.7 J	0.8 J	1.3	34.8	14.4 J	5.8 J
Silver	0.9	1.2	0.9	0.9	1.0	--	--	36.0	--	5.2
Sodium	137.0 B	247.0 B	194.0 B	219.0 B	251.0 B	230.0 B	308.0 B	269.0 B	345.0 B	367.0 B
Thallium	--	--	--	--	--	--	--	--	11.3	6.5
Vanadium	10.6 B	10.9 B	13.9	13.1	9.5 B	12.8	5.9 B	35.8 B	18.0 B	7.5 B
Zinc	330.0 J	1210.0 J	754.0 J	490.0 J	1830.0 J	1120.0 J	1840.0 J	12100.0 J	9630.0	5270.0
Cyanide	0.3	0.4	0.3	1.0	0.3	0.2	0.5	0.2	2.3 J	2.1 J

SITE NAME: DIAMOND SCRAP YARD

ILO 001093509

SOIL SAMPLE SUMMARY

TABLE 3-2

SAMPLING POINT / PARAMETER	X101 soil background	X111	X112	X113	X114	X115	X116	X117	X118	X119
VOLATILES UG\KG (PPB)										
Vinyl Chloride	--	7.0 J	--	--	--	--	--	--	--	--
Methylene Chloride	44.0	37.0	35.0	17.0	35.0	68.0	67.0	60.0	50.0	22.0
Acetone	--	680.0 E	180.0	38.0	17.0	--	--	--	--	--
Carbon Disulfide	--	10.0 J	--	--	--	--	--	--	--	--
1,1-Dichloroethane	--	4.0 J	--	--	--	--	--	--	--	--
Chloroform	--	--	--	--	--	--	--	--	--	--
2-Butanone (MEK)	--	130.0	33.0	20.0	--	--	--	--	--	--
Benzene	--	22.0	--	--	--	--	--	--	--	--
Toluene	--	120.0	--	7.0 J	--	--	--	--	--	--
Ethylbenzene	--	61.0	--	--	--	--	--	--	--	--
Xylene(total)	--	320.0	--	--	--	--	--	--	--	--
SEMIVOLATILES UG\KG (PPB)										
Naphthalene	--	--	220.0 J	--	140.0 J	450.0 J	--	790.0	820.0	--
2-Methylnaphthalene	--	--	240.0 J	--	260.0 J	--	130.0 J	360.0 J	370.0 J	--
Dimethylphthalate	--	--	130.0 J	--	--	--	--	--	--	--
Acenaphthylene	84.0 J	--	--	--	--	--	--	110.0 J	99.0 J	--
Acenaphthene	--	--	210.0 J	--	--	920.0 J	--	--	--	--
Dibenzofuran	--	--	120.0 J	--	--	490.0 J	--	300.0 J	300.0 J	--
Diethylphthalate	--	2100.0 J	--	--	--	--	--	--	--	--
Fluorene	--	--	210.0 J	--	66.0 J	1000.0 J	--	120.0 J	110.0 J	--
Phenanthrene	980.0	3400.0 J	1700.0	--	510.0	9400.0	990.0	2000.0	2000.0	400.0
Anthracene	230.0 J	--	490.0	--	85.0 J	1900.0	180.0 J	440.0	370.0 J	--
Carbazole	83.0 J	--	240.0 J		--	1100.0 J	110.0 J	290.0 J	310.0 J	--
Di-n-Butylphthalate	--	--	720.0	--	310.0 J	1300.0 J	250.0 J	78.0 J	120.0 J	97.0 J
Fluoranthene	1800.0	4800.0 J	1600.0	--	630.0	11000.0	1400.0	2400.0	2200.0	670.0
Pyrene	1900.0	5500.0 J	4300.0 E	--	890.0	9100.0	1200.0	2200.0	2100.0	550.0
Butylbenzylphthalate	--	4000.0 J	2200.0	--	430.0	--	330.0 J	--	270.0 J	--
Benzo(a)anthracene	1300.0	2200.0 J	1400.0	--	360.0 J	4600.0	650.0	2800.0	370.0 J	230.0 J
Chrysene	1500.0	2600.0 J	1400.0	--	400.0	5200.0	820.0	3100.0 E	3000.0	340.0 J
bis(2-Ethylhexyl)phthalate	--	39000.0 B	3100.0 BE	--	1500.0 B	--	670.0 B	2500.0 B	11000.0 BE	--
Di-n-Octylphthalate	--	--	--	--	--	--	--	--	310.0 J	--
Benzo(b)fluoranthene	1100.0	1800.0 J	2900.0	--	640.0	4500.0	820.0	3100.0 E	2700.0	330.0 J
Benzo(k)fluoranthene	820.0	2000.0 J	--	--	410.0	3300.0	480.0	1000.0	1000.0	270.0 J
Benzo(a)pyrene	1400.0	--	1600.0	--	450.0	4100.0	560.0	1900.0	1600.0	240.0 J
Indeno(1,2,3-cd)pyrene	740.0	--	1200.0	--	380.0	2600.0	380.0 J	1300.0	1000.0	170.0 J
Dibenz(a,h)anthracene	440.0	--	260.0 J	--	210.0 J	1300.0 J	180.0 J	1100.0	870.0	84.0 J
Benzo(g,h,i)perylene	840.0	1700.0 J	1300.0	--	400.0	2700.0	400.0	1200.0	1000.0	180.0 J

SITE NAME: DIAMOND SCRAP YARD

ILO 001093509

SOIL SAMPLE SUMMARY

TABLE 3-2

SAMPLING POINT / PARAMETER	X101 soil background	X111	X112	X113	X114	X115	X116	X117	X118	X119
PESTICIDES UG\KG (PPB)										
beta-BHC	--	170.0 P	--	--	--	--	--	--	--	--
gamma-BHC (Lindane)	--	--	--	4.5 P	21.0 P	--	--	--	--	--
Heptachlor	--	--	--	--	--	160.0 P	--	--	--	--
Aldrin	--	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	--	--	--	--	93.0 P	--	--	--	--	--
Endosulfan I	--	--	--	--	--	66.0 P	24.0 P	--	--	--
Dieldrin	--	--	--	--	--	1900.0 DP	--	--	--	--
4,4'-DDE	--	670.0 P	770.0 P	58.0 PE	210.0 P	640.0 P	240.0 P	52.0	48.0	100.0
Endrin	5.1 P	--	--	5.0 P	--	--	--	--	--	--
Endosulfan II	--	--	--	--	110.0 P	--	--	--	--	--
4,4'-DDD	--	--	--	--	47.0 P	1700.0 DP	60.0 P	48.0 P	43.0 P	--
4,4'-DDT	--	--	--	12.0 P	--	2600.0 PE	600.0 P	210.0	160.0	170.0 P
alpha-Chlorodane	--	--	--	33.0 P	--	--	--	--	--	--
gamma-Chlorodane	--	--	160.0 P	--	140.0 P	300.0 P	--	--	26.0	--
Aroclor-1242	--	20000.0 P	--	--	--	--	--	--	--	--
Aroclor-1248	--	--	15000.0 P	950.0 D	2000.0 P	4200.0 P	1400.0 P	--	--	--
Aroclor-1254	--	14000.0 P	22000.0 P	770.0 D	9600.0 DP	20000.0 D	5600.0 P	--	--	--
Aroclor-1260	--	--	--	--	--	--		--	--	--
INORGANICS MG\KG (PPM)										
Aluminum	1720.0	27500.0	12000.0	2170.0	9810.0	18900.0	10900.0	5360.0 J	9050.0 J	5290.0
Antimony	--	17.8 J	--	--	14.3 J	--	13.4 J	12.7 J	13.4 J	10.6 J
Arsenic	12.4	20.5 J	32.7 J	2.6 J	17.6 J	62.9 J	17.3 J	9.1	9.0	9.6
Barium	66.6	372.0	540.0	13.7 B	243.0	2550.0	372.0	230.0	276.0	143.0
Beryllium	0.5 J	0.4 J	0.5 J	--	0.8 J	0.8 J	0.9 J	1.0 B	1.1 B	0.7 J
Cadmium	3.1	17.3	72.1	--	29.5	71.0	14.0	5.3	5.9	2.5
Calcium	16600.0	22000.0	47400.0	1390.0	61500.0	40200.0	35100.0	23500.0	25100.0	14400.0
Chromium	7.2	96.3	445.0	4.5	187.0	182.0	47.4	20.6	19.3	14.0
Cobalt	3.4 B	9.7 B	30.3 B	1.6 B	14.3	39.9	10.6 B	6.2 B	6.2 B	5.7 B
Copper	89.0	2410.0	2890.0	10.7	1420.0	4000.0	1770.0	110.0 J	391.0 J	58.6
Iron	21800.0	63700.0	229000.0	5720.0	146000.0	163000.0	39000.0	17400.0	20400.0	17000.0
Lead	789.0	915.0	2760.0	10.7	2070.0	5970.0	875.0	264.0	261.0	598.0
Magnesium	7590.0	10800.0	23600.0	905.0 B	30800.0	20700.0	18300.0	9330.0	11300.0	6950.0
Manganese	219.0	619.0	2380.0	52.0	1410.0	2060.0	728.0	513.0	498.0	572.0
Mercury	0.4	2.0	20.5	0.1	8.0	10.5	2.1	0.7 J	0.2 J	0.6
Nickel	10.9	169.0 J	339.0 J	4.6 J	118.0 J	307.0 J	49.1 J	20.6 J	39.7 J	14.0
Potassium	479.0 B	--	--	--	567.0	1190.0	1410.0	1720.0	2350.0	683.0 B
Selenium	0.7 J	2.6 J	10.4 J	0.9 J	5.4 J	15.4 J	4.1 J	1.7 J	1.1 J	1.7 J
Silver	0.9	1.2 B	4.7 B	0.9 B	1.6 B	--	1.6 B	--	1.0	--
Sodium	137.0 B	295.0 B	324.0 B	61.2 B	340.0	728.0	567.0 B	209.0 B	420.0 B	159.0 B
Thallium	--	4.5	14.5	--	8.8	9.2	2.3 B	--	--	--
Vanadium	10.6 B	8.1 B	--	10.5 B	20.1	5.0	20.6	19.1	21.2	19.3
Zinc	330.0 J	3660.0	7590.0	46.0	2560.0	31900.0	1870.0	704.0 J	773.0 J	401.0 J
Cyanide	0.3	1.7 J	4.8 J	0.5 J	0.8 J	1.4 J	1.7 J	0.8	1.0	--

SITE NAME: DIAMOND SCRAP YARD

ILO 001093509

SOIL DIOXINS

TABLE 3-2

SAMPLING POINT	X107	X108	X109	X110	X112	X114	X115	X117	X118	X119
ANALYTES NG\KG (PPT)										
2378-TCDD	1.7	6.5	14.2	3.1	11.6	7.2	13.0	0.7	1.0	0.5
12378-PeCDD	5.4	30.6	71.2	10.7	50.0	27.4	44.0	3.0	3.7	2.5
123478-HxCDD	9.3	59.8	174.0	12.0	95.9	56.5	80.1	6.5	7.4	4.8
123678-HxCDD	31.6	131.0	342.0	62.5	278.0	152.0	256.0	23.4	26.2	11.7
123789-HxCDD	28.1	188.0	279.0	49.7	293.0	168.0	257.0	15.9	20.2	11.7
1234678-HpCDD	456.0	1240.0	4300.0	939.0	2420.0	2010.0	3610.0	526.0	550.0	246.0
OCDD	2660.0	5620.0	28130.0	7810.0	11290.0	13340.0	21130.0	3900.0	4100.0	1600.0
2378-TCDF	129.0	1320.0	787.0	285.0	1030.0	480.0	580.0	35.0	50.7	24.9
12378-PeCDF	19.6	206.0	127.0	38.0	347.0	93.8	75.9	6.4	8.6	4.7
23478-PeCDF	39.2	307.0	304.0	86.0	345.0	153.0	148.0	22.0	22.7	7.2
123478-HxCDF	127.0	1200.0	728.0	194.0	1750.0	563.0	596.0	32.3	39.8	20.5
123678-HxCDF	26.9	297.0	200.0	52.2	465.0	147.0	111.0	11.3	11.9	6.7
234678-HxCDF	33.0	479.0	205.0	42.4	463.0	186.0	158.0	15.1	15.3	11.2
123789-HxCDF	1.7	11.8	10.6	2.9	35.5	11.4	6.4	0.6	1.6	0.9
1234678-HpCDF	226.0	2080.0	1200.0	352.0	2490.0	848.0	1070.0	372.0	232.0	77.3
1234789-HpCDF	36.0	181.0	191.0	66.7	489.0	118.0	82.3	11.3	13.0	5.9
OCDF	371.0	2030.0	1950.0	792.0	3670.0	951.0	2300.0	651.0	692.0	180.0
TOTAL TCDD	41.2	243.0	203.0	41.8	258.0	240.0	273.0	9.0	34.8	18.9
TOTAL PeCDD	57.3	228.0	749.0	117.0	414.0	399.0	495.0	31.1	46.9	22.6
TOTAL HxCDD	347.0	1410.0	3610.0	669.0	2700.0	1790.0	2330.0	203.0	224.0	112.0
TOTAL HpCDD	1050.0	2540.0	9440.0	1920.0	4970.0	4210.0	7050.0	1000.0	1040.0	493.0
TOTAL TCDF	583.0	5400.0	4500.0	1390.0	4350.0	2610.0	2910.0	187.0	296.0	163.0
TOTAL PeCDF	445.0	3600.0	3480.0	792.0	3690.0	1910.0	1590.0	157.0	173.0	120.0
TOTAL HxCDF	314.0	3890.0	3690.0	776.0	4700.0	2060.0	2950.0	280.0	279.0	136.0
TOTAL HpCDF	483.0	2910.0	2810.0	921.0	4170.0	1700.0	2800.0	790.0	676.0	195.0
2,3,7,8-TCDD TOXICITY EQUIVALENT	73.9	593.3	564.0	145.6	736.4	322.5	388.3	41.2	44.7	19.9

SITE NAME: DIAMOND SCRAP YARD

ILO 001093509

SEDIMENT AND GROUNDWATER SUMMARY

TABLE 3-2

SAMPLING POINT / PARAMETER	X201 sediment background	X202	X203	X204	X205		G101 groundwater background	G103	G104	G105 Field Blank
VOLATILES UG\KG (PPB)										
Methylene Chloride	18.0	17.0	36.0	28.0	12.0		--	--	--	3.0 J
Acetone	--	22.0	15.0	--	--		--	--	--	410.0 D
SEMIVOLATILES UG\KG (PPB)										
Acenaphthene	96.0 J	--	--	--	--		--	--	--	--
Dibenzofuran	91.0 J	--	--	--	--		--	--	--	--
Fluorene	220.0 J	--	--	--	--		--	--	--	--
Phenanthrene	1600.0	410.0	120.0 J	--	150.0 J		--	--	--	--
Anthracene	310.0 J	86.0 J	--	--	--		--	--	--	--
Carbazole	230.0 J	--	--	--						
Di-n-Butylphthalate	--	--	61.0 J	--	--		--	--	--	--
Fluoranthene	2100.0	560.0	130.0 J	--	220.0 J		--	--	--	--
Pyrene	1700.0	430.0	110.0 J	--	170.0 J		--	--	--	--
Benzo(a)anthracene	940.0	210.0 J	--	--	81.0 J		--	--	--	--
Chrysene	1000.0	260.0 J	--	--	110.0 J		--	--	--	--
bis(2-Ethylhexyl)phthalate	730.0 B	--	--	--	--		5.0 J	1.0 J	3.0 J	26.0
Benzo(b)fluoranthene	940.0	230.0 J	--	--	91.0 J		--	--	--	--
Benzo(k)fluoranthene	770.0	240.0 J	--	--	91.0 J		--	--	--	--
Benzo(a)pyrene	840.0	220.0 J	--	--	89.0 J		--	--	--	--
Indeno(1,2,3-cd)pyrene	540.0	140.0 J	--	--	--		--	--	--	--
Dibenz(a,h)anthracene	290.0 J	--	--	--	--		--	--	--	--
Benzo(g,h,i)perylene	540.0	140.0 J	--	--	--		--	--	--	--
PESTICIDES UG\KG (PPB)										
delta-BHC	--	13.0	--	--	2.1 P		--	--	--	--
Aldrin	--	--	--	--	3.2 P		--	--	--	--
Endosulfan I	--	--	--	--	2.3 P		--	--	--	--
4,4'-DDE	24.0 P	21.0 P	--	--	7.6		--	--	--	--
4,4'-DDD	39.0	47.0	--	--	13.0 P		--	--	--	--
4,4'-DDT	35.0 P	60.0	--	--	6.5 P		--	--	--	--
Aroclor-1248	--	--	--	--	48.0 P		--	--	--	--
Aroclor-1254	--	--	--	--	63.0 P		--	--	--	--
INORGANICS MG\KG (PPM)										
Aluminum	2190.0	4800.0	6200.0	4690.0	3630.0		--	37.6 B	--	--
Antimony	13.0 J	19.9 J	21.8 J	16.4 J	17.0 J		--	--	--	--
Arsenic	2.8	7.1	6.5	6.8	9.6		--	3.2 B	--	--
Barium	13.1 B	40.5 B	21.0 B	19.9 B	20.4 B		36.6 B	19.6 B	10.3 B	1.0 J
Beryllium	0.2 J	9.2	0.6 J	0.5 J	0.7 J		0.6 J	--	--	--
Cadmium	--	1.3	--	--	--		--	--	--	--
Calcium	41100.0	61500.0	86300.0	95900.0	111000.0		48100.0	21300.0	12000.0	305.0 J
Chromium	7.5	32.0	11.1	9.2	9.3		--	--	--	--
Cobalt	1.9 B	9.3 B	7.7 B	7.3 B	11.8 B		--	3.4 B	--	--
Copper	16.8	990.0	24.1	23.6	27.5		13.3 J	16.6 J	19.2 J	8.6 J
Iron	8980.0	26200.0	16300.0	15000.0	16300.0		56.4 J	102.0	41.0 J	16.4 J
Lead	24.6	302.0	8.2	8.3	36.3		1.8 J	3.1 J	1.4 J	1.2 J
Magnesium	20700.0	33600.0	45900.0	50300.0	58700.0		20400.0	9020.0	4630.0 B	64.0 J
Manganese	263.0	834.0	593.0	643.0	728.0		4.9 B	33.8	10.7 B	--
Nickel	8.2 J	55.7	17.6	13.8	24.9		--	--	--	--
Potassium	--	779.0 B	1780.0	1310.0	509.0 B		--	2690.0	--	--
Selenium	0.7 B	0.9 J	0.7 J	0.9 J	1.1 J		--	--	--	--
Silver	--	1.0	--	--	--		--	--	--	--
Sodium	254.0 B	2200.0	283.0 B	272.0 B	397.0 B		49800.0	38400.0	62000.0	246.0 J
Vanadium	12.3 B	14.4	19.9	20.3	17.7		5.8	7.9	5.8	--
Zinc	101.0 J	5810.0 J	45.8	41.0	125.0		18.3 J	14.9 J	19.0 J	9.5 B

3.6 KEY SAMPLES

The following table (Table 3-3) identifies the key samples taken during the Diamond Scrap Yard Integrated Assessment which contained contaminants at a level at least three times greater than background levels. For a review of all contaminants detected in samples, reference Table 3-2, Sample Summary. (Table 3-2 can also be found at the front of Volume 2 of this report).

SITE NAME: DIAMOND SCRAP YARD

ILO 001093509

KEY SOIL SAMPLES

TABLE 3-3

SAMPLING POINT / PARAMETER	X101 soil background	X102	X103	X104	X105	X106	X107	X108	X109
VOLATILES UG/KG (PPB)									
Vinyl Chloride	--	--	--	--	--	--	--	--	--
Acetone	--	--	--	--	--	25.0 J	--	--	--
Carbon Disulfide	--	--	--	--	--	3.0 J	--	--	--
1,1-Dichloroethane	--	--	--	--	--	--	--	--	--
Chloroform	--	--	--	--	--	6.0 J	--	--	--
2-Butanone (MEK)	--	--	--	--	--	--	--	--	--
Benzene	--	--	--	--	--	17.0 J	--	--	--
Toluene	--	3.0 J	--	--	5.0 J	5.0 J	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--
Xylene(total)	--	--	--	--	--	21.0 J	--	--	--
SEMIVOLATILES UG/KG (PPB)									
Naphthalene	--	--	--	98.0 J	78.0 J	510.0 J	130.0 J	--	380.0
2-Methylnaphthalene	--	--	--	84.0 J	190.0 J	550.0 J	280.0 J	--	440.0
Dimethylphthalate	--	--	--	--	--	--	140.0 J	--	--
Acenaphthene	--	--	--	--	--	440.0 J	--	110.0 J	--
Dibenzofuran	--	--	--	--	--	--	--	--	180.0 J
Diethylphthalate	--	--	--	--	--	--	--	--	--
Fluorene	--	--	--	--	--	710.0 J	--	93.0 J	210.0 J
Phenanthrene	960.0	3900.0	--	--	--	3100.0	--	--	6600.0 E
Anthracene	230.0 J	860.0 J	--	--	--	--	--	--	--
Carbazole	83.0 J	290.0 J	--	--	--	--	--	--	--
Di-n-Butylphthalate	--	--	73.0 J	130.0 J	500.0	--	520.0	110.0 J	1300.0
Fluoranthene	1900.0	5500.0	--	--	--	--	--	--	--
Pyrene	1900.0	--	--	--	--	--	--	--	6800.0 E
Butylbenzylphthalate	--	--	140.0 J	940.0	3400.0 E	920.0 J	2400.0	300.0	950.0
Benzo(a)anthracene	1900.0	--	--	--	--	--	--	--	--
Chrysene	1500.0	--	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate	--	--	140.0 J	160.0 J	1100.0	5600.0	1300.0	1500.0	2300.0
Di-n-Octylphthalate	--	--	--	--	73.0 J	510.0 J	100.0 J	--	--
Benzo(b)fluoranthene	1100.0	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	740.0	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	840.0	--	--	--	--	--	--	--	--
PESTICIDES UG/KG (PPB)									
beta-BHC	--	--	--	14.0 P	--	--	47.0 P	31.0 P	--
gamma-BHC (Lindane)	--	--	4.5 J	--	--	--	--	--	--
Heptachlor	--	--	--	--	--	--	81.0	100.0 P	--
Aldrin	--	--	--	--	--	36.0	--	--	--
Heptachlor epoxide	--	--	--	--	--	--	--	75.0 P	--
Endosulfan I	--	--	5.3 J	--	--	15.0 P	--	--	--
Dieldrin	--	--	--	19.0 P	--	97.0 P	--	--	--
4,4'-DDE	--	--	28.0 J	72.0 P	29.0 P	--	--	490.0 P	690.0 P
Endrin	5.1 P	--	--	38.0 P	--	31.0 P	--	--	--
Endosulfan II	--	27.0 J	--	--	--	--	--	--	460.0 P
4,4'-DDD	--	--	--	--	--	--	--	--	--
4,4'-DDT	--	--	--	230.0	--	--	--	290.0 P	--
alpha-Chlordane	--	--	--	--	--	--	--	--	150.0 P
gamma-Chlordane	--	--	--	11.0 P	--	--	24.0 P	490.0	--
Aroclor-1242	--	--	--	--	--	--	--	--	--
Aroclor-1248	--	--	750.0 J	1000.0	300.0	830.0	6800.0 P	13000.0	12000.0 P
Aroclor-1254	--	--	--	--	--	--	--	--	--
Aroclor-1260	--	--	590.0 J	900.0 P	1200.0 P	1300.0	7000.0	8000.0	15000.0 P
INORGANICS MG/KG (PPM)									
Aluminum	1720.0	--	--	--	6550.0	--	--	257000.0	23700.0
Antimony	--	16.3 J	15.7 J	12.6 J	22.0 J	19.8 J	61.8 J	136.0 J	--
Arsenic	12.4	--	--	--	--	--	--	--	--
Barium	66.6	--	--	--	254.0	219.0	285.0	462.0	717.0
Cadmium	3.1	15.3	--	--	10.1	--	13.0	80.9	67.1
Calcium	15600.0	73200.0	55000.0	--	60000.0	64300.0	68200.0	--	--
Chromium	7.2	413.0	35.1	--	49.5	79.4	101.0	306.0	375.0
Cobalt	3.4 B	10.7 B	--	--	--	--	-- B	10.7 B	30.2 B
Copper	99.0	366.0	--	--	--	--	1810.0	15100.0	4380.0
Iron	21800.0	128000.0	--	--	88800.0	--	105000.0	--	160000.0
Lead	798.0	--	--	--	--	--	5250.0	4590.0	3160.0
Magnesium	7590.0	--	24900.0	--	30700.0	34700.0	38200.0	--	--
Manganese	219.0	2930.0	--	--	--	--	--	1450.0	1570.0
Mercury	0.4	--	1.5	--	--	--	1.5	2.5	17.4
Nickel	10.9	408.0	40.8	--	65.7	36.7	128.0	407.0	268.0 J
Potassium	479.0 B	--	--	--	--	--	--	--	--
Selenium	0.7 J	2.6 J	--	--	--	--	--	34.8	14.4 J
Silver	0.9	--	--	--	--	--	--	36.0	--
Sodium	137.0 B	--	--	--	--	--	--	--	--
Thallium	--	--	--	--	--	--	--	--	11.3
Vanadium	10.6 B	--	--	--	--	--	--	35.6 B	--
Zinc	330.0 J	1210.0 J	--	--	1830.0 J	1120.0 J	1840.0 J	12100.0 J	9630.0
Cyanide	0.3	--	--	1.0	--	--	--	--	2.3 J
DIOXINS NG/KG (PPT)									
2378-TCDD							1.7	6.5	14.2
2378-TCDF							129.0	1320.0	787.0
2378-TCDD TOXICITY EQUIVALENT							73.9	593.3	564.0

SITE NAME: DIAMOND SCRAP YARD

ILO 001093509

KEY SOIL SAMPLES

TABLE 3-3

SAMPLING POINT / PARAMETER	X101 soil background	X110	X111	X112	X113	X114	X115	X116	X117	X118	X119
VOLATILES UG/KG (PPB)											
Vinyl Chloride	--	--	7.0 J	--	--	--	--	--	--	--	--
Acetone	--	45.0	680.0 E	180.0	38.0	17.0	--	--	--	--	--
Carbon Disulfide	--	--	10.0 J	--	--	--	--	--	--	--	--
1,1-Dichloroethane	--	--	4.0 J	--	--	--	--	--	--	--	--
Chloroform	--	--	--	--	--	--	--	--	--	--	--
2-Butanone (MEK)	--	--	130.0	33.0	20.0	--	--	--	--	--	--
Benzene	--	--	22.0	--	--	--	--	--	--	--	--
Toluene	--	5.0 J	120.0	--	7.0 J	--	--	--	--	--	--
Ethylbenzene	--	--	61.0	--	--	--	--	--	--	--	--
Xylene(total)	--	--	320.0	--	--	--	--	--	--	--	--
SEMIVOLATILES UG/KG (PPB)											
Naphthalene	--	--	--	220.0 J	--	140.0 J	450.0 J	--	790.0	820.0	--
2-Methylnaphthalene	--	5800.0 J	--	240.0 J	--	260.0 J	--	130.0 J	360.0 J	370.0 J	--
Dimethylphthalate	--	--	--	130.0 J	--	--	--	--	--	--	--
Acenaphthene	--	--	--	210.0 J	--	--	920.0 J	--	--	--	--
Dibenzofuran	--	--	--	120.0 J	--	--	490.0 J	--	300.0 J	300.0 J	--
Diethylphthalate	--	--	2100.0 J	--	--	--	--	--	--	--	--
Fluorene	--	--	--	210.0 J	--	66.0 J	1000.0 J	--	120.0 J	110.0 J	--
Phenanthrene	960.0	--	3400.0 J	--	--	--	9400.0	--	--	--	--
Anthracene	230.0 J	--	--	--	--	--	1900.0	--	--	--	--
Carbazole	83.0 J	--	--	--	--	--	1100.0 J	--	--	--	--
Di-n-Butylphthalate	--	--	--	720.0	--	310.0 J	1300.0 J	250.0 J	78.0 J	120.0 J	97.0 J
Fluoranthene	1800.0	--	--	--	--	--	11000.0	--	--	--	--
Pyrene	1900.0	--	--	--	--	--	9100.0	--	--	--	--
Butylbenzylphthalate	--	3500.0 J	4000.0 J	2200.0	--	430.0	--	330.0 J	--	270.0 J	--
Benzo(a)anthracene	1300.0	--	--	--	--	--	4600.0	--	--	--	--
Chrysene	1500.0	--	--	--	--	--	5200.0	--	--	--	--
bis(2-Ethylhexyl)phthalate	--	28000.0 B	39000.0 B	3100.0 BE	--	1500.0 B	--	670.0 B	2500.0 B	11000.0 BE	--
Di-n-Octylphthalate	--	--	--	--	--	--	--	--	--	310.0 J	--
Benzo(b)fluoranthene	1100.0	--	--	--	--	--	4500.0	--	--	--	--
Indeno(1,2,3-cd)pyrene	740.0	3100.0 J	--	--	--	--	2600.0	--	--	--	--
Benzo(g,h,i)perylene	840.0	3200.0 J	--	--	--	--	2700.0	--	--	--	--
PESTICIDES UG/KG (PPB)											
beta-BHC	--	180.0 P	170.0 P	--	--	--	--	--	--	--	--
gamma-BHC (Lindane)	--	--	--	--	4.5 P	21.0 P	--	--	--	--	--
Heptachlor	--	--	--	--	--	--	160.0 P	--	--	--	--
Aldrin	--	--	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	--	--	--	--	--	93.0 P	--	--	--	--	--
Endosulfan I	--	--	--	--	--	--	66.0 P	24.0 P	--	--	--
Dieldrin	--	--	--	--	--	--	1900.0 DP	--	--	--	--
4,4'-DDE	--	570.0 P	670.0 P	770.0 P	58.0 PE	210.0 P	640.0 P	240.0 P	52.0	48.0	100.0
Endrin	5.1 P	--	--	--		--	--	--	--	--	--
Endosulfan II	--	--	--	--	--	110.0 P	--	--	--	--	--
4,4'-DDD	--	--	--	--	--	47.0 P	1700.0 DP	60.0 P	48.0 P	43.0 P	--
4,4'-DDT	--	--	--	--	12.0 P	--	2600.0 PE	600.0 P	210.0	160.0	170.0 P
alpha-Chlordane	--	170.0 P	--	--	33.0 P	--	--	--	--	--	--
gamma-Chlordane	--	--	--	160.0 P	--	140.0 P	300.0 P	--	--	26.0	--
Aroclor-1242	--	--	20000.0 P	--	--	--	--	--	--	--	--
Aroclor-1248	--	28000.0 P	--	15000.0 P	950.0 D	2000.0 P	4200.0 P	1400.0 P	--	--	--
Aroclor-1254	--	13000.0 P	14000.0 P	22000.0 P	770.0 D	9600.0 DP	20000.0 D	5600.0 P	--	--	--
Aroclor-1260	--	--	--	--	--	--	--	--	--	--	--
INORGANICS MG/KG (PPM)											
Aluminum	1720.0	11400.0	27500.0	12000.0	--	9810.0	18900.0	10900.0	5360.0 J	9050.0 J	5290.0
Antimony	--	27.9 J	17.8 J	--	--	14.3 J	--	13.4 J	12.7 J	13.4 J	10.6 J
Arsenic	12.4	--	--	--	--	--	62.9 J	--	--	9.0	--
Barium	56.6	461.0	372.0	540.0	--	243.0	2550.0	372.0	230.0	276.0	--
Cadmium	3.1	22.1	17.3	72.1	--	29.5	71.0	14.0	--	--	--
Calcium	16600.0	70700.0	--	--	--	61500.0	--	--	--	--	--
Chromium	7.2	157.0	96.3	445.0	--	187.0	182.0	47.4	--	--	--
Cobalt	3.4 B	16.0	--	30.3 B	--	14.3	39.9	10.6 B	--	--	--
Copper	89.0	29100.0	2410.0	2890.0	--	1420.0	4000.0	1770.0	--	391.0 J	--
Iron	21900.0	100000.0	--	229000.0	--	146000.0	163000.0	--	--	--	--
Lead	789.0	--	--	2760.0	--	--	5970.0	--	--	--	--
Magnesium	7590.0	38800.0	--	23600.0	--	30800.0	--	--	--	--	--
Manganese	219.0	891.0	--	2380.0	--	1410.0	2060.0	728.0	--	--	--
Mercury	0.4	8.2	2.0	20.5	--	8.0	10.5	2.1	--	--	--
Nickel	10.9	133.0 J	169.0 J	339.0 J	--	118.0 J	307.0 J	49.1 J	--	39.7 J	--
Potassium	479.0 B	--	--	--	--	--	--	--	1720.0	2350.0	--
Selenium	0.7 J	5.8 J	2.6 J	10.4 J	--	5.4 J	15.4 J	4.1 J	--	--	--
Silver	0.9	5.2	--	4.7 B	--	--	--	--	--	--	--
Sodium	137.0 B	--	--	--	--	--	--	567.0 B	--	420.0 B	--
Thallium	--	6.5	4.5	14.5	--	8.8	9.2	2.3 B	--	--	--
Vanadium	10.6 B	--	--	--	--	--	--	--	--	--	--
Zinc	330.0 J	5270.0	3660.0	7590.0	--	2560.0	31900.0	1870.0	--	--	--
Cyanide	0.3	2.1 J	1.7 J	4.8 J	--	--	1.4 J	1.7 J	--	1.0	--
DIOXINS NG/KG (PPT)											
2378-TCDD		3.1		11.6		7.2	13.0		0.7	1.0	0.5
2378-TCDF		285.0		1030.0		480.0	580.0		35.0	50.7	24.9
2378-TCDD TOXICITY EQUIVALENT		145.6		736.4		322.5	388.3		41.2	44.7	19.9

SITE NAME: DIAMOND SCRAP YARD

ILO 001093509

KEY SEDIMENT AND GROUNDWATER SAMPLES

TABLE 3-3

SAMPLING POINT / PARAMETER	X201 sediment background	X202	X203	X204	X205		G101 groundwater background	G103	G104	G105 Field Blank
VOLATILES UG\KG (PPB)										
Acetone	--	22.0	15.0	--	--		--	--	--	--
SEMIVOLATILES UG\KG (PPB)										
Di-n-Butylphthalate	--	--	61.0 J	--	--		--	--	--	--
bis(2-Ethylhexyl)phthalate	730.0 B	--	--	--	--		5.0 J			26.0
PESTICIDES UG\KG (PPB)										
delta-BHC	--	13.0	--	--	2.1 P		--	--	--	--
Aldrin	--	--	--	--	3.2 P		--	--	--	--
Endosulfan I	--	--	--	--	2.3 P		--	--	--	--
Aroclor-1248	--	--	--	--	48.0 P		--	--	--	--
Aroclor-1254	--	--	--	--	63.0 P		--	--	--	--
INORGANICS MG\KG (PPM)										
Aluminum	--	--	--	--	--		--	37.6 B	--	--
Arsenic	2.8	--	--	--	9.6		--	3.2 B	--	--
Barium	13.1 B	40.5 B	--	--	--		--	--	--	--
Beryllium	0.2 J	9.2	--	--	--		--	--	--	--
Cadmium	--	1.3	--	--	--		--	--	--	--
Chromium	7.5	32.0	--	--	--		--	--	--	--
Cobalt	1.9 B	9.3 B	7.7 B	7.3 B	11.8 B		--	3.4 B	--	--
Copper	16.8	990.0	--	--	--		--	--	--	--
Lead	24.6	302.0	--	--	--		--	--	--	--
Manganese	263.0	834.0	--	--	--		4.9 B	33.8	--	--
Nickel	8.2 J	55.7	--	--	24.9		--	--	--	--
Potassium	--	779.0 B	1780.0	1310.0	509.0 B		--	2690.0	--	--
Silver	--	1.0	--	--	--		--	--	--	--
Sodium	254.0 B	2200.0	--	--	--		--	--	--	--
Zinc	101.0 J	5810.0 J	--	--	--		--	--	--	--

4. IDENTIFICATION OF SOURCES

4.1 INTRODUCTION

One waste source has been identified in the initial stages of the CERCLA Integrated Assessment Inspection. This source is being discussed in this section.

Information concerning source history, size, volume, waste type, waste composition, and waste containment factors of each source were compiled during the initial Site Assessment and subsequent Integrated Assessment inspection. It should be pointed out, however, that the total number and nature of the sources at the site may change as more information is received on the site.

4.2 CONTAMINATED SOIL

Diamond Scrap Yard operations have occurred for over 40 years on the parcel of land east of Market Street. On-site operations have included salvaging and scrapping old automobiles, transformers, drums, in addition to other unknown materials. Reports of dumping liquids from gasoline tanks before crushing automobiles and drums may have contributed to contaminant soil on the property.

The extent of contaminated soils at this site was established by using the peripheral sampling points of known contamination. Because the property is long and narrow, and the sampling points were initially selected to confirm suspected areas of contamination, the area of soil contamination has been initially calculated as 522,720 square feet.

On-site soils sampled during the Integrated Assessment inspection revealed contamination within the upper two feet of soil. An area of observed soil contamination was determined using samples X102, X103, X105, X107, X108, X109, X110, X112, X114, X115 and X116. Residential sample X116 was the only sample which was collected outside of the Diamond Scrap property which had elevated levels of contaminants similar to those found on-site. These samples contained various semi-volatiles, pesticides, PCB's and inorganic contaminants. Table 3-3 lists key contaminants detected in each sample and their concentrations.

Residential soil sample X117 and duplicate X118 had concentrations of aluminum and bis(2-ethlyhexyl) phthalate significantly above background concentrations which could be attributed to the scrap yard.

Sample X115 contained the highest levels of semi-volatiles, pesticides, inorganic contaminants and dioxins. Pesticides found include heptachlor, heptachlor epoxide, dieldrin and 4,4'DDT. PCB's of concern include arochlor 1242, 1248, 1254 and 1260. Inorganic contaminants on-site consisted of arsenic, cadmium, chromium, and lead.

Subsurface soil samples indicate that contaminants can be found at least four feet below ground surface. Samples deeper than four feet were not collected during this investigation, therefore the depth of contamination is unknown. Contaminants found in the upper four feet of soil include, volatiles, semi-volatiles, pesticides and PCB's.

Observations made during the site visit revealed a lack of any type of containment in place. No evidence of a liner was noted nor did any of the soil borings suggest a natural or man-made liner. Surface water near the north end of the site flowed into the Waukegan River without any obstruction.

5. DISCUSSION OF MIGRATION PATHWAYS

5.1 INTRODUCTION

The CERCLA Site Assessment Program identifies three migration pathways and one exposure pathway by which hazardous substances may pose a threat to human health and/or the environment. Consequently, sites are evaluated on their known or potential impact to these four pathways. The pathways evaluated are groundwater migration, surface water migration, soil exposure, and air migration.

This section presents and discusses information collected during the CERCLA Integrated Assessment Inspection of Diamond Scrap Yard. Information gathered during the inspection, coupled with information documented in other sources, will be used to assess the site's impact on the four pathways and the various human and environmental targets within the established target distance limits.

Discussion of the pathways will include pathway descriptions, contaminant sources, and targets, such as human populations, fisheries, endangered species, wetlands and other sensitive environments.

5.2 GROUNDWATER

Information provided by the Illinois State Geological Survey (ISGS) indicates the geology of the area consists of glacial deposits ranging from approximately 90 feet on the east side of the county to 300 feet on the west side. Beach deposits are present as glacial drift under the site and along the shoreline of Lake Michigan. Underlying the glacial drift, is a layer of bedrock formation consisting mainly of beds of dolomite and shale which dip easterly at about 10 to 15 feet per mile (ISWS/BUL 60-20/76). This layer of dolomite is known as Silurian dolomite which is hydraulically connected to the glacial drift. Thickness of the shallow dolomite ranges from nearly zero on the west side of the county to 200 feet on the east side. Depth of the dolomite layer is approximately 90 to 300 feet from surface elevations.

The interconnected glacial drift material and the Silurian dolomite is the aquifer of concern at this site. The top of the aquifer of concern is approximately ten feet below ground surface. The Silurian dolomite is underlain by the Maquoketa Group which a non-water- bearing shale (considered a confining layer) that separates the dolomite layer from deeper water bearing layers. Beneath the shale layer is (Galena-Platteville) dolomite and (Glenwood-St. Peter) sandstone. Wells drilled through the Maquoketa shale would probably not be susceptible to contamination since this geologic unit would act to restrict the downward migration of groundwater or contaminants.

The majority of the population within four miles of Diamond

Scrap are served by the Waukegan Water System using Lake Michigan as a drinking water supply. However, twelve private wells have been identified within a four mile radius of the site. Based on information obtained from U.S.G.S. topographic maps and the U.S. Census average of 2.97 persons per house in Lake County, an estimated 36 people use groundwater from private water supplies within four miles of Diamond Scrap Yard. The nearest known private drinking water well drawing from the aquifer of concern was located approximately 3.5 miles south of the site under investigation. Approximately 60 non-community public drinking water wells (restaurants, parks, gas stations, ect.) exist within four miles of the site. The total number of workers at these establishments is unknown.

Four public drinking water wells were identified west of the site, the nearest being approximately 2.8 miles (Appendix A). These four wells are currently inactive and are considered standby wells to be used in emergencies. The depth of these wells range from approximately 600 to 1200 feet below ground surface. These are the only known public water wells within a four mile radius of the site. No private or public water wells were sampled since the nearest well was over 2 miles from the site.

There were no monitoring wells functional on the Diamond Scrap Yard property during the CERCLA field inspection. However, prior to this CERCLA inspection, IEPA installed monitoring wells on EJ & E Railroad property east of Diamond Scrap property. No contaminants which could be attributed to the site were found in either of the

monitoring wells sampled during the CERCLA Integrated Assessment.

SURFACE WATER

Surface water runoff from the northern portion of the Diamond Scrap property entered the Waukegan River. A large culvert, located beneath the area where the Diamond Scrap Office once existed, allowed the Waukegan River to flow beneath the property approximately 250 feet east to Lake Michigan. The perennial Waukegan River receives surface water runoff from Diamond Scrap Yard property.

The watershed of the Waukegan River consisted of the city of Waukegan and storm drains which collected water from the city's storm sewer system. An average stream flow rate was not listed in the U.S. Geological Survey Water Data Report 1989, although the River had a low flow rate estimated at less than 10 cubic feet per second (cfs) during the field inspection. According to the Illinois State Water Survey there are no surface water drinking intakes between the Probably Point of Entry (PPE) and Lake Michigan.

Lake Michigan is used for recreational purposes, fishing and a drinking water source. Information from the IEPA Bureau of Public Water Supplies, U.S.G.S. topographic maps and from local water operators indicated that nine communities have surface water intakes within the 15 mile target distance. Populations associated with these surface water intakes are shown below.

Table 5-1

Surface Water Target Population

Intake Name	Population
1. Waukegan	69,392
2. North Chicago	14,890
3. Great Lakes Naval Training Center	41,000
4. Lake Forest	17,836
5. Fort Sheridan	3,500
6. Highwood	5,500
7. Northbrook	32,308
8. Highland Park	30,575
9. Zion-Benton	25,000
Total:	240,001

Information provided to the agency by the Illinois Department of Conservation (IDOC) documented two state threatened species of fish within the 15 mile surface water route. According to IDOC there are no sensitive environments within a half mile radius of the Diamond Scrap property. An area referred to as Julians Reef, located approximately 12 miles south of Diamond Scrap, was designated as a potential spawning area critical for maintenance of fish\shellfish. Julians Reef has been identified as a particular area important to the maintenance of unique biotic communities.

One additional area identified by IDOC was Illinois Beach State Park, located approximately 2.5 miles north of Diamond Scrap Property. IDOC referred to this State Park as possibly being the densest concentration of endangered and threatened species in the state of Illinois. However, it should be pointed out that species are not found within the surface water route but rather all are terrestrial occurrences within the park. There are also Lacustrine wetlands along Lake Michigan's shoreline, according to the National

Wetland Inventory prepared by the U.S. Department of Interior. The Federal Emergency Management Flood Insurance Maps listed the Diamond Scrap property in an "area of minimal flooding."

No surface water samples were collected during the CERCLA Integrated Assessment. Although sediment samples were collected from the Waukegan River which flowed through a culvert beneath the northern portion of the property, where the Diamond Scrap office was previously located. Sediment sample X201 was collected upstream, west, of the Diamond property. The remaining sediment samples X202 through X205 were collected downstream, east, of the Diamond Scrap property. Sample X202 contained the highest level of inorganic constituents when compared to background conditions. The inorganic contaminants found in this sample included: arsenic, chromium, copper, lead, nickel, and zinc. These inorganic contaminants detected in X202 exceeded the environmental benchmarks for the surface water pathway listed in the Superfund Chemical Data Matrix. Arsenic, chromium, manganese, nickel, and zinc exceeded the lowest effect level listed in the Ontario Sediment Guidelines. Copper and lead exceeded the severe effect level within this document.

Two contaminants of concern, arsenic and PCB's, were detected in sample X205 which was collected just before the confluence of Waukegan River with Lake Michigan. Ontario Sediment Standard's lowest effect level was exceeded for both arsenic and PCB's in sample X205. However the arsenic and PCB contamination may not have originated from the Diamond Scrap property.

5.4 SOIL EXPOSURE

During the October 25-26, 1994 CERCLA Integrated Assessment Inspection fifteen soil samples were collected from the scrap yard property and four samples were collected off the property. Sample X101 was collected east of the scrap yard property, near the shoreline of Lake Michigan, and was intended to establish background concentration information. According to the Lake County Soil Survey, the Diamond Scrap property and the location of X101 was classified as "Made Land".

Twelve soil samples were collected from property which was either owned and or operated by Diamond Scrap Yard. Soil samples collected on the scrap yard property were collected within two feet of the ground surface except for X104 and X113. Sample X104 was collected at three feet and X113 at four feet below the ground surface. Samples collected off the facility included three residential soil samples collected along Market Street and one background taken east of Diamond Scrap. All off-site soil samples were collected zero to four inches from the soil surface.

Analytical results from samples collected on Diamond property revealed arsenic, cadmium, chromium, copper, and lead above the Removal Action Limits (RAL) established by USEPA. PCB's exceeded the cancer risk level for soil exposure listed in Superfund Chemical Data Matrix (SCDM). Dioxin 2378-TCDD also exceeded the cancer risk levels published in SCDM.

Key analytical findings were sent to the Illinois Department of Public health (IDPH) to perform a health assessment for the

public community near Diamond Scrap Yard. This health assessment addressed samples within the top three inches of soil. Inorganic contaminants found at greater concentrations than comparison values include arsenic, cadmium, chromium, copper, iron, lead, magnesium, manganese and zinc. Semivolatiles of concern include benzo(a)anthracene, chrysene, and benzo(b)fluoranthrene in sample X115. These compounds are classified by USEPA as a probable human carcinogen. Sample X110 contained indeno(1,2,3-cd)pyrene which is also classified and a probable carcinogen. PCB's were identified having concentrations greater than comparison values. Dioxin 2,3,7,8-TCDD equivalent contained concentrations higher than comparison values. IDPH concluded that contaminants 2,3,7,8-TCDD, aroclors (PCB's) and lead may pose a health risk to individuals exposed to contaminated soils. According to the IDPH evaluation, a low increased cancer risk due to investigation of, inhalation of, dermal contact with on-site soils is possible since the site is not restricted by a fence. There were no health problems identified in the surface water or groundwater pathway.

Within a four mile radius of Diamond Scrap Yard property, the population was estimated to be approximately 146,102 people. The nearest residence was located within the strip of property under investigation although Diamond Scrap operations were not conducted on this residence. This particular residence was separated by a chain link fence from Diamond Scrap property on the north, east and south side. No schools or daycare facilities were found to exist on-site or within 200 feet of potentially contaminated areas.

Nearby population within one mile of Diamond Scrap property has been calculated to be 15,155 people (Table 5-2). The population count was determined by referencing the 1989-90 Illinois Municipal Directory and USGS topographic maps for the area surrounding the scrap yard property. Where census information was not available, 2.97 persons per household average for Lake County was applied.

Table 5-2

Nearby population within one mile of the site

Distance	Population
0 - 1\4 mile	2821
1\4 - 1\2 mile	2819
1\2 - 1.0 mile	9515

Access to the site was not restricted by fencing, although remaining portions of the fence were present when the IA was conducted. There were holes in the fence and areas along the west property line had sections of missing fence. Observations made during the field inspection suggested the property was used for occasional recreation. Also during the sampling event two individuals living in an abandoned boat were observed on the Diamond Scrap property. According to the Illinois Department of Conservation Records, no sensitive areas were identified within one-half mile of the scrap yard property.

5.5 AIR ROUTE

No ambient air samples were collected, nor were any air releases observed visually during the field inspection. The

potential does exist for contaminants to be carried away from the site due to contaminants found in surficial soil. Surficial soil was observed throughout the site during sample collection. A minimal amount of ground vegetation found in the areas where most of the salvaging activities occurred would allow windblown particles to be dispersed from the site.

The approximate number of individuals within each distance category in the four mile radius of Diamond Scrap property are listed in Table 5-3. The nearest resident was located within the parcel of property under investigation although scrap yard operations were not conducted on this residential property. Sensitive environments, excluding wetlands, were found non-existent on-site or within one-half mile of Diamond Scrap Yard (Appendix G).

Table 5-3

Individuals potentially exposed to air-borne contaminants

Distance	Population
On-site	2
0 -1\4 mile	2,819
1\4 - 1\2 mile	2,819
1\2 - 1.0 mile	9,515
1.0 - 2.0 mile	34,183
2.0 - 3.0 mile	57,856
3.0 - 4.0 mile	38,908
Total	146,102

During the field inspection on October 25-26, 1994 an HNU

photoionization meter with a 10.2 Ev lamp was used to screen ambient air around the site and air in the breathing zone at each sample point. There were no HNU readings detected above background concentrations in the breathing zone throughout the field inspection. HNU concentrations did however exceed background levels in soil samples X106 and X111.

Section 6

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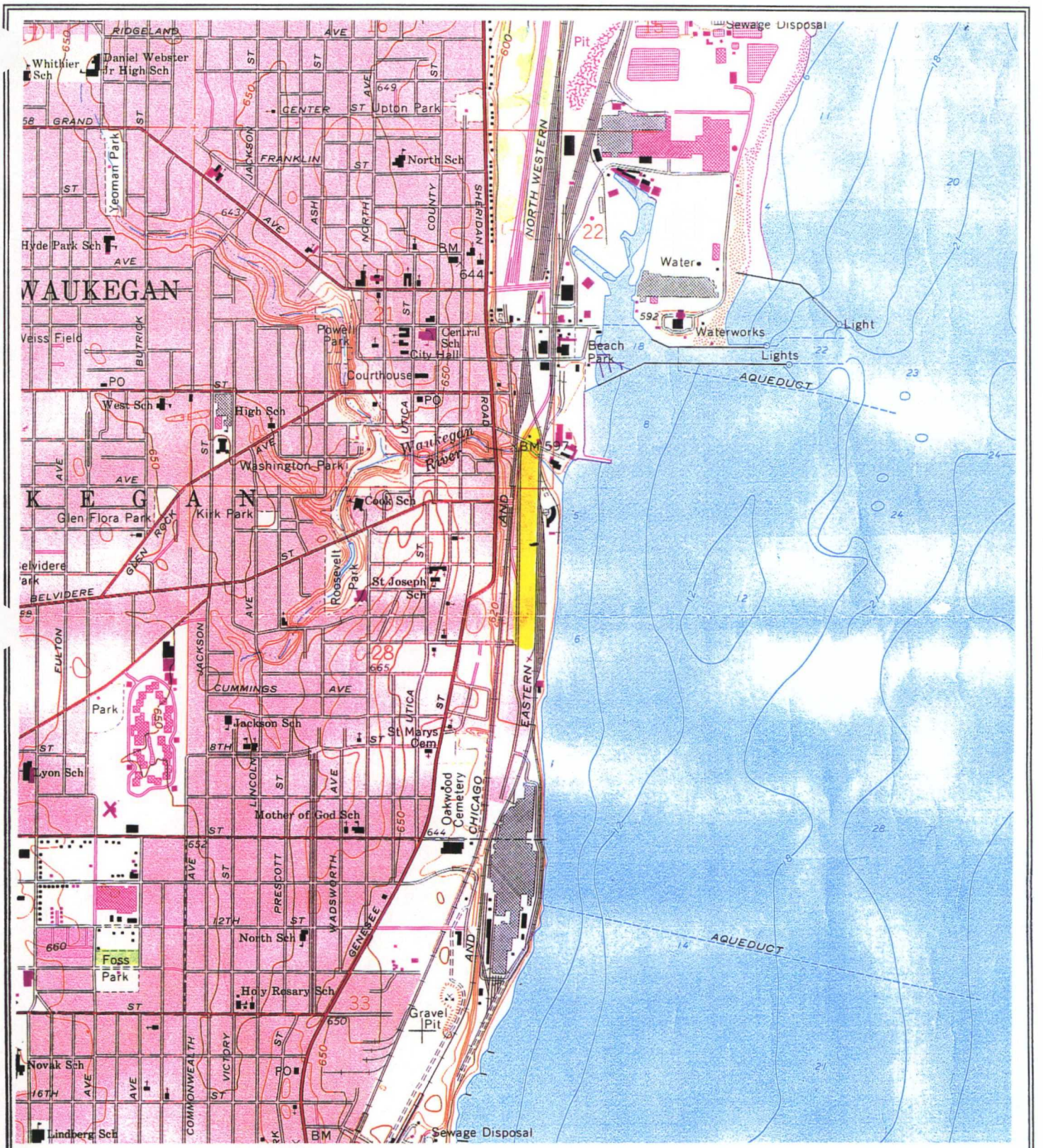
Federal Emergency Management Agency Flood Insurance Rate Map for the City of Waukegan, Illinois. Lake County. Effective Date: June 15, 1981.

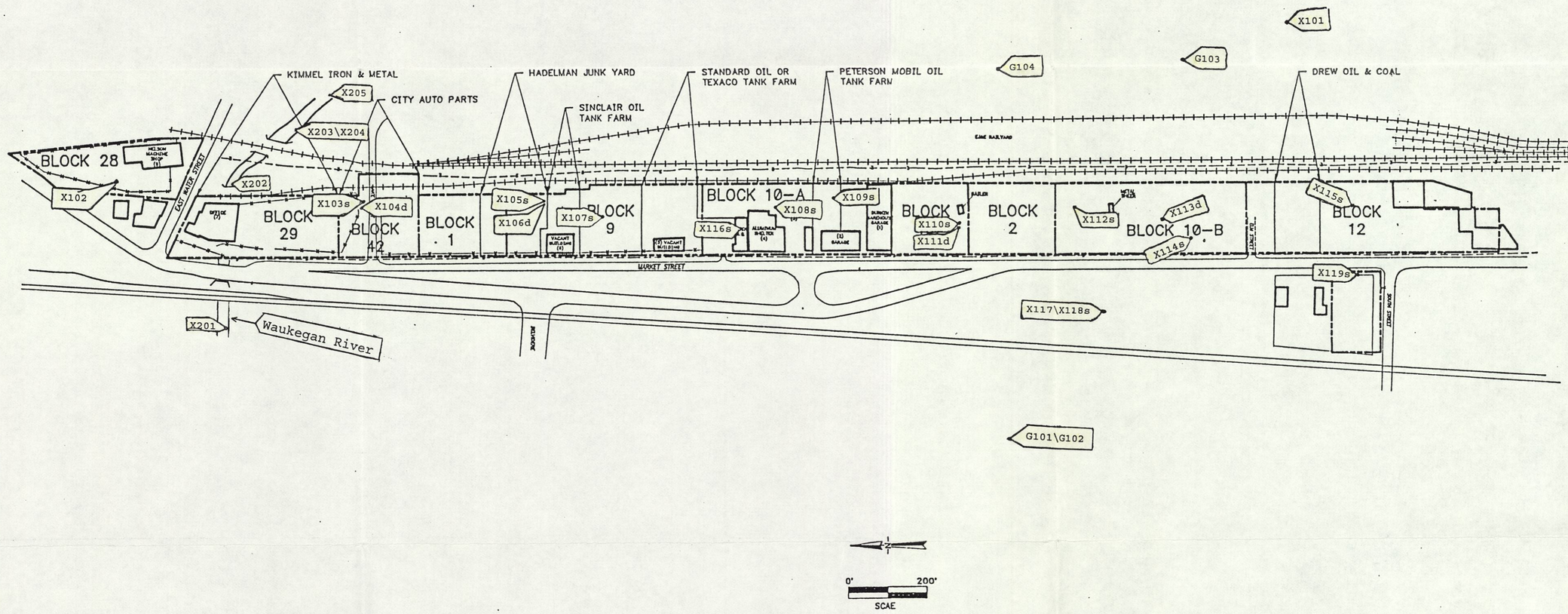
SITE LOCATION

Figure 1



DIAMOND SCRAP YARD WAUKEGAN, ILLINOIS

Figure 2



s = shallowsoil sample

d = deep sol sample

Figure 3

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY	SITE: Diamond Scrap Yard SITE ILO 001093509
Sampling Location Map	
LEGEND:	Site Location

APPENDIX A

SITE 4-MILE RADIUS MAP

AND

15-MILE SURFACE WATER MAP

1/4 MILE
1/2 MILE
1 MILE
2 MILES
3 MILES
4 MILES
WAUKEGAN
NORTH CHICAGO
GREAT LAKES NAVAL TRAINING CENTER
LAKE MICHIGAN
FOUR-MILE RADIUS TOPOGRAPHIC MAP
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
N
SITE NAME: Diamond Scrap Yard
SITE IL#: 0971900043
USGS TOPOGRAPHIC MAPS
NAME:Zion, IL - WI
DATE:1960
REVISED:1972 & 1980
NAME:Wadsworth, IL - WI
DATE:1960
REVISED:1972
NAME:Libertyville, IL
DATE:1960
REVISED:1972 & 1980
NAME:Waukegan, IL
DATE:1960
REVISED:1972 & 1980
MAP SCALE
1 : 24,000
LEGEND
SITE LOCATION
NEAREST WELL
PUBLIC WELL
SURFACE INTAKE
ILLINOIS
QUADRANGLE LOCATION

15 Mile Target Distance
PPE
LAKE MICHIGAN
APPROXIMATE MEAN LAKE ELEVATION 581 ft
N
W
E
S
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
SITE: Diamond Scrap Yard
Waukegan, Il.
SITE ILO #001093509
15-MILE SURFACE WATER MAP
LEGEND:
KILOMETERS
MILES
Site Location
Surface Water Intake
BENTON
Zion
Waukegan
WAUKEGAN
North Chicago
SHIELDS
Lake Forest
WEST DEERFIELD
Highland Park
Deerfield
DEERFIELD
Northbrook
NORTHFIELD
Glencoe
Winnetka
NEW TRIER
Northfield
Kenilworth
MAINE
Niles
NILES
Park Ridge
CHICAGO
ROGERS PARK
Illinois Beach State Park
Waukegan Memorial Airport
Dunes Park
Lake Bluff
Highwood
Bannockburn
Chicago Botanic Garden
North Branch Bicycle Trail
Flood Plain Lagoons
Skokie Lagoons
Hubbard Woods
Ravinia
Deerpath
Lake Michigan Circle Tour
Winthrop Harbor
Camp Logan
Beach Park
Shiloh Park
Farnum Point
ILLINOIS BEACH STATE PARK
Lakings Pond
Park City
Northshore Cem
GREAT LAKES NAVAL TRAINING CENTER
Aqueduct
Landing Strip
FORT SHERIDAN
Walter E. Heller Nature Park & Interpretive Center
Bridgeway Cemetery
Bellevue Lake
Hospital
Cem
© DeLorme

APPENDIX B

U.S. EPA FORM 2070-13

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
Il.	IID 001093509

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Diamond Scrap Yard	Market Street and Elgin

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Waukegan	Il.	60087	Lake	097	10&12

09 COORDINATES LATITUDE	LONGITUDE	10 TYPE OF OWNERSHIP (Check one)
42 01 41.0	087 42 23.0	☒ 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
10 25 94 (MONTH DAY YEAR)	☐ ACTIVE ☒ INACTIVE	1930 (BEGINNING YEAR) 1988 (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.
Brad S. Taylor	Env. Protection Specialist II	Il. EPA	(217) 782-6760

09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
Pete Sorensen	"	"	( ) "
Bob Casper	"	"	( ) "
Ken Corkill	Env. Protection Specialist III	"	( ) "
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
David Miller	Consultant	1240 E. Diehl Rd. Naperville	(708) 955-6777
John Geiyer	"	"	(708) 955-6690
Tom Weigel	Engineer	Joliet EJ&E. Railway	(815) 740-6636
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	10/25-94 - 10-26-94	Cloudy, North-Northwest Wind. Approximately 45°F

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Sonia Vega	U.S. EPA Region V	(312) 886-7191

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Brad S. Taylor	Il. EPA	State of Illinois	217-782-6760	8 22 95 (MONTH DAY YEAR)

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	IL0 001093509

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- [x] 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 _____
NO. OF DRUMS None

03 WASTE CHARACTERISTICS (Check all that apply)

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

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
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
MES	Cadmium	7440-43-9	All substances were	80.9	ppm
MES	Chromium III	16065-83-1	found in on-site	445	ppm
MES	Copper	7440-50-8	soil samples	29100	ppm
	DDT	50-29-3	collected during	2600	ppb
	Dieldrin	60-57-1	the field inspection.	1900	ppb
	Heptachlor	76-44-8		160	ppb
	Heptachlor epoxide	1024-57-3		93	ppb
MES	Lead	7439-92-1		5970	ppm
	PCB's (Arochlor 1248)	1336-36-3		28	ppm
	TCDD	1746-01-6		14.2	ppt
	Arochlor 1260	1336-36-3		15	ppm
MES	Aluminum	7429-90-5		257,000	ppm
MES	Arsenic	7440-38-2		62.9	ppm

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)

IL EPA Land Division Files.

Analytical Results from Field Inspection on 10/25/94 & 10/26/94.

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
I.I.	I10 00109 3509

II. HAZARDOUS CONDITIONS AND INCIDENTS

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

A potential for ground water contamination does exist due to contaminant found in on site soils. However, monitoring well near the site did not possess contaminants above MCL's.

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

Sediment samples revealed contaminants similar to those found on-site. Lake Michigan is used for Fishing, Recreation, & Drinking Water.

01 ■ C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 146,102 04 NARRATIVE DESCRIPTION

There are 146,102 people within 4 miles of the site. Although analytical results suggest contamination is limited to the immediate vicinity of Diamond Scray property.

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

The site is not fenced off and Residents live nearby. There appeared to have been illegal dumping and activity be tresspassers.

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

Contaminant were found throughout the 12 acre piece of property.

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

Contaminants were found in the Waukegan River which empties into Lake Michigan and is used as a drinking water source.

01 ■ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: 3 04 NARRATIVE DESCRIPTION

There are workers located at the northern end of the property at Larson Marine Company.

01 ■ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 2 04 NARRATIVE DESCRIPTION

Only one residence was found to contain contaminants above established benchmarks.

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	IL0 00 1093509

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: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION *(Include name(s) of species)*

None documented or observed

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

Contaminant could migrate from the site into the Waukegan River which empties into Lake Michigan.

01 ■ M. UNSTABLE CONTAINMENT OF WASTES *(Soils/Runoff/Standing liquids, Leaking drums)* — 02 ■ OBSERVED (DATE: 10/25/94) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

There were no on-site structures to prevent contaminants from entering the Waukegan River or otherwise leaving the site.

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

There is a low potential for contaminated soil to be distribed to neilboring through air migration and or overland surface flow.

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

A potential exists for soils to be washed into the sanitary drains.

01 ■ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ■ OBSERVED (DATE: 10/25/94) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

During the field inspection a variety of materials were dumped on-site and along Market Street.

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

None

III. TOTAL POPULATION POTENTIALLY AFFECTED: 146,107

IV. COMMENTS

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

IEPA Land Division Files

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	IL0 001093509

II. PERMIT INFORMATION

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

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☒ B. PILES	Unknown	
☐ C. DRUMS, ABOVE GROUND		
☒ D. TANK, ABOVE GROUND	Unknown	
☒ E. TANK, BELOW GROUND	2	500, 1000gal
☐ 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

12 (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.

No containment system used to prevent materials from being carried away from the site through surface wind & water erosion.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☒ YES ☐ NO

02 COMMENTS

The site is not fenced.

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

IL EPA Bureau of Land File.

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
Il.	Il0 00189 3509

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. _____ (mi)
B. _____ (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 36

03 DISTANCE TO NEAREST DRINKING WATER WELL 3.5 (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
10 (ft)		(ft)	(gpd)	☐ YES ☐ NO

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

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

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
Lake Michigan	☐	0.2 (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 15155 NO. OF PERSONS	B. 49338 NO. OF PERSONS	C. 107194 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION 0 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE: Unknown

04 DISTANCE TO NEAREST OFF-SITE BUILDING _____ (mi)

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

Il. EPA Land Division Files.

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	IL0 00109 3509

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
90-300 (ft)	Unknown (ft)	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
33.57 (in)	2.4 (in)	Flat %		%

09 FLOOD POTENTIAL

SITE IS IN — 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)*

2.5 (mi)

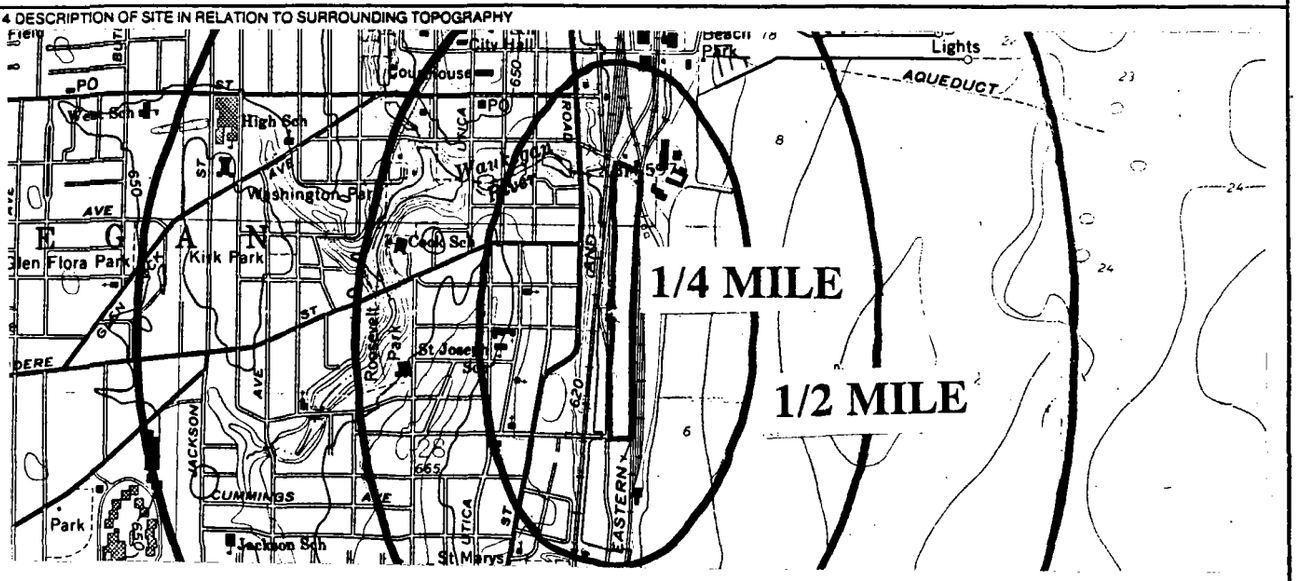
ENDANGERED SPECIES: _____

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. _____ (mi)	B. _____ (mi)	C. _____ (mi)	D. _____ (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY



VII. 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 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
Il.	I/O 00/09 3509

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	3		
SURFACE WATER (Sediment)	5	Organic Analysis	
WASTE		American Analytical & Technical Services	
AIR		11950 Industrial Blvd.	
RUNOFF		Baton Rouge LA.	
SPILL		Inorganics	
SOIL	19	Quanterra Environmental Services	
VEGETATION		13715 Rider Trail North	
OTHER		Earth City, Mo. 63045	

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
Groundwater	pH, Temperature, Millivolts, HNU
Soil/Sediment	HNU, Locations, Depth of sample, appearance, measurements
	from identifiable landmarks.

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☒ AERIAL

02 IN CUSTODY OF Il. EPA / Bureau of Land Records (Name of organization or individual)

03 MAPS ☒ YES ☐ NO

04 LOCATION OF MAPS

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

Visual observations and photographic documentation of each sample location

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

Il. EPA Division of Land Files.

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	IL0 001093509

II. CURRENT OWNER(S) / **PARENT COMPANY** (If applicable)

01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
Bank of Waukegan			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE
Waukegan	Il.	60087			

01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
Burton Diamond			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE
Waukegan	Il.	60087			

01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first) / **IV. REALTY OWNER(S)** (If applicable; list most recent first)

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

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

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)

Illinois EPA Division of Land Files

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
Il.	I/0 001093509

II. CURRENT OPERATOR (Provide if different from owner)			OPERATOR'S PARENT COMPANY (If applicable)		
01 NAME Inactive		02 D+B NUMBER	10 NAME		11 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER				

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)			PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)		
01 NAME		02 D+B NUMBER	10 NAME		11 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD				
01 NAME		02 D+B NUMBER	10 NAME		11 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD				
01 NAME		02 D+B NUMBER	10 NAME		11 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD				

IV. 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 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	IL0 000093509

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
Barton Diamond	

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

05 CITY	06 STATE	07 ZIP CODE
Waukegan	IL	60087

III. OFF-SITE GENERATOR(S)

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

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

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)

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	ILD 001093509

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N.A.

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

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

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

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

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N.A.

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

01 ☐ H. ON SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Unknown

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

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

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

01 ☐ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N.A.

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

01 ☐ N. CUTOFF WALLS — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N.A.

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

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

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

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	IL000109 3509

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)*

IL EPA Division of Land Files

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	I 10 00093509

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 C

TARGET COMPOUND LIST

TARGET COMPOUND LIST

Volatile Target Compounds

Chloromethane	1,2-Dichloropropane
Bromomethane	cis-1,3-Dichloropropene
Vinyl Chlorde	Trichloroethene
Chloroethane	Dibromochloromethane
Methylene Chloride	1,1,2-Trichloroethane
Acetone	Benzene
Carbon Disulfide	trans-1,3-Dichloropropene
1,1-Dichloroethene	Bromoform
1,1-Dichloroethane	4-Methyl-2-pentanone
1,2-Dichloroehtene (total)	2-Hexanone
Chloroform	Tetrachloroethene
1,2-Dichloroethane	1,1,2,2-Tetrachloroethane
2-Butanone	Toluene
1,1,1-Trichloroethane	Chlorobenzene
Carbon Tetrachloride	Ethylbenzene
Vinyl Acetate	Styrene
Bromodichloromethane	Xylenes (total)

Base/Neutral Target Compounds

Hexachloroethane	2,4-Dinitrotoluene
bis(2-Chloroethyl) Ether	Diethylphthalate
Benzyl Alcohol	N-Nitrosodiphenylamine
bis (2-Chloroisopropyl) Ether	Hexachlorobenzene
N-Nitroso-Di-n-Propylamine	Phenanthrene
Nitrobenzene	4-Bromophenyl-phenylether

Hexachlorobutadiene	Anthracene
2-Methylnaphthalene	Di-n-Butylphthalate
1,2,4-Trichlorobenzene	Fluoranthene
Isophorone	Pyrene
Naphthalene	Butylbenzylphthalate
4-Chloroaniline	bis(2-Ethylhexyl)Phthalate
bis(2-chloroethoxy)Methane	Chrysene
Hexachlorocyclopentadiene	Benzo(a)Anthracene
2-Chloronaphthalene	3-3'-Dichlorobenzidene
2-Nitroaniline	Di-n-Octyl Phthalate
Acenaphthylene	Benzo(b)Fluoranthene
3-Nitroaniline	Benzo(k)Fluoranthene
Acenaphthene	Benzo(a)Pyrene
Dibenzofuran	Ideno(1,2,3-cd)Pyrene
Dimethyl Phthalate	Dibenz(a,h)Anthracene
2,6-Dinitrotoluene	Benzo(g,h,i)Perylene
Fluorene	1,2-Dichlorobenzene
4-Nitroaniline	1,3-Dichlorobenzene
4-Chlorophenyl-phenylether	1,4-Dichlorobenzene

Acid Target Compounds

Benzoic Acid	2,4,6-Trichlorophenol
Phenol	2,4,5-Trichlorophenol
2-Chlorophenol	4-Chloro-3-methylphenol
2-Nitrophenol	2,4-Dinitrophenol
2-Methylphenol	2-Methyl-4,6-dinitrophenol
2,4-Dimethylphenol	Pentachlorophenol
4-Methylphenol	4-Nitrophenol
2,4-Dichlorophenol	

Pesticide/PCB Target Compounds

alpha-BHC	Endrin Ketone
beta-BHC	Endosulfan Sulfate
delta-BHC	Methoxychlor
gamma-BHC (Lindane)	alpha-Chlordane
Heptachlor	gamma-Chlordane
Aldrin	Toxaphene
Heptachlor epoxide	Aroclor-1016
Endosulfan I	Aroclor-1221
4,4'-DDE	Aroclor-1232
Dieldrin	Aroclor-1242
Endrin	Aroclor-1248
4,4'-DDD	Aroclor-1254
Endosulfan II	Aroclor-1260
4,4'-DDT	

Inorganic Target Compounds

Aluminum	Manganese
Antimony	Mercury
Arsenic	Nickel
Barium	Potassium
Beryllium	Selenium
Cadmium	Silver
Calcium	Sodium
Chromium	Thallium
Cobolt	Vanadium
Copper	Zinc

Iron	Cyanide
Lead	Sulfide
Magnesium	

APPENDIX D

INTEGRATED SITE INSPECTION PHOTOGRAPHS

INTEGRATED ASSESSMENT INSPECTION PHOTOS

ATE: 10/25/94	SITE ILO#: 001093509 COUNTY: LAKE
TIME: 2:30 p	SITE NAME: DIAMOND SCRAP YARD

PHOTOGRAPH TAKEN BY: BRAD TAYLOR

COMMENTS: Picture taken toward: East

SAMPLE X101

Soil sample taken from EJ & E Rail-road property. Area east of Diamond Scrap Yard.

Depth 0-4 in

DATE: 10/25/94

TIME: 2:30 p

PHOTOGRAPH TAKEN BY: BRAD TAYLOR

COMMENTS: Picture taken toward: WEST

SAMPLE X101

Soil sample taken from EJ & E Rail-road property. Area east of Diam-ond Scrap Yard.

Depth 0-4 in

INTEGRATED ASSESSMENT INSPECTION PHOTOS

ATE: 10/26/94	SITE ILO#:001093509 COUNTY: LAKE
TIME: 4:15 p	SITE NAME: DIAMOND SCRAP YARD

PHOTOGRAPH TAKEN BY: BRAD TAYLOR

COMMENTS: Picture taken toward: SOUTH

SAMPLE X102

Soil taken from Block 28 where Larsen Marine Boat was currently located.

Depth 12 in

DATE: 10/26/94

TIME: 4:15 p

PHOTOGRAPH TAKEN BY: BRAD TAYLOR

COMMENTS: Picture taken toward: WEST

SAMPLE X102

Soil sample taken from Block 28. Looking toward Sand Street.

Depth 12 in

INTEGRATED ASSESSMENT INSPECTION PHOTOS

ATE: 10/26/94	SITE ILO#:001093509 COUNTY: LAKE
TIME: 8:45 a	SITE NAME: DIAMOND SCRAP YARD

PHOTOGRAPH TAKEN BY: BRAD TAYLOR

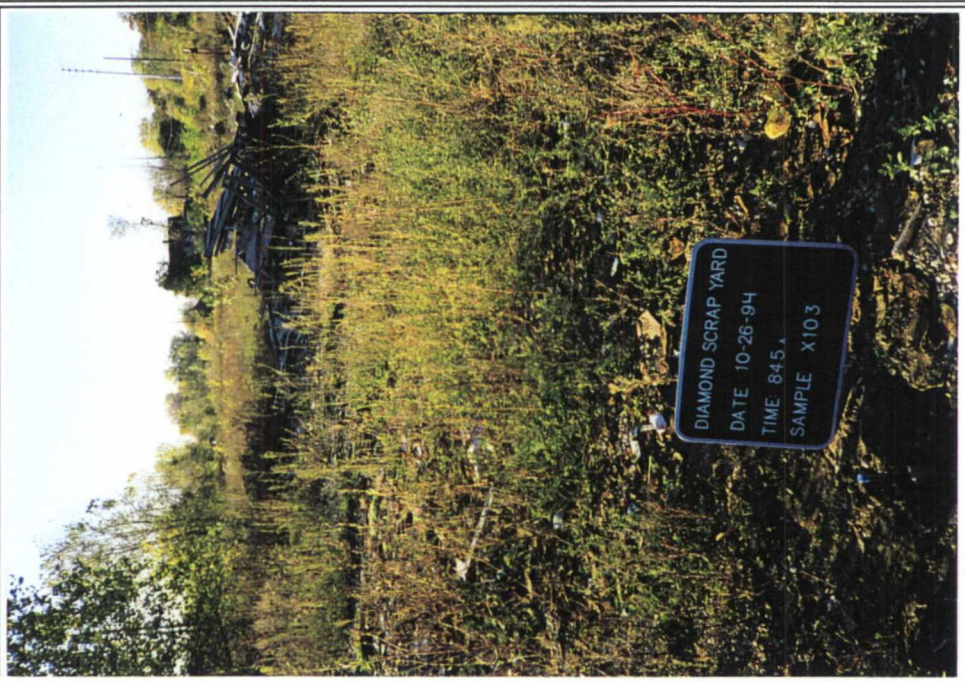
COMMENTS: Picture taken toward: South

SAMPLE X103

Surface soil taken

from Block 42.

Depth 2-4 in



DATE: 10/26/94

TIME: 8:45 a

PHOTOGRAPH TAKEN BY: BRAD TAYLOR

COMMENTS: Picture taken toward: WEST

SAMPLE X103

Surface soil taken

from Block 42.

Looking toward

Market Street.

Depth 2-4 in

INTEGRATED ASSESSMENT INSPECTION PHOTOS

`ATE: 10/26/94	SITE ILO#:001093509 COUNTY: LAKE
TIME: 8:15 a	SITE NAME: DIAMOND SCRAP YARD
PHOTOGRAPH TAKEN BY: BRAD TAYLOR	
COMMENTS: Picture taken toward: South	
SAMPLE X104	
Deep soil sample	
taken from Block 42	
Depth 3 feet	

DATE: 10/26/94
TIME: 8:15 a
PHOTOGRAPH TAKEN BY: BRAD TAYLOR
COMMENTS: Picture taken toward: WEST
SAMPLE X104
Deep soil sample
taken from Block
42.
Depth 3 feet

INTEGRATED ASSESSMENT INSPECTION PHOTOS

DATE: 10/26/94	SITE ILO#:001093509 COUNTY: LAKE
TIME: 9:15 a	SITE NAME: DIAMOND SCRAP YARD

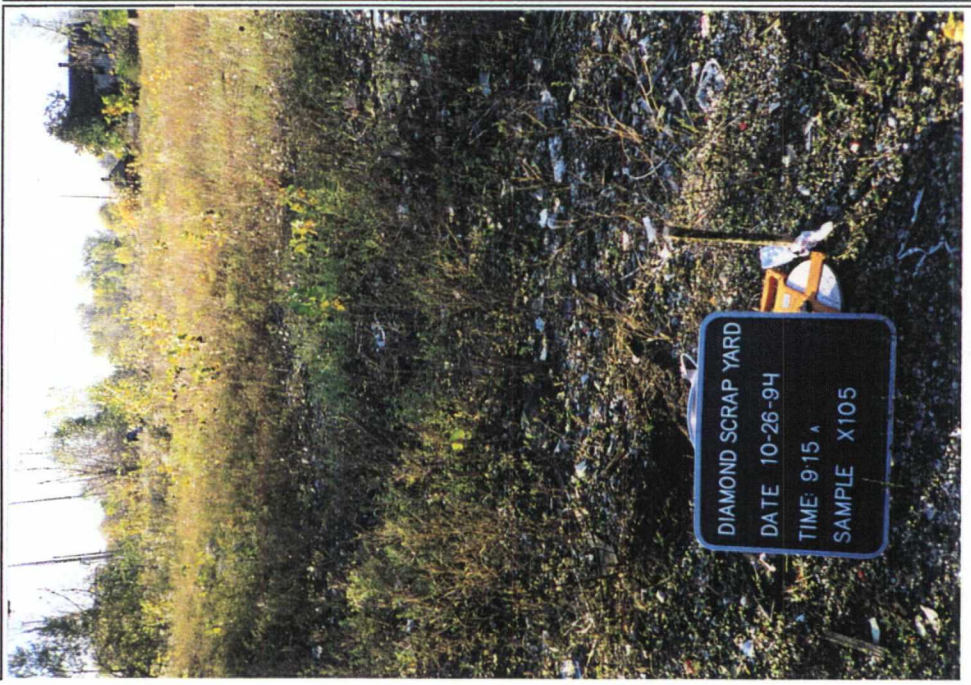
PHOTOGRAPH TAKEN BY: BRAD TAYLOR

COMMENTS: Picture taken toward: South

SAMPLE X105

Surface soil sample taken from north portion of Block 9.

Depth 0-4 in



DATE: 10/26/94

TIME: 9:15 a

PHOTOGRAPH TAKEN BY: BRAD TAYLOR

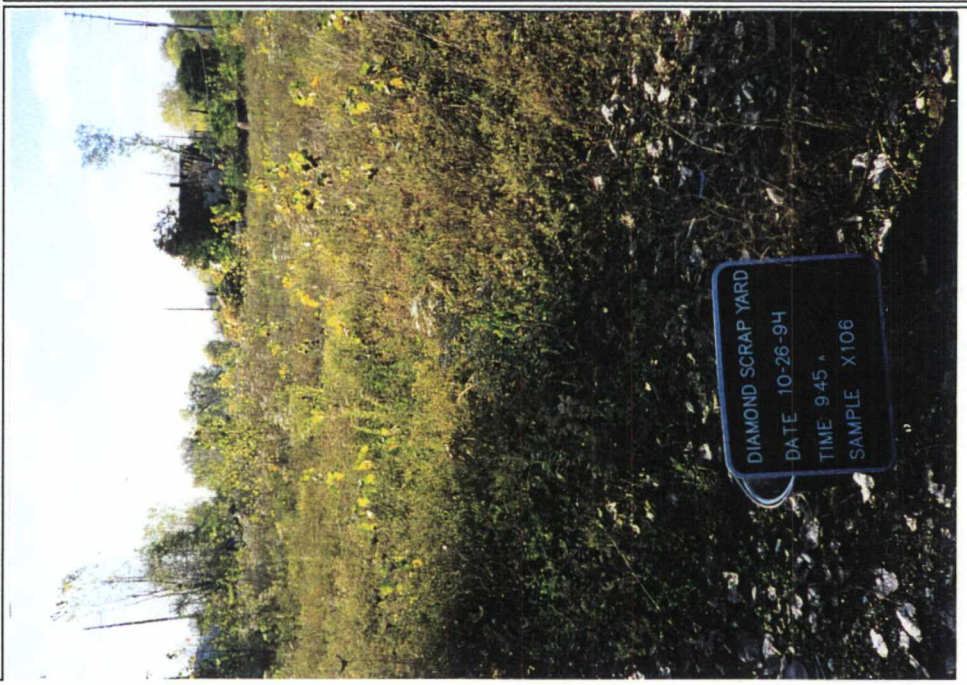
COMMENTS: Picture taken toward: WEST

SAMPLE X105

Surface soil sample taken from Block 9. Looking west toward Market Street.

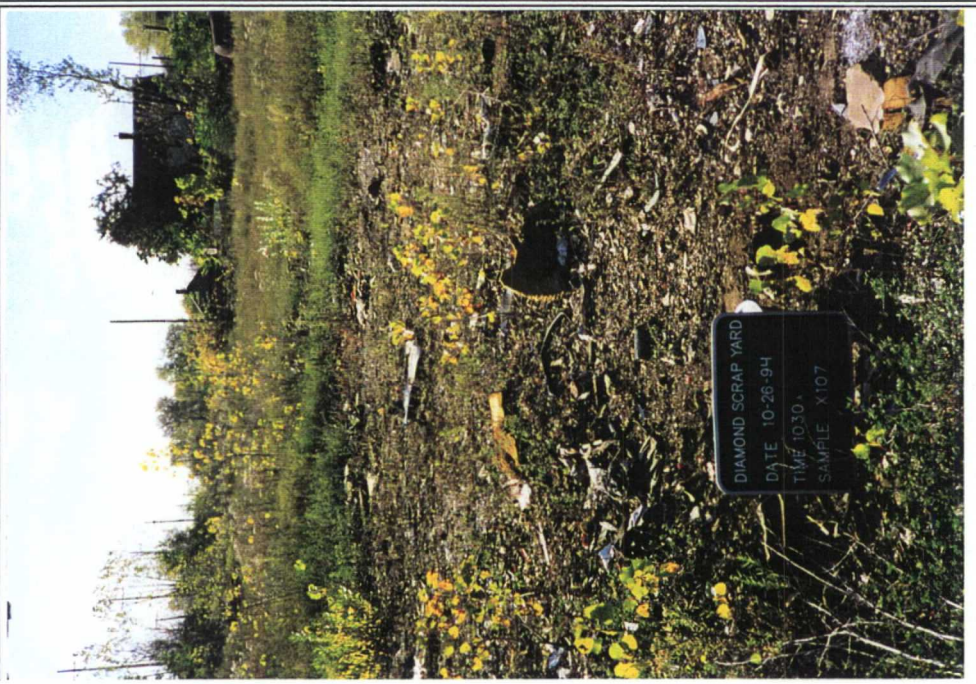
Depth 0-4 in

INTEGRATED ASSESSMENT INSPECTION PHOTOS

ATE: 10/26/94	SITE ILO#:001093509 COUNTY: LAKE
TIME: 9:45 a	SITE NAME: DIAMOND SCRAP YARD
PHOTOGRAPH TAKEN BY: BRAD TAYLOR	
COMMENTS: Picture taken toward: South	
SAMPLE X106	
Soil sample taken	
from the northern	
part of Block 9.	
Depth 12 in	

DATE: 10/26/94	
TIME: 9:45 a	
PHOTOGRAPH TAKEN BY: BRAD TAYLOR	
COMMENTS: Picture taken toward: WEST	
SAMPLE X106	
Soil sample taken	
from the northern	
portion of Block 9.	
Depth 12 in	

INTEGRATED ASSESSMENT INSPECTION PHOTOS

DATE: 10/26/94	SITE ILO#:001093509 COUNTY: LAKE
TIME: 10:30 a	SITE NAME: DIAMOND SCRAP YARD
PHOTOGRAPH TAKEN BY: BRAD TAYLOR	
COMMENTS: Picture taken toward: South	
SAMPLE X107	
Surface soil sample	
taken from the	
southern portion of	
Block 9.	
Depth 1-4 in	

DATE: 10/26/94	
TIME: 10:30 a	
PHOTOGRAPH TAKEN BY: BRAD TAYLOR	
COMMENTS: Picture taken toward: WEST	
SAMPLE X107	
Surface soil sample	
taken near the	
southern portion of	
Block 9.	
Depth 1-4 in	

INTEGRATED ASSESSMENT INSPECTION PHOTOS

ATE: 10/26/94	SITE ILO#:001093509 COUNTY: LAKE
TIME: 11:00 a	SITE NAME: DIAMOND SCRAP YARD

PHOTOGRAPH TAKEN BY: BRAD TAYLOR

COMMENTS: Picture taken toward: South

SAMPLE X108

Surface soil sample taken from Block 10-A where the Aluminum smelter used to be.

Depth 0-4 in

DATE: 10/26/94

TIME: 11:00 a

PHOTOGRAPH TAKEN BY: BRAD TAYLOR

COMMENTS: Picture taken toward: WEST

SAMPLE X108

Surface soil sample taken from Block 10-A where the Aluminum smelter used to be.

Depth 0-4 in

INTEGRATED ASSESSMENT INSPECTION PHOTOS

DATE: 10/26/94	SITE ILO#:001093509 COUNTY: LAKE
TIME: 11:30 a	SITE NAME: DIAMOND SCRAP YARD
PHOTOGRAPH TAKEN BY: BRAD TAYLOR	
COMMENTS: Picture taken toward: South	
SAMPLE X109	
Surface soil sample	
taken from the	
southern portion of	
Block 10-A, near	
Durkin warehouse.	
Depth 0-2 in	

DATE: 10/26/94
TIME: 11:30 a
PHOTOGRAPH TAKEN BY: BRAD TAYLOR
COMMENTS: Picture taken toward: WEST
SAMPLE X109
Surface soil sample
taken from the
southern portion of
Block 10-A, near
Durkin warehouse.
Depth 0-2 in

INTEGRATED ASSESSMENT INSPECTION PHOTOS

ATE: 10/26/94	SITE ILO#:001093509 COUNTY: LAKE
TIME: 11:45 a	SITE NAME: DIAMOND SCRAP YARD
PHOTOGRAPH TAKEN BY: BRAD TAYLOR	
COMMENTS: Picture taken toward: South	
SAMPLE X110	
Surface soil sample	
taken from Block	
19, north of Baler.	
Depth 0-4 in	

DATE: 10/26/94	
TIME: 11:45 a	
PHOTOGRAPH TAKEN BY: BRAD TAYLOR	
COMMENTS: Picture taken toward: WEST	
SAMPLE X110	
Surface soil sample	
taken from Block 19	
north of the Baler.	
Depth 0-4 in	

INTEGRATED ASSESSMENT INSPECTION PHOTOS

DATE: 10/26/94	SITE ILO#:001093509 COUNTY: LAKE
TIME: 12:00 noon	SITE NAME: DIAMOND SCRAP YARD

PHOTOGRAPH TAKEN BY: BRAD TAYLOR

COMMENTS: Picture taken toward: South

SAMPLE X111

Soil boring taken from Block 19, north of the Baler.

HNU reading 5 PPM

Depth 2 feet

DATE: 10/26/94

TIME: 12:00 noon

PHOTOGRAPH TAKEN BY: BRAD TAYLOR

COMMENTS: Picture taken toward: WEST

SAMPLE X111

Soil boring taken from the southern portion of Block 19 north of the Baler.

HNU reading 5 PPM

Depth 2 feet

INTEGRATED ASSESSMENT INSPECTION PHOTOS

DATE: 10/26/94	SITE ILO#:001093509 COUNTY: LAKE
TIME: 1:00 p	SITE NAME: DIAMOND SCRAP YARD

PHOTOGRAPH TAKEN BY: BRAD TAYLOR

COMMENTS: Picture taken toward: South

SAMPLE X112

Surface soil sample taken from Block 10-B, where the incinerator used to be.

Depth 0-3 in

DATE: 10/26/94

TIME: 1:00 p

PHOTOGRAPH TAKEN BY: BRAD TAYLOR

COMMENTS: Picture taken toward: WEST

SAMPLE X112

Surface soil sample taken from Block 10-B, where the wire incinerator used to be.

Depth 0-3 in

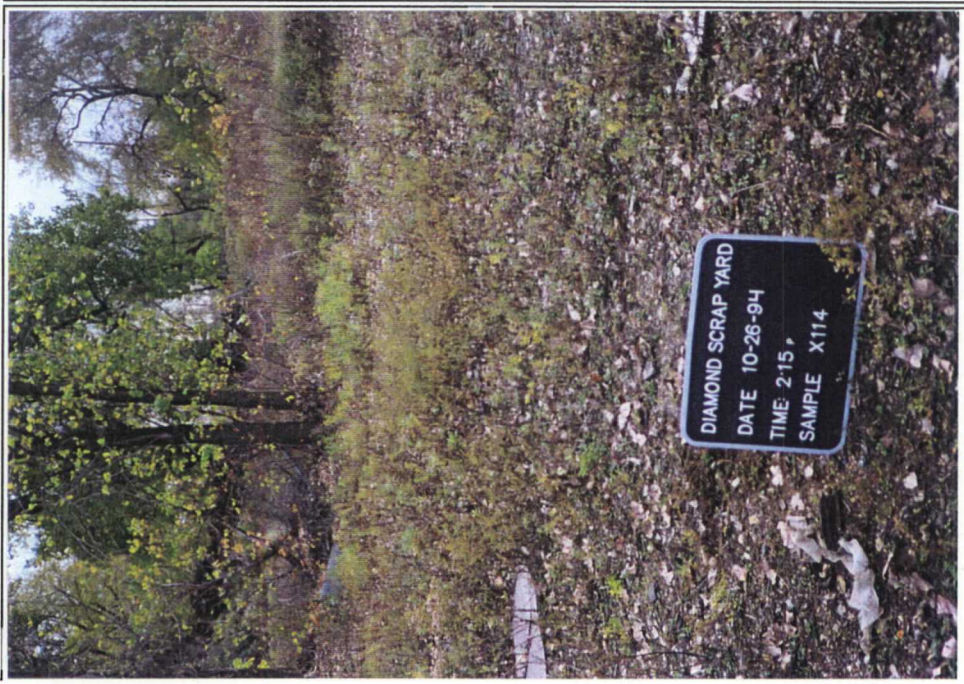
INTEGRATED ASSESSMENT INSPECTION PHOTOS

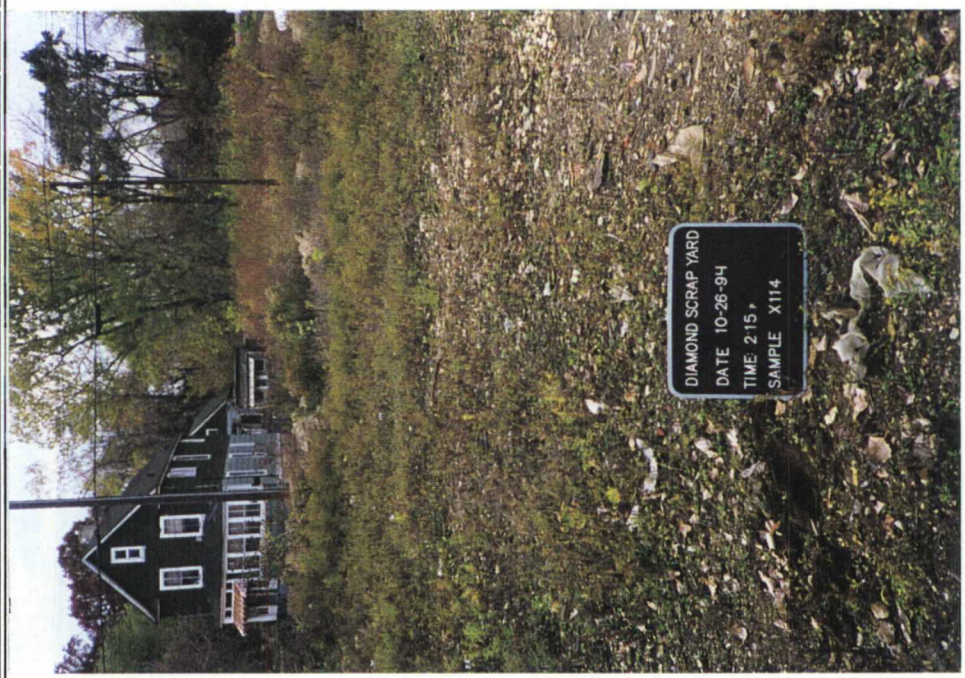
DATE: 10/26/94	SITE ILO#:001093509 COUNTY: LAKE
TIME: 1:30 p	SITE NAME: DIAMOND SCRAP YARD
PHOTOGRAPH TAKEN BY: BRAD TAYLOR	
COMMENTS: Picture taken toward: South	
SAMPLE X113	
Soil boring taken	
from Block 10-B,	
north of the metal	
shear.	
Depth 4 feet	

DATE: 10/26/94
TIME: :
PHOTOGRAPH TAKEN BY: BRAD TAYLOR
COMMENTS: Picture taken toward:
SAMPLE X113
Depth 4 feet

No Photo Available

INTEGRATED ASSESSMENT INSPECTION PHOTOS

DATE: 10/26/94	SITE ILO#:001093509 COUNTY: LAKE
TIME: 2:15 p	SITE NAME: DIAMOND SCRAP YARD
PHOTOGRAPH TAKEN BY: BRAD TAYLOR	
COMMENTS: Picture taken toward: South	
SAMPLE X114	
Surface soil sample	
taken from the	
southern portion of	
Block 10-B.	
Depth 0-4 in	

DATE: 10/26/94	
TIME: 2:15 p	
PHOTOGRAPH TAKEN BY: BRAD TAYLOR	
COMMENTS: Picture taken toward: WEST	
SAMPLE X114	
Surface soil sample	
taken from the	
southern portion of	
Block 10-B.	
Depth 0-4 in	

INTEGRATED ASSESSMENT INSPECTION PHOTOS

DATE: 10/26/94	SITE ILO#:001093509 COUNTY: LAKE
TIME: 2:45 p	SITE NAME: DIAMOND SCRAP YARD

PHOTOGRAPH TAKEN BY: BRAD TAYLOR

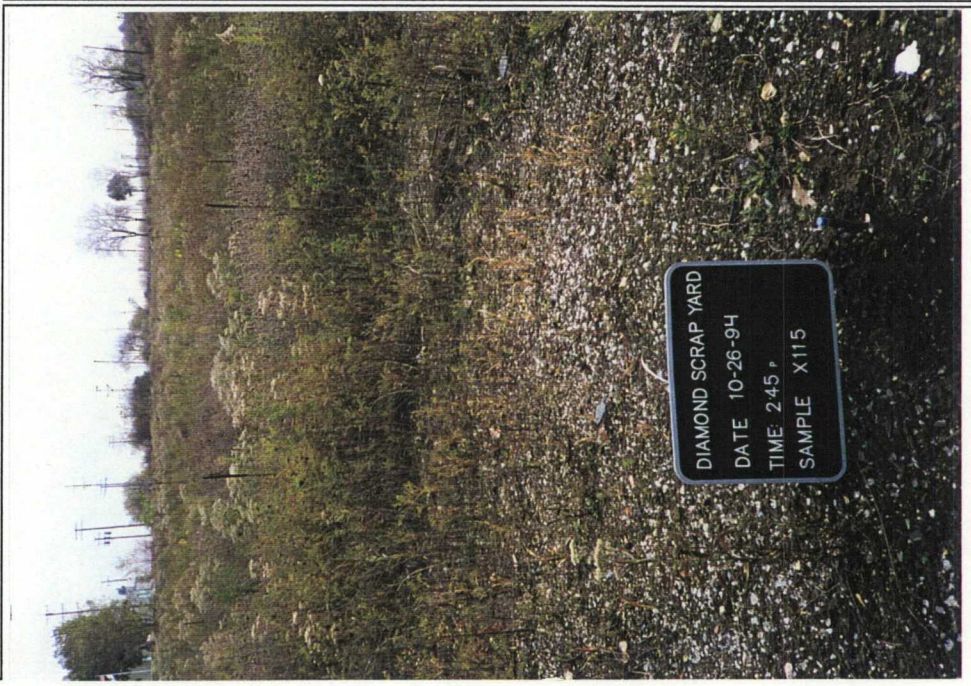
COMMENTS: Picture taken toward: South

SAMPLE X115

Surface soil sample

taken from Block 12

Depth 0-2 in



DATE: 10/26/94

TIME: 2:45 p

PHOTOGRAPH TAKEN BY: BRAD TAYLOR

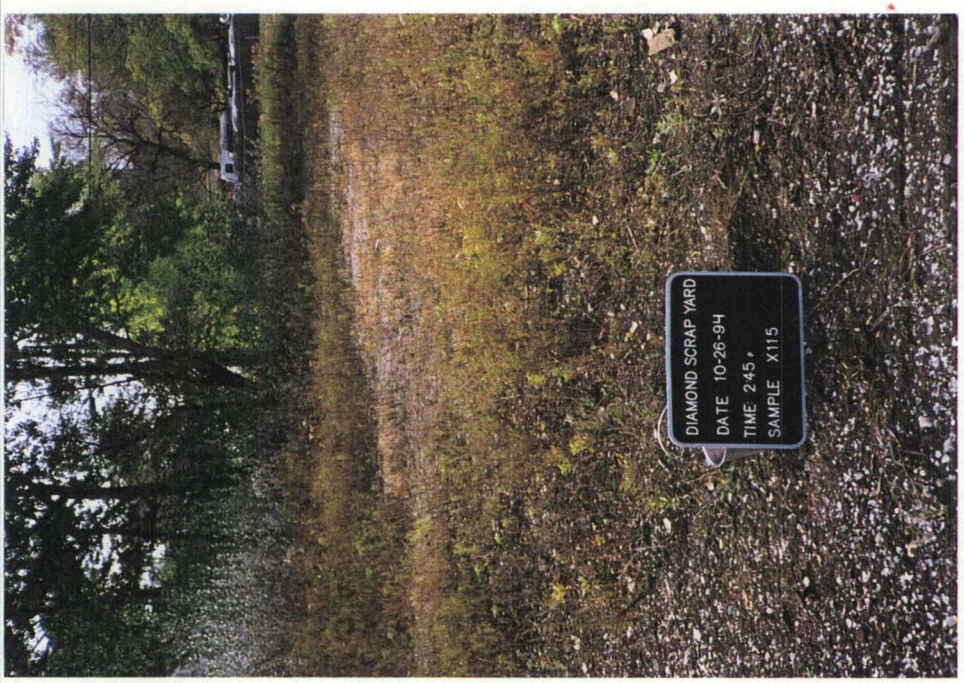
COMMENTS: Picture taken toward: WEST

SAMPLE X115

Surface soil sample

taken from Block 12

Depth 0-2 in



INTEGRATED ASSESSMENT INSPECTION PHOTOS

DATE: 10/26/94	SITE ILO#:001093509 COUNTY: LAKE
TIME: 3:45 p	SITE NAME: DIAMOND SCRAP YARD

PHOTOGRAPH TAKEN BY: BRAD TAYLOR

COMMENTS: Picture taken toward: North

SAMPLE X116

Surface soil sample taken from the northeast part of residential yard.

Depth 0-4 in

DATE: 10/26/94

TIME: 3:45 p

PHOTOGRAPH TAKEN BY: BRAD TAYLOR

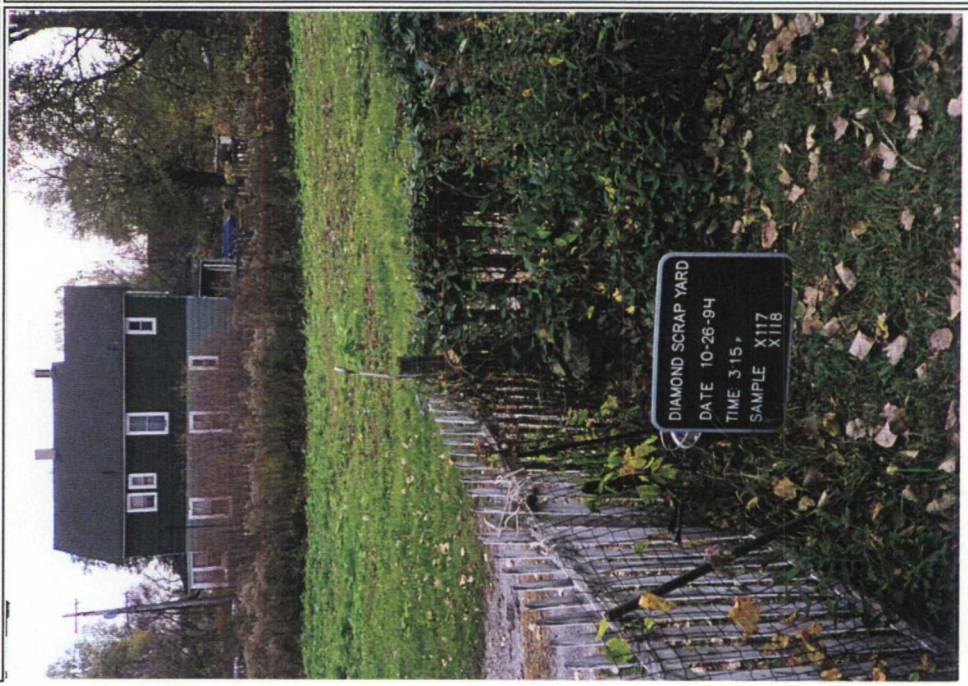
COMMENTS: Picture taken toward: East

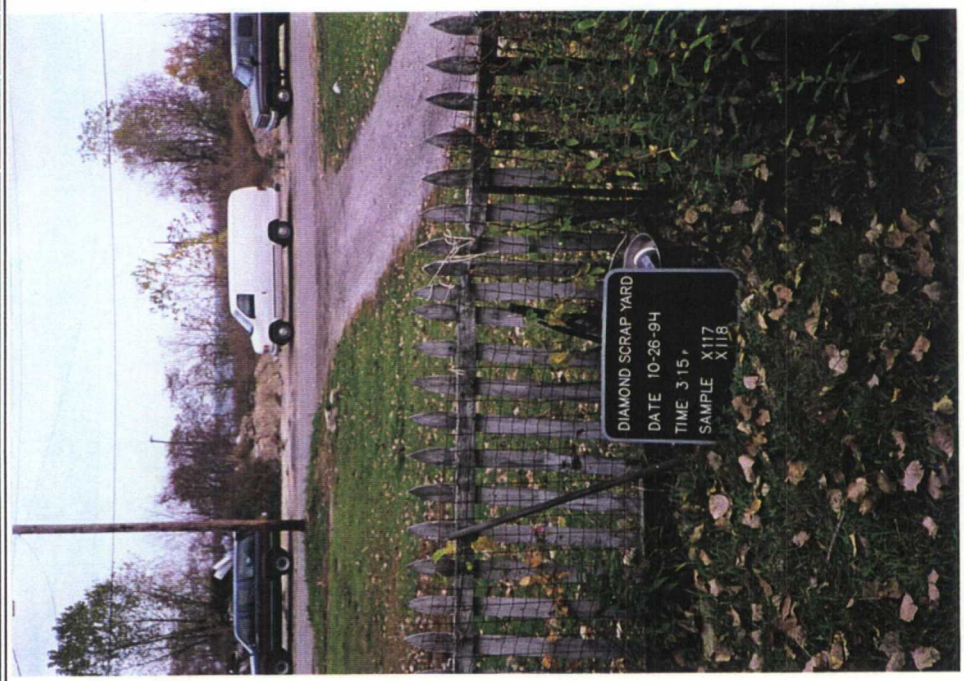
SAMPLE X116

Surface soil sample taken from the northeast part of the residential yard.

Depth 0-4 in

INTEGRATED ASSESSMENT INSPECTION PHOTOS

DATE: 10/26/94	SITE ILO#:001093509 COUNTY: LAKE
TIME: 3:15 p	SITE NAME: DIAMOND SCRAP YARD
PHOTOGRAPH TAKEN BY: BRAD TAYLOR	
COMMENTS: Picture taken toward: South	
SAMPLE X117\X118	
(X118 Duplicate)	
Surface soil sample	
taken from the	
southeast part of	
residents yard.	
Depth 0-4 in	

DATE: 10/26/94	
TIME: 3:15 p	
PHOTOGRAPH TAKEN BY: BRAD TAYLOR	
COMMENTS: Picture taken toward: East	
SAMPLE X117\X118	
Surface soil sample	
taken from the	
southeast part of	
the residents yard.	
Depth 0-4 in	

INTEGRATED ASSESSMENT INSPECTION PHOTOS

DATE: 10/26/94	SITE ILO#:001093509 COUNTY: LAKE
TIME: 3:00 p	SITE NAME: DIAMOND SCRAP YARD
PHOTOGRAPH TAKEN BY: BRAD TAYLOR	
COMMENTS: Picture taken toward: South	
SAMPLE X119	
Surface soil sample	
taken from the	
east part of the	
residents yard in-	
side the fence.	
Depth 0-4 in	

DATE: 10/26/94	
TIME: 3:00 p	
PHOTOGRAPH TAKEN BY: BRAD TAYLOR	
COMMENTS: Picture taken toward: North	
SAMPLE X119	
Surface soil sample	
taken from the	
east part of the	
residents yard, in-	
side the fence.	
Depth 0-4 in	

INTEGRATED ASSESSMENT INSPECTION PHOTOS

DATE: 10/25/94	SITE ILO#:001093509 COUNTY: LAKE
TIME: 4:00 p	SITE NAME: DIAMOND SCRAP YARD

PHOTOGRAPH TAKEN BY: BRAD TAYLOR

COMMENTS: Picture taken toward: East

SAMPLE X201

Sediment sample taken upstream from Diamond Scrap Yard property.

Depth 0-4 in

DATE: 10/25/94

TIME: 4:00 p

PHOTOGRAPH TAKEN BY: BRAD TAYLOR

COMMENTS: Picture taken toward: WEST

SAMPLE X201

Sediment sample taken upstream from Diamond Scrap Yard property.

Depth 0-4 in

INTEGRATED ASSESSMENT INSPECTION PHOTOS

DATE: 10/25/94	SITE ILO#:001093509 COUNTY: LAKE
TIME: 3:30 p	SITE NAME: DIAMOND SCRAP YARD

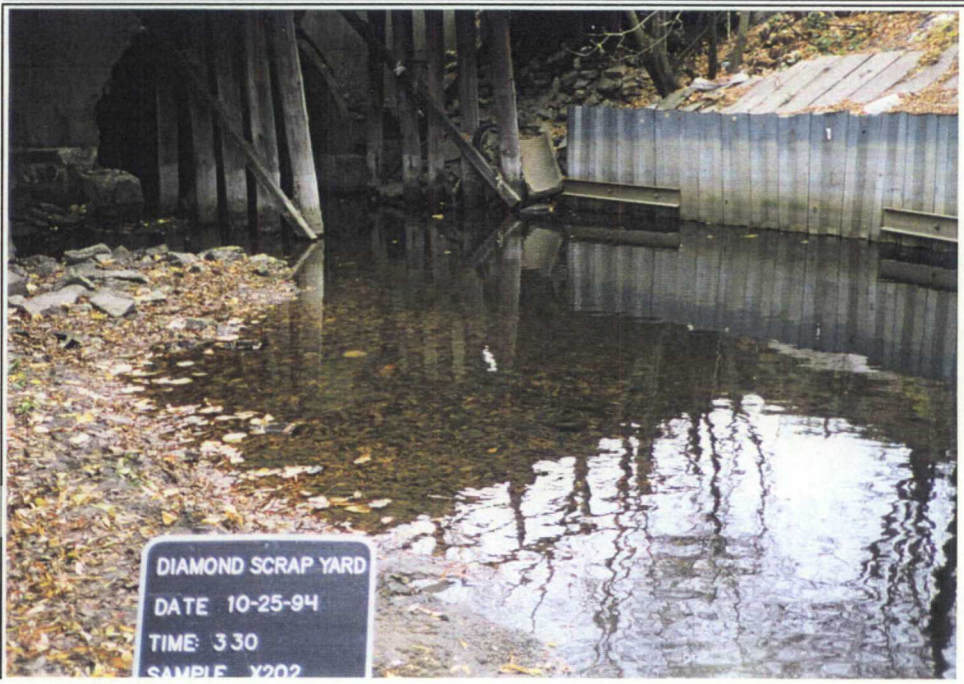
PHOTOGRAPH TAKEN BY: BRAD TAYLOR

COMMENTS: Picture taken toward: West-Northwest

SAMPLE X202

Sediment sample taken downstream from where Diamond Scrap office used to be.

Depth 8-12 in



DATE: 10/25/94

TIME: 3:30 p

PHOTOGRAPH TAKEN BY: BRAD TAYLOR

COMMENTS: Picture taken toward: East

SAMPLE X202

Sediment sample taken downstream from where Diamond Scrap Yard Office used to be.

Depth 8-12 in

INTEGRATED ASSESSMENT INSPECTION PHOTOS

DATE: 10/25/94	SITE ILO#:001093509 COUNTY: LAKE
TIME: 3:00 p	SITE NAME: DIAMOND SCRAP YARD

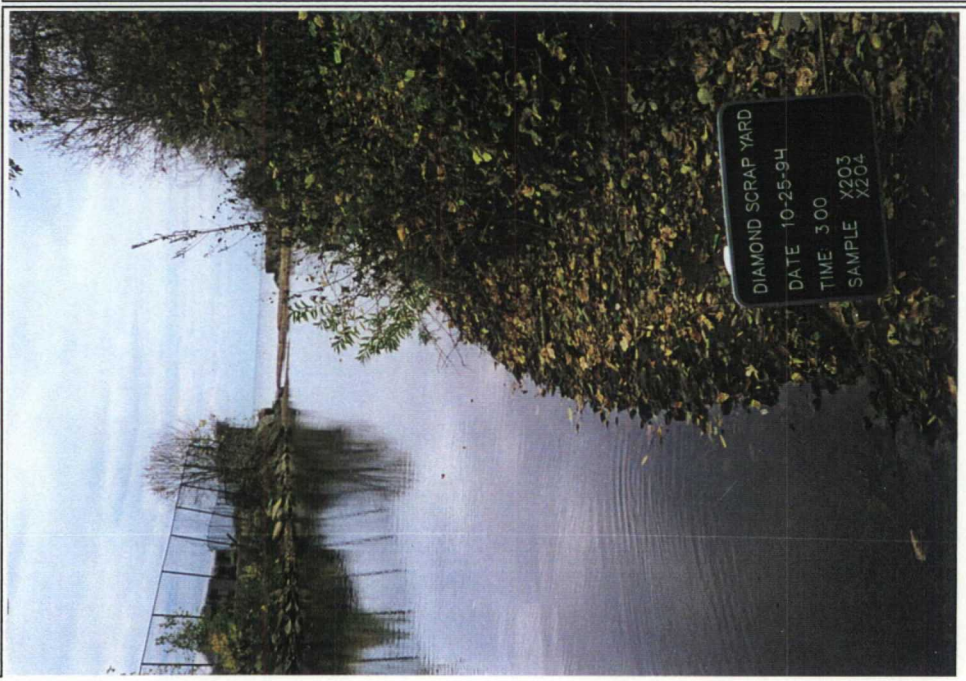
PHOTOGRAPH TAKEN BY: BRAD TAYLOR

COMMENTS: Picture taken toward: East

SAMPLE X203\X204

Sediment sample taken downstream from where Diamond Scrap office used to be.

Depth 4-6 in



DATE: 10/25/94

TIME: 3:00 p

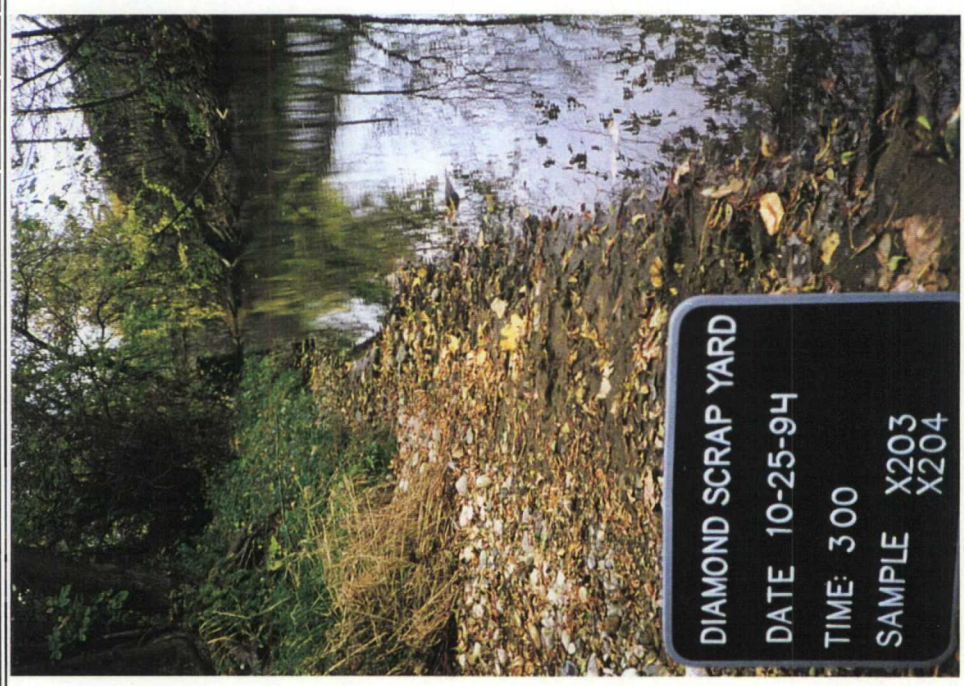
PHOTOGRAPH TAKEN BY: BRAD TAYLOR

COMMENTS: Picture taken toward: Northwest

SAMPLE X203\X204

Sediment sample taken downstream from where Diamond Scrap Yard Office used to be.

Depth 4-6 in



INTEGRATED ASSESSMENT INSPECTION PHOTOS

DATE: 10/25/94	SITE ILO#:001093509 COUNTY: LAKE
TIME: 2:45 p	SITE NAME: DIAMOND SCRAP YARD

PHOTOGRAPH TAKEN BY: BRAD TAYLOR

COMMENTS: Picture taken toward: East

SAMPLE X205

Sediment sample taken where the Waukegan River entered Lake Michigan.

Depth 0-4 in

DATE: 10/25/94

TIME: 2:45 p

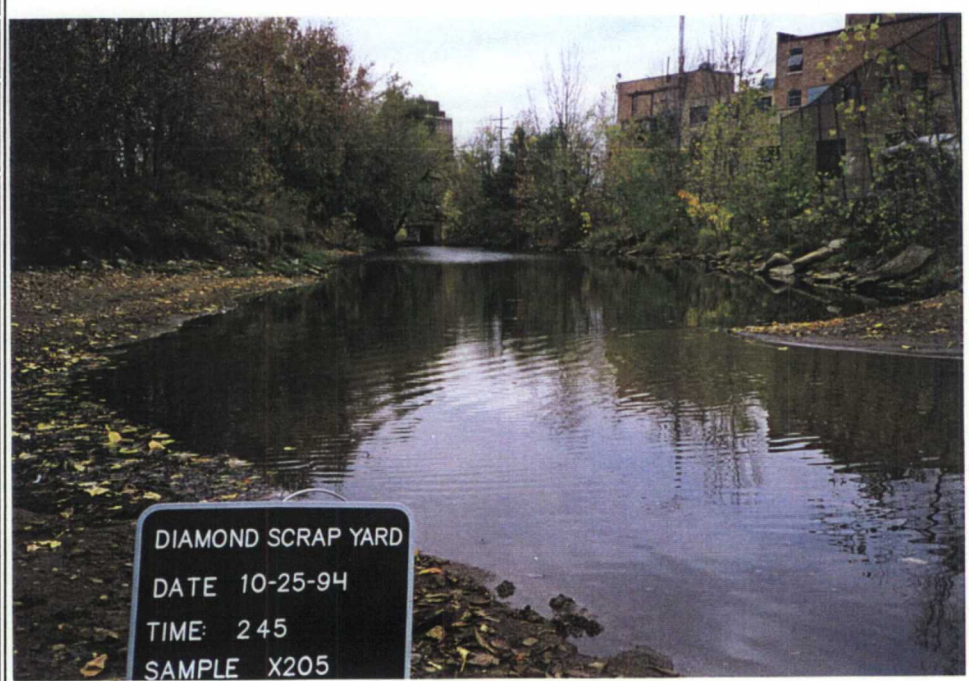
PHOTOGRAPH TAKEN BY: BRAD TAYLOR

COMMENTS: Picture taken toward: West-Northwest

SAMPLE X205

Sediment sample taken where the Waukegan River entered Lake Michigan.

Depth 0-4 in



INTEGRATED ASSESSMENT INSPECTION PHOTOS

DATE: 10/26/94	SITE ILO#:001093509 COUNTY: LAKE
TIME: 6:00 p	SITE NAME: DIAMOND SCRAP YARD

PHOTOGRAPH TAKEN BY: BRAD TAYLOR

COMMENTS: Picture taken toward: North

SAMPLE G101\G102

Monitoring well located west of Diamond Scrap Yard up on the Bluff.

No HNU detection

DATE: 10/26/94

TIME: 6:00 p

PHOTOGRAPH TAKEN BY: BRAD TAYLOR

COMMENTS: Picture taken toward: West

SAMPLE G101\G102

Monitoring well located west of Diamond Scrap Yard, up on the Bluff.

No HNU detection

INTEGRATED ASSESSMENT INSPECTION PHOTOS

DATE: 10/26/94	SITE ILO#:001093509 COUNTY: LAKE
TIME: 5:00 p	SITE NAME: DIAMOND SCRAP YARD
PHOTOGRAPH TAKEN BY: BRAD TAYLOR	
COMMENTS: Picture taken toward: East	
SAMPLE G103	
Monitoring well	
located on EJ & E.	
Railroad, east of	
Diamond Scrap Yard.	
No HNU detection	

DATE: 10/26/94
TIME: 5:00 p
PHOTOGRAPH TAKEN BY: BRAD TAYLOR
COMMENTS: Picture taken toward: North
SAMPLE G103
Monitoring well
located on EJ & E.
Railroad property,
east of Diamond
Scrap Yard.
No HNU detection

INTEGRATED ASSESSMENT INSPECTION PHOTOS

DATE: 10/26/94	SITE ILO#:001093509 COUNTY: LAKE
TIME: 5:15 p	SITE NAME: DIAMOND SCRAP YARD
PHOTOGRAPH TAKEN BY: BRAD TAYLOR	
COMMENTS: Picture taken toward: East	
SAMPLE G104	
Monitoring well	
located on EJ & E.	
Railroad property.	
East of Diamond	
Scrap Yard.	
No HNU detection	

DATE: 10/26/94	
TIME: 5:15 p	
PHOTOGRAPH TAKEN BY: BRAD TAYLOR	
COMMENTS: Picture taken toward: North-Northeast	
SAMPLE G104	
Monitoring well	
located on EJ & E.	
Railroad property.	
East of Diamond	
property.	
No HNU detection	

APPENDIX E

SUMMARY OF ANALYTICAL RESULTS

OF OCTOBER 25-26, 1994

INTEGRATED ASSESSMENT INSPECTION RESULTS

SITE NAME: DIAMOND SCRAP YARD

ILO 001093509

TABLE 3-2
SOIL SUMMARY

SAMPLING POINT / PARAMETER	X101 soil background	X102	X103	X104	X105	X106	X107	X108	X109	X110
VOLATILES UG\KG (PPB)										
Vinyl Chloride	--	--	--	--	--	--	--	--	--	--
Methylene Chloride	44.0	27.0	15.0	21.0	35.0	24.0 J	--	36.0	32.0	32.0
Acetone	--	--	--	--	--	25.0 J	--	--	--	45.0
Carbon Disulfide	--	--	--	--	--	3.0 J	--	--	--	--
1,1-Dichloroethane	--	--	--	--	--	--	--	--	--	--
Chloroform	--	--	--	--	--	6.0 J	--	--	--	--
2-Butanone (MEK)	--	--	--	--	--	--	--	--	--	--
Benzene	--	--	--	--	--	17.0 J	--	--	--	--
Toluene	--	3.0 J	--	--	5.0 J	5.0 J	--	--	--	5.0 J
Ethylbenzene	--	--	--	--	--	--	--	--	--	--
Xylene(total)	--	--	--	--	--	21.0 J	--	--	--	--
SEMIVOLATILES UG\KG (PPB)										
Naphthalene	--	--	--	98.0 J	78.0 J	510.0 J	130.0 J	--	380.0	--
2-Methylnaphthalene	--	--	--	84.0 J	190.0 J	550.0 J	280.0 J	--	440.0	5800.0 J
Dimethylphthalate	--	--	--	--	--	--	140.0 J	--	--	--
'Acenaphthylene	84.0 J	--	--	140.0 J	--	--	--	--	240.0 J	--
Acenaphthene	--	--	--	--	--	440.0 J	--	110.0 J	--	--
Dibenzofuran	--	--	--	--	--	--	--	--	180.0 J	--
Diethylphthalate	--	--	--	--	--	--	--	--	--	--
Fluorene	--	--	--	--	--	710.0 J	--	93.0 J	210.0 J	--
Phenanthrene	960.0	3900.0	140.0 J	360.0 J	950.0 J	3100.0	480.0	1100.0	6600.0 E	--
Anthracene	230.0 J	860.0 J	--	130.0 J	83.0 J	630.0 J	160.0 J	250.0 J		--
Carbazole	83.0 J	290.0 J	--	--	--	440.0 J	--	160.0 J	780.0	--
Di-n-Butylphthalate	--	--	73.0 J	130.0 J	500.0	--	520.0	110.0 J	1300.0	--
Fluoranthene	1800.0	5500.0	240.0 J	970.0	530.0	2500.0	520.0	1900.0	5300.0 E	1500.0 J
Pyrene	1900.0	4700.0	190.0 J	510.0	560.0	3100.0	1100.0	920.0	6800.0 E	2200.0 J
Butylbenzylphthalate	--	--	140.0 J	940.0	3400.0 E	920.0 J	2400.0	300.0	950.0	3500.0 J
Benzo(a)anthracene	1300.0	2900.0	110.0 J	500.0	250.0 J	1200.0 J	770.0	670.0	2400.0	--
Chrysene	1500.0	2200.0	130.0 J	600.0	340.0 J	1500.0 J	400.0 J	810.0	1100.0	--
bis(2-Ethylhexyl)phthalate	--	--	140.0 J	160.0 J	1100.0	5600.0	1300.0	1500.0	2300.0	28000.0 B
Di-n-Octylphthalate	--	--	--	--	73.0 J	510.0 J	100.0 J	--	--	--
Benzo(b)fluoranthene	1100.0	2400.0	120.0 J	650.0	520.0	1400.0 J	980.0	920.0	3000.0 E	2300.0 J
Benzo(k)fluoranthene	820.0	1800.0	100.0 J	310.0 J	--	1000.0 J	--	430.0	1300.0	1700.0 J
Benzo(a)pyrene	1400.0	2400.0	100.0 J	430.0	330.0 J	1100.0 J	470.0	710.0	1700.0	--
Indeno(1,2,3-cd)pyrene	740.0	1300.0	88.0 J	220.0 J	310.0 J	650.0 J	700.0	260.0 J	2000.0	3100.0 J
Dibenz(a,h)anthracene	440.0	750.0 J	--	--	160.0 J	--	170.0 J	140.0 J	350.0 J	--
Benzo(g,h,i)perylene	840.0	1300.0	93.0 J	220.0 J	500.0	640.0 J	410.0	300.0 J	2500.0	2200.0 J

SITE NAME: DIAMOND SCRAP YARD

ILO 001093509

TABLE 3-2
SOIL SUMMARY

SAMPLING POINT / PARAMETER	X101 soil background	X102	X103	X104	X105	X106	X107	X108	X109	X110
PESTICIDES UG\KG (PPB)										
beta-BHC	--	--	--	14.0 P	--	--	47.0 P	31.0 P	--	180.0 P
gamma-BHC (Lindane)	--	--	4.5 J		--	--	--	--	--	--
Heptachlor	--	--	--	--	--	--	81.0	100.0 P	--	--
Aldrin	--	--	--	--	--	36.0	--	--	--	--
Heptachlor epoxide	--	--	--	--	--	--	--	75.0 P	--	--
Endosulfan I	--	--	5.3 J	--	--	15.0 P	--	--	--	--
Dieldrin	--	--	--	19.0 P	--	97.0 P	--	--	--	--
4,4'-DDE	--	--	28.0 J	72.0 P	29.0 P	--	--	490.0 P	690.0 P	570.0 P
Endrin	5.1 P	--	--	38.0 P	--	31.0 P	--	--	--	--
Endosulfan II	--	27.0 J	--	--	--	--	--	--	460.0 P	--
4,4'-DDD	--	--	--	--	--	--	--	--	--	--
4,4'-DDT	--	--	--	230.0	--	--	--	290.0 P	--	--
alpha-Chlorodane	--	--	--	--	--	--	--	--	150.0 P	170.0 P
gamma-Chlorodane	--	--	--	11.0 P	--	--	24.0 P	490.0	--	--
Aroclor-1242	--	--	--	--	--	--	--	--	--	--
Aroclor-1248	--	--	750.0 J	1000.0	300.0	830.0	6800.0 P	13000.0	12000.0 P	28000.0 P
Aroclor-1254	--	--	--	--	--	--	--	--	--	13000.0 P
Aroclor-1260	--	--	590.0 J	900.0 P	1200.0 P	1300.0	7000.0	8000.0	15000.0 P	--
INORGANICS MG\KG (PPM)										
Aluminum	1720.0	2160.0	3780.0	4750.0	6550.0	4730.0	5060.0	257000.0	23700.0	11400.0
Antimony	--	16.3 J	15.7 J	12.6 J	22.0 J	19.8 J	61.8 J	138.0 J	--	27.9 J
Arsenic	12.4	20.7	10.0	23.4	11.6	10.1	34.9	10.8	36.1 J	15.6 J
Barium	66.6	117.0	96.9	130.0	254.0	219.0	285.0	462.0	717.0	481.0
Beryllium	0.5 J	0.6 J	0.4 J	0.6 J	0.6 J	0.6 J	0.6 J	1.1 J	0.8 J	0.5 J
Cadmium	3.1	15.3	6.3	3.9	10.1	6.8	13.0	80.9	67.1	22.1
Calcium	16500.0	73200.0	55000.0	28300.0	60000.0	64300.0	68200.0	19600.0	43500.0	70700.0
Chromium	7.2	413.0	35.1	21.3	49.5	79.4	101.0	306.0	375.0	157.0
Cobalt	3.4 B	10.7 B	4.4 B	4.0 B	9.1 B	5.8 B	8.9 B	10.7 B	30.2 B	16.0
Copper	89.0	366.0	176.0	126.0	288.0	193.0	1810.0	15100.0	4380.0	29100.0
Iron	21800.0	128000.0	32700.0	33800.0	88800.0	49200.0	105000.0	46600.0	160000.0	100000.0
Lead	789.0	543.0	317.0	382.0	784.0	605.0	5250.0	4590.0	3160.0	2190.0
Magnesium	7590.0	20000.0	24900.0	13400.0	30700.0	34700.0	38200.0	19100.0	17400.0	38800.0
Manganese	219.0	2930.0	346.0	357.0	641.0	444.0	811.0	1450.0	1570.0	891.0
Mercury	0.4	0.5	1.5	0.8	1.1	0.4	1.5	2.5	17.4	8.2
Nickel	10.9	408.0	40.8	19.1	65.7	36.7	128.0	407.0	268.0 J	133.0 J
Potassium	479.0 B	646.0 B	--	737.0 B	797.0 B	582.0 B	742.0 B	--	--	--
Selenium	0.7 J	2.6 J	1.0 J	0.6 J	0.7 J	0.8 J	1.3	34.8	14.4 J	5.8 J
Silver	0.9	1.2	0.9	0.9	1.0	--	--	36.0	--	5.2
Sodium	137.0 B	247.0 B	194.0 B	219.0 B	251.0 B	230.0 B	306.0 B	269.0 B	345.0 B	367.0 B
Thallium	--	--	--	--	--	--	--	--	11.3	6.5
Vanadium	10.6 B	10.9 B	13.9	13.1	9.5 B	12.8	5.9 B	35.6 B	18.0 B	7.5 B
Zinc	330.0 J	1210.0 J	754.0 J	490.0 J	1830.0 J	1120.0 J	1840.0 J	12100.0 J	9630.0	5270.0
Cyanide	0.3	0.4	0.3	1.0	0.3	0.2	0.5	0.2	2.3 J	2.1 J

SITE NAME: DIAMOND SCRAP YARD

ILO 001093509

TABLE 3-2
SOIL SUMMARY

SAMPLING POINT	X101 soil background	X111	X112	X113	X114	X115	X116	X117	X118	X119
PARAMETER										
VOLATILES UG\KG (PPB)										
Vinyl Chloride	--	7.0 J	--	--	--	--	--	--	--	--
Methylene Chloride	44.0	37.0	36.0	17.0	35.0	68.0	67.0	60.0	50.0	22.0
Acetone	--	680.0 E	180.0	38.0	17.0	--	--	--	--	--
Carbon Disulfide	--	10.0 J	--	--	--	--	--	--	--	--
1,1-Dichloroethane	--	4.0 J	--	--	--	--	--	--	--	--
Chloroform	--	--	--	--	--	--	--	--	--	--
2-Butanone (MEK)	--	130.0	33.0	20.0	--	--	--	--	--	--
Benzene	--	22.0	--	--	--	--	--	--	--	--
Toluene	--	120.0	--	7.0 J	--	--	--	--	--	--
Ethylbenzene	--	61.0	--	--	--	--	--	--	--	--
Xylene(total)	--	320.0	--	--	--	--	--	--	--	--
SEMIVOLATILES UG\KG (PPB)										
Naphthalene	--	--	220.0 J	--	140.0 J	450.0 J	--	790.0	820.0	--
2-Methylnaphthalene	--	--	240.0 J	--	260.0 J	--	130.0 J	360.0 J	370.0 J	--
Dimethylphthalate	--	--	130.0 J	--	--	--	--	--	--	--
Acenaphthylene	84.0 J	--	--	--	--	--	--	110.0 J	99.0 J	--
Acenaphthene	--	--	210.0 J	--	--	920.0 J	--	--	--	--
Dibenzofuran	--	--	120.0 J	--	--	490.0 J	--	300.0 J	300.0 J	--
Diethylphthalate	--	2100.0 J	--	--	--	--	--	--	--	--
Fluorene	--	--	210.0 J	--	66.0 J	1000.0 J	--	120.0 J	110.0 J	--
Phenanthrene	960.0	3400.0 J	1700.0	--	510.0	9400.0	990.0	2000.0	2000.0	400.0
Anthracene	230.0 J	--	490.0	--	85.0 J	1900.0	180.0 J	440.0	370.0 J	--
Carbazole	83.0 J	--	240.0 J		--	1100.0 J	110.0 J	290.0 J	310.0 J	--
Di-n-Butylphthalate	--	--	720.0	--	310.0 J	1300.0 J	250.0 J	78.0 J	120.0 J	97.0 J
Fluoranthene	1800.0	4800.0 J	1600.0	--	630.0	11000.0	1400.0	2400.0	2200.0	670.0
Pyrene	1900.0	5500.0 J	4300.0 E	--	890.0	9100.0	1200.0	2200.0	2100.0	550.0
Butylbenzylphthalate	--	4000.0 J	2200.0	--	430.0	--	330.0 J	--	270.0 J	--
Benzo(a)anthracene	1300.0	2200.0 J	1400.0	--	360.0 J	4600.0	650.0	2800.0	370.0 J	230.0 J
Chrysene	1500.0	2600.0 J	1400.0	--	400.0	5200.0	820.0	3100.0 E	3000.0	340.0 J
bis(2-Ethylhexyl)phthalate	--	39000.0 B	3100.0 BE	--	1500.0 B	--	670.0 B	2500.0 B	11000.0 BE	--
Di-n-Octylphthalate	--	--	--	--	--	--	--	--	310.0 J	--
Benzo(b)fluoranthene	1100.0	1800.0 J	2900.0	--	640.0	4500.0	820.0	3100.0 E	2700.0	330.0 J
Benzo(k)fluoranthene	820.0	2000.0 J	--	--	410.0	3300.0	480.0	1000.0	1000.0	270.0 J
Benzo(a)pyrene	1400.0	--	1600.0	--	450.0	4100.0	560.0	1900.0	1600.0	240.0 J
Indeno(1,2,3-cd)pyrene	740.0	--	1200.0	--	380.0	2600.0	380.0 J	1300.0	1000.0	170.0 J
Dibenz(a,h)anthracene	440.0	--	260.0 J	--	210.0 J	1300.0 J	180.0 J	1100.0	870.0	84.0 J
Benzo(g,h,i)perylene	840.0	1700.0 J	1300.0	--	400.0	2700.0	400.0	1200.0	1000.0	180.0 J

SITE NAME: DIAMOND SCRAP YARD

ILO 001093509

TABLE 3-2
SOIL SUMMARY

SAMPLING POINT / PARAMETER	X101 soil background	X111	X112	X113	X114	X115	X116	X117	X118	X119
PESTICIDES UG\KG (PPB)										
beta-BHC	--	170.0 P	--	--	--	--	--	--	--	--
gamma-BHC (Lindane)	--	--	--	4.5 P	21.0 P	--	--	--	--	--
Heptachlor	--	--	--	--	--	160.0 P	--	--	--	--
Aldrin	--	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	--	--	--	--	93.0 P	--	--	--	--	--
Endosulfan I	--	--	--	--	--	66.0 P	24.0 P	--	--	--
Dieldrin	--	--	--	--	--	1900.0 DP	--	--	--	--
4,4'-DDE	--	670.0 P	770.0 P	58.0 PE	210.0 P	640.0 P	240.0 P	52.0	48.0	100.0
Endrin	5.1 P	--	--	5.0 P	--	--	--	--	--	--
Endosulfan II	--	--	--	--	110.0 P	--	--	--	--	--
4,4'-DDD	--	--	--	--	47.0 P	1700.0 DP	60.0 P	48.0 P	43.0 P	--
4,4'-DDT	--	--	--	12.0 P	--	2600.0 PE	600.0 P	210.0	160.0	170.0 P
alpha-Chlorodane	--	--	--	33.0 P	--	--	--	--	--	--
gamma-Chlorodane	--	--	160.0 P	--	140.0 P	300.0 P	--	--	26.0	--
Aroclor-1242	--	20000.0 P	--	--	--	--	--	--	--	--
Aroclor-1248	--	--	15000.0 P	950.0 D	2000.0 P	4200.0 P	1400.0 P	--	--	--
Aroclor-1254	--	14000.0 P	22000.0 P	770.0 D	9600.0 DP	20000.0 D	5600.0 P	--	--	--
Aroclor-1260	--	--	--	--	--	--		--	--	--
INORGANICS MG\KG (PPM)										
Aluminum	1720.0	27500.0	12000.0	2170.0	9810.0	18900.0	10900.0	5360.0 J	9050.0 J	5290.0
Antimony	--	17.8 J	--	--	14.3 J	--	13.4 J	12.7 J	13.4 J	10.6 J
Arsenic	12.4	20.5 J	32.7 J	2.6 J	17.6 J	62.9 J	17.3 J	9.1	9.0	9.6
Barium	66.6	372.0	540.0	13.7 B	243.0	2550.0	372.0	230.0	276.0	143.0
Beryllium	0.5 J	0.4 J	0.5 J	--	0.8 J	0.8 J	0.9 J	1.0 B	1.1 B	0.7 J
Cadmium	3.1	17.3	72.1	--	29.5	71.0	14.0	5.3	5.9	2.5
Calcium	16600.0	22000.0	47400.0	1390.0	61500.0	40200.0	35100.0	23500.0	25100.0	14400.0
Chromium	7.2	96.3	445.0	4.5	187.0	182.0	47.4	20.6	19.3	14.0
Cobalt	3.4 B	9.7 B	30.3 B	1.6 B	14.3	39.9	10.6 B	6.2 B	6.2 B	5.7 B
Copper	89.0	2410.0	2890.0	10.7	1420.0	4000.0	1770.0	110.0 J	391.0 J	58.6
Iron	21800.0	63700.0	229000.0	5720.0	146000.0	163000.0	39000.0	17400.0	20400.0	17000.0
Lead	789.0	915.0	2760.0	10.7	2070.0	5970.0	875.0	264.0	281.0	598.0
Magnesium	7590.0	10800.0	23600.0	905.0 B	30800.0	20700.0	18300.0	9330.0	11300.0	6950.0
Manganese	219.0	819.0	2980.0	52.0	1410.0	2080.0	728.0	513.0	496.0	572.0
Mercury	0.4	2.0	20.5	0.1	8.0	10.5	2.1	0.7 J	0.2 J	0.6
Nickel	10.9	169.0 J	339.0 J	4.6 J	118.0 J	307.0 J	49.1 J	20.6 J	39.7 J	14.0
Potassium	479.0 B	--	--	--	567.0	1190.0	1410.0	1720.0	2350.0	683.0 B
Selenium	0.7 J	2.6 J	10.4 J	0.9 J	5.4 J	15.4 J	4.1 J	1.7 J	1.1 J	1.7 J
Silver	0.9	1.2 B	4.7 B	0.9 B	1.6 B	--	1.6 B	--	1.0	--
Sodium	137.0 B	295.0 B	324.0 B	61.2 B	340.0	728.0	567.0 B	209.0 B	420.0 B	159.0 B
Thallium	--	4.5	14.5	--	8.8	9.2	2.3 B	--	--	--
Vanadium	10.8 B	8.1 B	--	10.5 B	20.1	5.0	20.6	19.1	21.2	19.3
Zinc	330.0 J	3660.0	7590.0	46.0	2560.0	31900.0	1870.0	704.0 J	773.0 J	401.0 J
Cyanide	0.3	1.7 J	4.8 J	0.5 J	0.8 J	1.4 J	1.7 J	0.8	1.0	--

SITE NAME: DIAMOND SCRAP YARD

ILO 001093509

TABLE 3-2
SOIL DIOXINS

SAMPLING POINT	X107	X108	X109	X110	X112	X114	X115	X117	X118	X119
ANALYTES NG\KG (PPT)										
2378-TCDD	1.7	6.5	14.2	3.1	11.6	7.2	13.0	0.7	1.0	0.5
12378-PeCDD	5.4	30.6	71.2	10.7	50.0	27.4	44.0	3.0	3.7	2.5
123478-HxCDD	9.3	59.8	174.0	12.0	95.9	56.5	80.1	6.5	7.4	4.8
123678-HxCDD	31.6	131.0	342.0	62.5	278.0	152.0	256.0	23.4	26.2	11.7
123789-HxCDD	28.1	188.0	279.0	49.7	293.0	168.0	257.0	15.9	20.2	11.7
1234678-HpCDD	456.0	1240.0	4300.0	939.0	2420.0	2010.0	3610.0	526.0	550.0	246.0
OCDD	2660.0	5620.0	28130.0	7810.0	11290.0	13340.0	21130.0	3900.0	4100.0	1600.0
2378-TCDF	129.0	1320.0	787.0	285.0	1030.0	480.0	580.0	35.0	50.7	24.9
12378-PeCDF	19.6	206.0	127.0	38.0	347.0	93.8	75.9	6.4	8.6	4.7
23478-PeCDF	39.2	307.0	304.0	86.0	345.0	153.0	148.0	22.0	22.7	7.2
123478-HxCDF	127.0	1200.0	728.0	194.0	1750.0	563.0	596.0	32.3	39.8	20.5
123678-HxCDF	26.9	297.0	200.0	52.2	465.0	147.0	111.0	11.3	11.9	6.7
234678-HxCDF	33.0	479.0	205.0	42.4	463.0	186.0	158.0	15.1	15.3	11.2
123789-HxCDF	1.7	11.8	10.6	2.9	35.5	11.4	6.4	0.6	1.6	0.9
1234678-HpCDF	226.0	2080.0	1200.0	352.0	2490.0	848.0	1070.0	372.0	232.0	77.3
1234789-HpCDF	36.0	181.0	191.0	66.7	489.0	118.0	82.3	11.3	13.0	5.9
OCDF	371.0	2030.0	1950.0	792.0	3670.0	951.0	2300.0	651.0	692.0	180.0
TOTAL TCDD	41.2	243.0	203.0	41.8	258.0	240.0	273.0	9.0	34.8	18.9
TOTAL PeCDD	57.3	228.0	749.0	117.0	414.0	399.0	495.0	31.1	46.9	22.6
TOTAL HxCDD	347.0	1410.0	3610.0	669.0	2700.0	1790.0	2330.0	203.0	224.0	112.0
TOTAL HpCDD	1050.0	2540.0	9440.0	1920.0	4970.0	4210.0	7050.0	1000.0	1040.0	493.0
TOTAL TCDF	583.0	5400.0	4500.0	1390.0	4350.0	2610.0	2910.0	187.0	296.0	163.0
TOTAL PeCDF	445.0	3600.0	3480.0	792.0	3690.0	1910.0	1590.0	157.0	173.0	120.0
TOTAL HxCDF	314.0	3890.0	3690.0	776.0	4700.0	2060.0	2950.0	280.0	279.0	136.0
TOTAL HpCDF	483.0	2910.0	2810.0	921.0	4170.0	1700.0	2800.0	790.0	676.0	195.0
2,3,7,8-TCDD TOXICITY EQUIVALENT	73.9	593.3	564.0	145.6	736.4	322.5	388.3	41.2	44.7	19.9

SITE NAME: DIAMOND SCRAP YARD

ILO 001093509

TABLE 3-2
SEDIMENT AND GROUNDWATER SUMMARY

SAMPLING POINT / PARAMETER	X201 sediment background	X202	X203	X204	X205	G101 groundwater background	G103	G104	G105 Field Blank
VOLATILES UG\KG (PPB)									
Methylene Chloride	18.0	17.0	36.0	28.0	12.0	--	--	--	3.0 J
Acetone	--	22.0	15.0	--	--	--	--	--	410.0 D
SEMIVOLATILES UG\KG (PPB)									
Acenaphthene	96.0 J	--	--	--	--	--	--	--	--
Dibenzofuran	91.0 J	--	--	--	--	--	--	--	--
Fluorene	220.0 J	--	--	--	--	--	--	--	--
Phenanthrene	1600.0	410.0	120.0 J	--	150.0 J	--	--	--	--
Anthracene	310.0 J	86.0 J	--	--	--	--	--	--	--
Carbazole	230.0 J	--	--	--					
Di-n-Butylphthalate	--	--	61.0 J	--	--	--	--	--	--
Fluoranthene	2100.0	560.0	130.0 J	--	220.0 J	--	--	--	--
Pyrene	1700.0	430.0	110.0 J	--	170.0 J	--	--	--	--
Benzo(a)anthracene	940.0	210.0 J	--	--	81.0 J	--	--	--	--
Chrysene	1000.0	260.0 J	--	--	110.0 J	--	--	--	--
bis(2-Ethylhexyl)phthalate	730.0 B	--	--	--	--	5.0 J	1.0 J	3.0 J	26.0
Benzo(b)fluoranthene	940.0	230.0 J	--	--	91.0 J	--	--	--	--
Benzo(k)fluoranthene	770.0	240.0 J	--	--	91.0 J	--	--	--	--
Benzo(a)pyrene	840.0	220.0 J	--	--	89.0 J	--	--	--	--
Indeno(1,2,3-cd)pyrene	540.0	140.0 J	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	290.0 J	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	540.0	140.0 J	--	--	--	--	--	--	--
PESTICIDES UG\KG (PPB)									
delta-BHC	--	13.0	--	--	2.1 P	--	--	--	--
Aldrin	--	--	--	--	3.2 P	--	--	--	--
Endosulfan I	--	--	--	--	2.3 P	--	--	--	--
4,4'-DDE	24.0 P	21.0 P	--	--	7.8	--	--	--	--
4,4'-DDD	39.0	47.0	--	--	13.0 P	--	--	--	--
4,4'-DDT	35.0 P	60.0	--	--	8.5 P	--	--	--	--
Aroclor-1248	--	--	--	--	48.0 P	--	--	--	--
Aroclor-1254	--	--	--	--	63.0 P	--	--	--	--
INORGANICS MG\KG (PPM)									
Aluminum	2190.0	4800.0	6200.0	4690.0	3630.0	--	37.6 B	--	--
Antimony	13.0 J	19.9 J	21.8 J	16.4 J	17.0 J	--	--	--	--
Arsenic	2.8	7.1	6.5	6.8	9.6	--	3.2 B	--	--
Barium	13.1 B	40.5 B	21.0 B	19.9 B	20.4 B	36.6 B	19.6 B	10.3 B	1.0 J
Beryllium	0.2 J	9.2	0.6 J	0.5 J	0.7 J	0.6 J	--	--	--
Cadmium	--	1.3	--	--	--	--	--	--	--
Calcium	41100.0	61500.0	86300.0	95900.0	111000.0	48100.0	21300.0	12000.0	305.0 J
Chromium	7.5	32.0	11.1	9.2	9.3	--	--	--	--
Cobalt	1.9 B	9.3 B	7.7 B	7.3 B	11.8 B	--	3.4 B	--	--
Copper	16.8	990.0	24.1	23.6	27.5	13.3 J	16.6 J	19.2 J	8.6 J
Iron	8980.0	26200.0	16300.0	15000.0	16300.0	56.4 J	102.0	41.0 J	16.4 J
Lead	24.6	302.0	8.2	8.3	36.3	1.6 J	3.1 J	1.4 J	1.2 J
Magnesium	20700.0	33600.0	45900.0	50300.0	58700.0	20400.0	9020.0	4630.0 B	64.0 J
Manganese	263.0	834.0	593.0	643.0	726.0	4.9 B	33.8	10.7 B	--
Nickel	8.2 J	55.7	17.6	13.8	24.9	--	--	--	--
Potassium	--	779.0 B	1780.0	1310.0	509.0 B	--	2690.0	--	--
Selenium	0.7 B	0.9 J	0.7 J	0.9 J	1.1 J	--	--	--	--
Silver	--	1.0	--	--	--	--	--	--	--
Sodium	254.0 B	2200.0	283.0 B	272.0 B	397.0 B	49800.0	38400.0	62000.0	246.0 J
Vanadium	12.3 B	14.4	19.9	20.3	17.7	5.8	7.9	5.8	--
Zinc	101.0 J	5810.0 J	45.8	41.0	125.0	18.3 J	14.9 J	19.0 J	9.5 B

DATA QUALIFIERS

QUALIFIER	DEFINITION ORGANICS	DEFINITION INORGANICS
U	Compound was tested for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture. For soil samples subjected to GPC clean-up procedures, the CRQL is also multiplied by two, to account for the fact that only half of the extract is recovered.	Analyte was analyzed for but not detected.
J	Estimated value. Used when estimating a concentration for tentatively identified compounds (TICS) where a 1:1 response is assumed or when the mass spectral data indicate the presence of a compound that meets the identification criteria and the result is less than the sample quantitation limit but greater than zero. Used in data validation when the quality control data indicate that a value may not be accurate.	Estimated value. Used in data validation when the quality control data indicate that a value may not be accurate.
C	This flag applies to pesticide results where the identification is confirmed by GC/MS.	Method qualifier indicates analysis by the Manual Spectrophotometric method.
B	Analyte was found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.	The reported value is less than the CRDL but greater than the instrument detection limit (IDL).
D	Identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor as in the "E" flag, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and all concentration values are flagged with the "D" flag.	Not used.
E	Identifies compounds whose concentrations exceed the calibration range for that specific analysis. All extracts containing compounds exceeding the calibration range must be diluted and analyzed again. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration range in the second analysis, then the results of both analyses must be reported on separate Forms I. The Form I for the diluted sample must have the "DL" suffix appended to the sample number.	The reported value is estimated because of the presence of interference.
A	This flag indicates that a TIC is a suspected aldol concentration product formed by the reaction of the solvents used to process the sample in the laboratory.	Method qualifier indicates analysis by Flame Atomic Absorption (AA).
M	Not used.	Duplicate injection (a QC parameter not met).

N	Not used	Spiked sample (a QC parameter not met).
S	Not used.	The reported value was determined by the Method of Standard Additions (MSA).
W	Not used.	Post digestion spike for Furnace AA analysis (a QC parameter) is out of control limits of 85% to 115% recovery, while sample absorbance is less than 50% of spike absorbance.
*	Not used.	Duplicate analysis (a QC parameter not within control limits).
+	Not used.	Correlation coefficient for MSA (a QC parameter) is less than 0.995.
P	Not used.	Method qualifier indicates analysis by ICP (Inductively Coupled Plasma) Spectroscopy.
CV	Not used.	Method qualifier indicates analysis by Cold Vapor AA.
AV	Not used.	Method qualifier indicates analysis by Automated Cold Vapor AA.
AS	Not used.	Method qualifier indicates analysis by Semi-Automated Cold Spectrophotometry.
T	Not used.	Method qualifier indicates Titrimetric analysis.
NR	The analyte was not required to be analyzed.	The analyte was not required to be analyzed.
R	Rejected data. The QC parameters indicate that the data is not usable for any purpose.	Rejected data. The QC parameters indicate that the data is not usable for any purpose.

APPENDIX F

ILLINOIS DEPARTMENT OF PUBLIC HEALTH EVALUATION OF ANALYTICAL DATA COLLECTED BY IEPA

HEALTH ASSESSMENT

STATE INITIAL SITE EVALUATION

DIAMOND SCRAP YARD

WAUKEGAN, LAKE COUNTY, ILLINOIS

CERCLIS NUMBER ILD 0971900043

MARCH 1995

DRAFT

Prepared by:

Illinois Department of Public Health

BACKGROUND AND STATEMENT OF ISSUES

The Diamond Scrap Yard (DSY) site is located along the east side of Market Street from just south of South Street to just north of East Water Street in Waukegan, Illinois (Attachment 1). The entire site is no more than 250 feet wide (east-west) and is approximately 3,000 feet long (north-south). The site occupies approximately 13 acres and is bordered on the east by an Elgin, Joliet & Evanston Railyard and Lake Michigan (Attachment 2). The Waukegan River flows through the northern section of the site.

The city of Waukegan has a population of approximately 70,000 (1990 census). The site is situated in an industrial and sparsely developed residential area. There are private residences on the west side of Market Street across from the southern third of the site. Neighboring properties are mainly manufacturing facilities, undeveloped land, vacant buildings, railroad properties, and residences. Further west of the site are more densely populated areas and commercial businesses. Properties to the north of the site are primarily industrial and commercial. An industrial area is located to the south of the site (1).

Scrap yard operations at this location began sometime in the 1930s. These operations included, but were not limited to: coal storage, automobile and drum scrapping, petroleum storage, wire and transformer burning, and iron and steel production. The site is no longer in operation, however, trash at the site indicates extensive illegal dumping (2).

The Illinois Environmental Protection Agency (IEPA) conducted a CERCLA site inspection at DSY on October 25 and 26, 1994. Access to the site was not restricted. Two individuals were observed living in an abandoned boat on the property. Abandoned buildings and trash on the site present physical hazards to persons coming on-site. Nineteen soil samples were collected on or near the site. In addition, IEPA collected five sediment samples from the Waukegan River, and four groundwater samples from area monitoring wells (3).

DISCUSSION

Seventeen soil samples collected by IEPA in October 1994 were taken within two feet of the surface. Soil samples X104 and X113 were collected at depths of 3 feet and 4 feet respectively (Attachment 2). This assessment assumes the contaminant concentrations reported for these samples are representative of surface (depth of 0 to 3 inches) concentrations. The maximum concentration of each soil contaminant determined by the IEPA sampling was compared with appropriate screening comparison values used to select contaminants for further evaluation for both carcinogenic and non-carcinogenic health endpoints. Chemicals which exceeded comparison values or chemicals for which no comparison was available were selected for further evaluation. These selected chemical contaminants as well as their maximum concentrations, sample locations, and comparison values are shown in Table 1. A detailed discussion of each of the comparison values used is found in Attachment 3. A number of chlorinated dibenzodioxins and furans were detected at

DSY. The analytical results for these compounds were converted to the toxicity equivalent of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) by using USEPA Toxicity Equivalence Factors (TEFs) for dioxins and furans (4). These results were summarized and listed on Table 1 as "2,3,7,8-TCDD equivalent."

Table 1. On-Site Soil Contamination (0 to 2 feet)

Chemical	Maximum Concentration (mg/kg)	Sample Location	Comparison Value[1] (mg/kg)
INORGANICS			
Arsenic	62.9	X115	10 (EMEG)
Cadmium	72.1	X112	40 (EMEG)
Chromium	445	X112	(VI)300* (RMEG)
Copper	29,100	X110	None
Iron	229,000	X112	None
Lead	5,970	X115	None
Magnesium	38,800	X110	None
Manganese	2,930	X102	300 (RMEG)
Zinc	31,900	X115	20,000 (EMEG)
SEMIVOLATILES			
Benz(a)anthracene	4.6	X115	B2*
Chrysene	5.2	X115	B2
Benzo(b)fluoranthene	4.5	X115	B2
Indeno(1,2,3-cd)pyrene	3.1	X110	B2
Benzo(g,h,i)perylene	3.2	X110	None
DIOXINS & PESTICIDES			
2,3,7,8-TCDD equivalent	0.00074	X112	0.00005 (EMEG)
Aroclor-1242	20.0	X111	1 (EMEG)
Aroclor-1254	22.0	X112	1 (EMEG)
Aroclor-1260	15.0	X109	1 (EMEG)

mg/kg = milligrams of chemical per kilogram of soil
[1] = comparison values are based on assumptions of a child's exposure
*(VI) = comparison value is for chromium (VI)
B2 = USEPA classifies this compound as a probable human carcinogen

Of the soil contaminants listed in Table 1, many were found at several of the sample locations. Table 2 shows the extent of the contamination by indicating the sample locations where concentrations exceeded the appropriate comparison values.

Table 2. Extent of Soil Contamination

Chemical	Sample Locations With Concentrations Greater Than Comparison Value*
INORGANICS	
Arsenic	X115
Cadmium	X108, X109, X112, X115
Chromium	X102, X108, X109, X112
Copper	X107, X108, X109, X110, X111, X112, X114, X115, X116
Iron	X102, X105, X107, X109, X110, X112, X114, X115
Lead	X107, X108, X109, X112, X115
Magnesium	X103, X105, X106, X107, X110, X112, X114
Manganese	X102, X108, X109, X110, X112, X114, X115, X116
Zinc	X115
SEMIVOLATILES	
Benz(a)anthracene	X115
Chrysene	X115
Benzo(b)fluoranthene	X115
Indeno(1,2,3-cd)pyrene	X110, X115
Benzo(g,h,i)perylene	X110, X115
DIOXINS & PESTICIDES	
2,3,7,8-TCDD equivalent	X107, X108, X109, X110, X112, X114, X115
Aroclor-1242	X111
Aroclor-1254	X110, X111, X112, X114, X115, X116
Aroclor-1260	X105, X106, X107, X108, X109

* if no comparison value, sample concentrations were compared to backgrounds and soil norms

Of the soil contaminants selected, 2,3,7,8-TCDD, the aroclors, and lead may pose a health risk to individuals exposed to contaminated soils. The semi-volatile contaminants are not particularly elevated for typical urban soils. The low concentrations of the other contaminants are not likely to cause adverse health effects (5).

Since access to the site is not restricted, individuals may be directly exposed via ingestion of, inhalation of, and dermal contact with on-site soils. To assess the level of exposure, a scenario assuming a child at play who is exposed to contaminated soils by ingestion, inhalation, and dermal contact by playing on-site for two hours a day, 180 days a year for ten years. Such an exposure scenario could lead to a low increased cancer risk due to TCDD, Aroclors, and possibly lead. The potential health effects that may be related to exposure to these contaminants include:

Aroclors (PCBs)--Skin irritations, such as acne and rashes, can occur in people exposed to PCBs. Animal studies have shown a link between PCBs and liver, reproductive, nervous system, and immune system disorders. At low doses, these effects have not been observed in humans. The USEPA has determined that PCBs are probable human carcinogens. However, recent re-evaluation of these compounds indicates that not all PCBs are carcinogens (6).

Lead--Lead is especially dangerous to young children because of the deleterious effects it has on their central nervous system. In adults, lead exposure may decrease reaction time and possibly memory. Lead exposure may cause anemia, weakness in the ankles, wrists, or fingers, and may also increase blood pressure in middle-aged males. Some lead compounds have been determined to be carcinogens (7).

TCDD (dioxins)--Dioxins can cause chloracne, a severe kin lesion that usually occurs on the head or upper body. There is suggestive evidence that dioxins cause liver damage and digestive disorders in exposed individuals. Although not demonstrated in humans, animal studies have linked dioxins to immune system and reproductive disorders. Based on positive evidence in animal studies, 2,3,7,8-TCDD has been classified as a probable human carcinogen (8).

Sediment samples collected by IEPA showed no contaminants at levels which would adversely affect human health. Sediment sample X205 collected at the confluence of the Waukegan River and Lake Michigan did show traces of pesticides and PCBs.

IEPA collected groundwater samples from monitoring wells located on the Elgin, Joliet & Evanston Railyard east of the site (9). Since Lake Michigan is east of the railyard, it is likely that these wells are downgradiant of the DSY site. The only contaminant of note in any of the October 1994 well water samples was bis(2-Ethylhexyl) phthalate at a concentration of 26 micrograms per liter in sample G105. This concentration of this chemical would not be expected to cause adverse health effects were this water consumed on a regular basis.

CONCLUSIONS

Based on the information reviewed, IDPH concludes:

1. a health threat exists in association with exposure to contaminated on-site soils, and because of present physical hazards;
2. individuals on-site could be exposed to hazardous substances via ingestion of, inhalation of, and dermal contact with soils;
3. the potential for off-site human contact with on-site contaminants via fugitive dust generation is possible if DSY is devoid of vegetation;
4. the current data is not sufficient evidence to conclude that on-site contaminants have migrated into area groundwater.

RECOMMENDATIONS

IDPH recommends the following:

1. restrict public access to the site;
2. reduce the potential for migration of on-site contaminants to off-site areas;
3. continue periodic monitoring of area groundwater;
4. re-sample on site soils to determine actual surface concentrations.

K.D. Runkle

K.D. Runkle, M.A.
Environmental Toxicologist

REFERENCES

1. IEPA. Letter from Brad Taylor to Tom Long. March 1, 1995.

2. Ibid.

3. Ibid.

4. IDPH. Memorandum from Tom Long to Brad Taylor. February 6, 1995.

5. Agency for Toxic Substances and Disease Registry. Health Guidelines. March 1995.

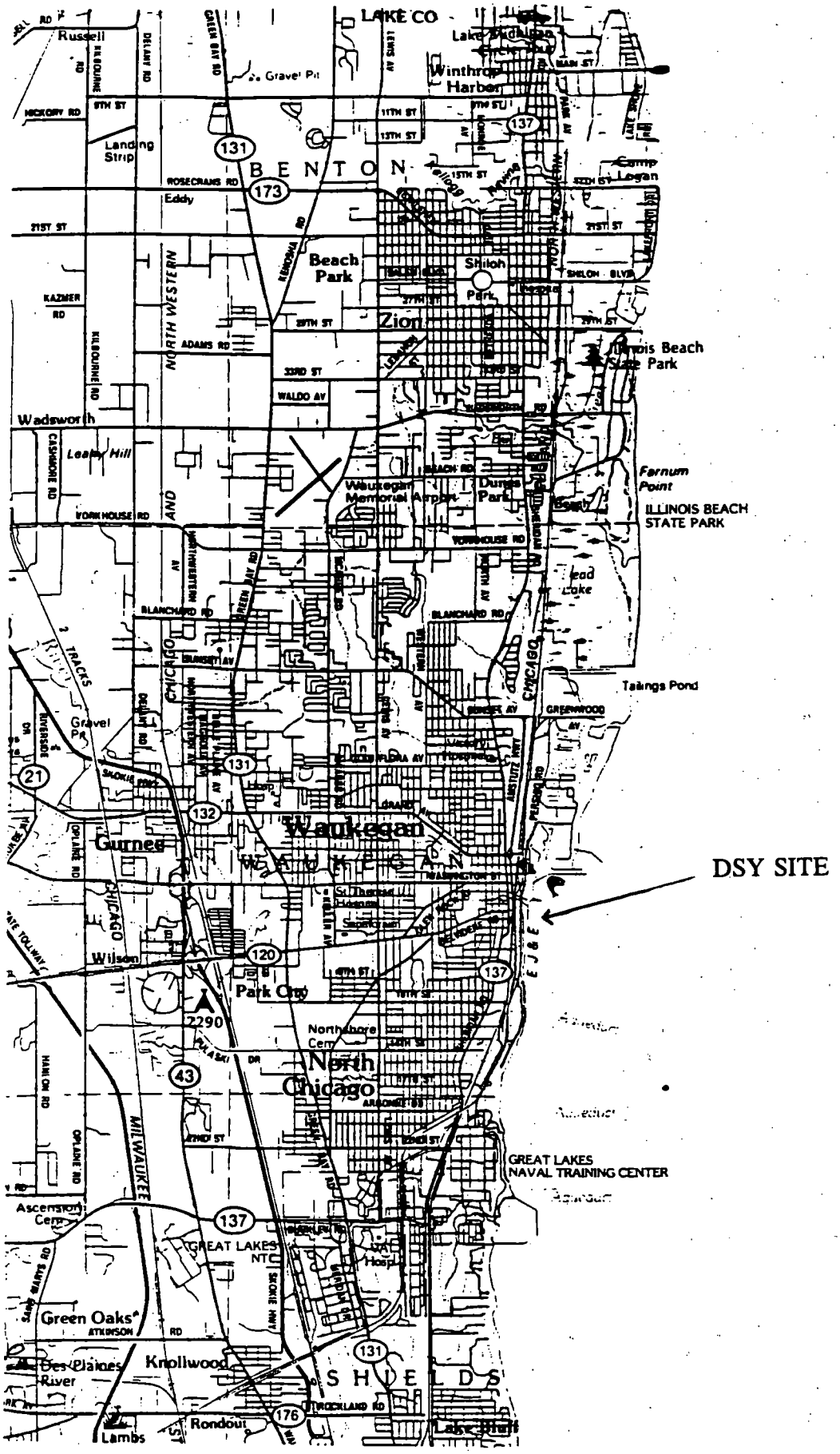
6. Agency for Toxic Substances and Disease Registry. Toxicological Profile for Selected PCBs. April 1993.

7. Agency for Toxic Substances and Disease Registry. Toxicological Profile for Lead (Draft). October, 1991.

8. Agency for Toxic Substances and Disease Registry. Toxicological Profile for 2,3,7,8-Tetrachlorodibenzo-p-dioxin. June 1989.

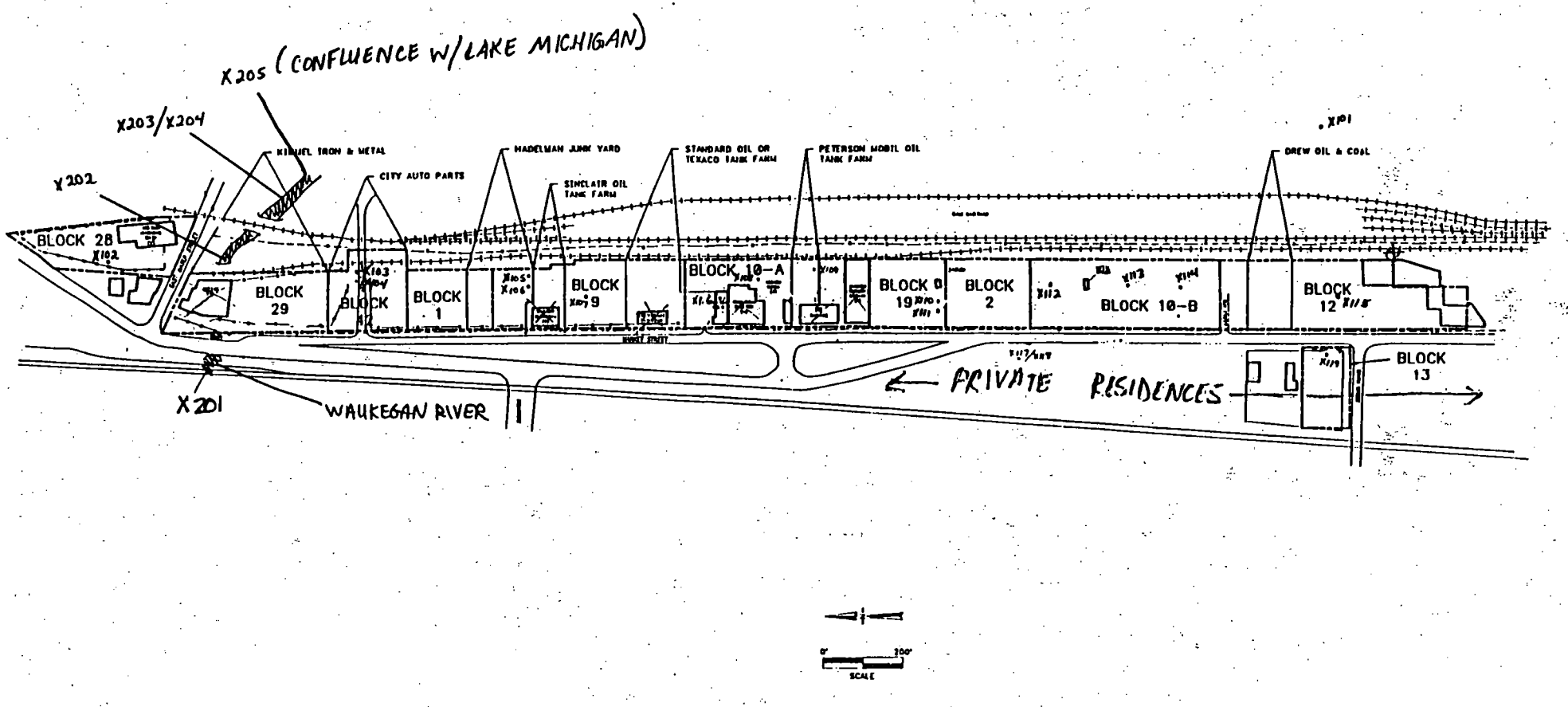
9. Telephone conversation with Brad Taylor of IEPA. March 14, 1995.

ATTACHMENT 1



source: Illinois Atlas & Gazetteer
DeLorme Mapping

ATTACHMENT 2



X101 - BACKGROUND SOIL

X201 - BACKGROUND SEDIMENT

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY	SITE: Diamond Scrap Yard SITE ILD 0971900043
SITE MAP	
LEGEND:	

ATTACHMENT 3

Comparison Values Used In Selecting Contaminants of Concern

Environmental Media Evaluation Guides (EMEGs) are developed for chemicals based on their toxicity, frequency of occurrence at National Priority List (NPL) sites, and potential for human exposure. They are derived to protect the most sensitive populations and are not cut-off levels, but rather comparison values. They do not consider carcinogenic effects, chemical interactions, multiple route exposure, or other media-specific routes of exposure, and are very conservative concentration values designed to protect sensitive members of the population.

Reference Dose Media Evaluation Guides (RMEGs) are another type of comparison value derived to protect the most sensitive populations. They do not consider carcinogenic effects, chemical interactions, multiple route exposure, or other media-specific routes of exposure, and are very conservative concentration values designed to protect sensitive members of the population.

Cancer Risk Evaluation Guides (CREGs) are estimated contaminant concentrations based on a one excess cancer in a million persons exposed to a chemical over a lifetime. These are also very conservative values designed to protect sensitive members of the population.

APPENDIX G

DEPARTMENT OF CONSERVATION LETTER

Illinois Department of Conservation
LINCOLN TOWER PLAZA • 524 SOUTH SECOND STREET • SPRINGFIELD 62701-1787 CHICAGO OFFICE • ROOM 4-300 • 100 WEST RANDOLPH • CHICAGO 60601
Brent Manning, Director John W. Comerio, Deputy Director Bruce F. Clay, Assistant Director

October 26, 1993

Ms. Lynnette Mick
LPC/IEPA
P.O. Box 19276
Springfield, IL 62794-9276

Re: Diamond Scrap Yard
Lake Co.
L 0971905176
SF/HRS

Dear Ms. Mick:

The Department has completed its review of the above CERCLIS project and has determined there are no sensitive areas (form attached) on-site or in the 0-1/4, 1/4-1/2 mile radius of the site.

The 15-mile water route includes a portion of Lake Michigan from which three listed species of fish have been collected. The Longnose Sucker (Catostomus catostomus), Lake Whitefish (Coregonus clupeaformis), and Cisco (Coregonus artedli) have been reported by the Lake Michigan Program. All three of these species are currently listed as threatened. The Endangered Species Protection Board has recommended the removal of the Lake Whitefish from the state list because it is more common than previously believed.

The surface water area delineated, borders on Illinois Beach State Park with its many listed species. By strict interpretation, these endangered species occurrences are not within the water route because they are all terrestrial occurrences within the park. If, however, you want more information about the listed species at Illinois Beach, we can provide it on request.

Thank you for the opportunity to comment.

Sincerely,

Richard W. Lutz

Richard W. Lutz
Acting Chief
Division of Impact Analysis

RWL:mcp

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DEPARTMENT OF CONSERVATION IDENTIFICATION OF
ENVIRONMENTAL SENSITIVE AREAS

DIAMOND SCRAP YARD - LAKE CO.

ILD # 2

—— = none known in area

SENSITIVE ENVIRONMENTS	TARGET DISTANCE CATEGORIES On-site	0-1/4 mile	1/4-1/2 mile	stream milage
I. Critical habitat for Federally designated or proposed endangered or threatened species	—	—	—	—
II. Habitat known to be used by Federally designated or proposed endangered or threatened species	—	—	—	—
III. State wildlife refuge	—	—	—	—
IV. POTENTIAL Spawning areas critical for the maintenance of fish/shellfish species within a river system	—	—	—	** Julian's Reef.
V. Terrestrial areas utilized by large or dense aggregations of verbebrate animals for breeding	—	—	—	—
VI. Habitat known to be used by State designated or threatened species	—	—	—	*
VII. Habitat known to be used by a species under review as to its Federal endangered or threatened status	—	—	—	—
VIII. State lands designated for wildlife or game management	—	—	—	—
IX. State designated natural area	—	—	—	—
X. Particular areas, relatively small in size, important to the maintenance of unique biotic communities	—	—	—	** Julian's Reef

If any of the sensitive areas identified above exist within the designated target distance limits, please post an asterisk (*) in the appropriate column.

** See Attached Information

Illinois Department of Conservation
LINCOLN TOWER PLAZA • 524 SOUTH SECOND STREET • SPRINGFIELD 62701-1787 CHICAGO OFFICE • ROOM 4-300 • 100 WEST RANDOLPH • CHICAGO 60601
Brent Manning, Director John W. Comerio, Deputy Director Bruce F. Clay, Assistant Director

April 5, 1994

Lynette Mick
Land Pollution Control
Illinois Environmental Protection Agency
2200 Churchill Road
Springfield, IL 62706

Dear Ms. Mick:

This is to follow up on our phone conversation of today concerning endangered and threatened species at Illinois Beach State Park. Listed below are all the species for which we have records within the park. This includes the two dedicated nature preserves that lie within the boundaries of Illinois Beach.

Common Name	Scientific Name
Redveined Prairie Leafhopper	Aflexia rubranura
Pale False Foxglove	Agalinis skinneriana
Bearded Wheat Grass	Agropyron subsecundum
Henslow's Sparrow	Ammodramus henslowii
Marram Grass	Ammophila breviligulata
Bearberry	Arctostaphylos uva-ursi
Upland Sandpiper	Bartamia longicauda
Sea Rocket	Cakile edentula
Grass Pink Orchid	Calopogon tuberosus
Golden Sedge	Carex aurea
Crawe Sedge	Carex crawei
Elk Sedge	Carex garberi
Little Green Sedge	Carex viridula
Downy Yellow Painted Cup	Castilleja sessiliflora
Veery	Catharus fuscescens
Redroot	Ceanothus herbaceus
Seaside Spurge	Chamaesyce polygonifolia
Round-leaved Sundew	Drosera rotundifolia
Capitate Spike Rush	Eleocharis olivacea
Kalm St. Johns-wort	Hypericum kalmianum
Hoary Elfin	Incisalia polia
Least Bittern	Ixobrychus exilis
Richardson's Rush	Juncus alpinus
Ground Juniper	Juniperus communis
Trailing Juniper	Juniperus horizontalis
Illinois Mud Turtle	Kinosternon flavescens
Pinweed	Lechea intermedia
Karner Blue Butterfly	Lycaeides melissa samuelis
Black-crowned Night Heron	Nycticorax nycticorax
Clustered Broomrape	Orobanche fasciculata
Jack Pine	Pinus banksiana
Wood Orchid	Platanthera clavellata
Tubercled Orchid	Platanthera flava
Prairie White-fringed Orchid	Platanthera leucophaea

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Purple-fringed Orchid	Platanthera psycodes
Pied-billed Grebe	Podilymbus podiceps
Balsam Poplar	Populus balsamifera
Beaked Rush	Rhynchospora alba
Dune Willow	Salix syrticola
False Asphodel	Tofieldia glutinosa
Common Bog Arrow Grass	Triglochin maritimum
Slender Bog Arrow Grass	Triglochin palustre
Horned Bladderwort	Utricularia cornuta
Flatleaf Bladderwort	Utricularia intermedia
Small Bladderwort	Utricularia minor

As you can see, Illinois Beach State Park provides habitat for a wide variety of rare plants and animals. It is, in fact, probably the densest concentration of endangered and threatened species in the state. Many of the species listed above occur at more than one location in the park.

If you want specific information about any of these species, please call me at (217)785-8290.

Sincerely,

Glen Kruse

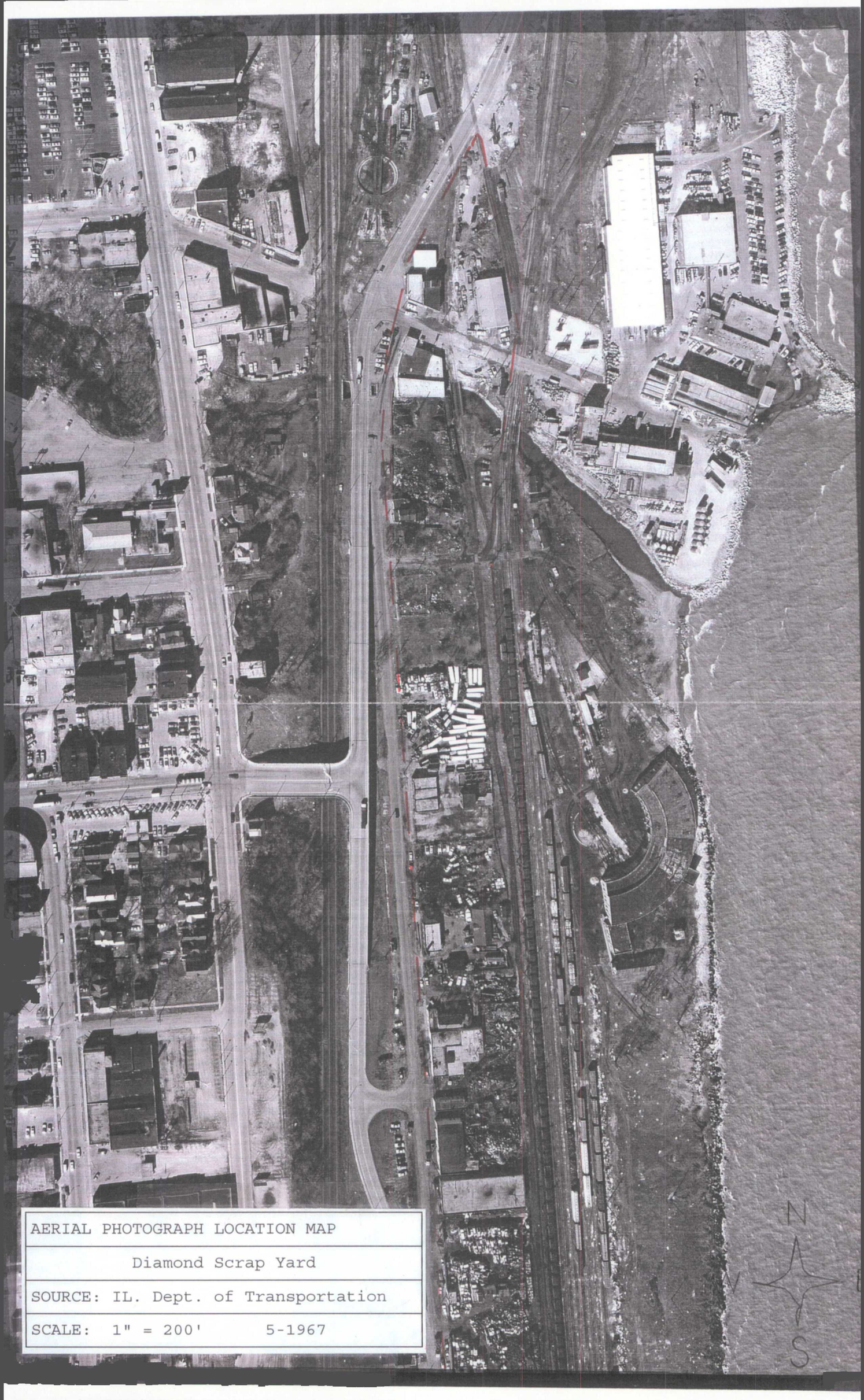
Glen Kruse
Project Manager
Endangered and Threatened Species

cc: Dick Lutz

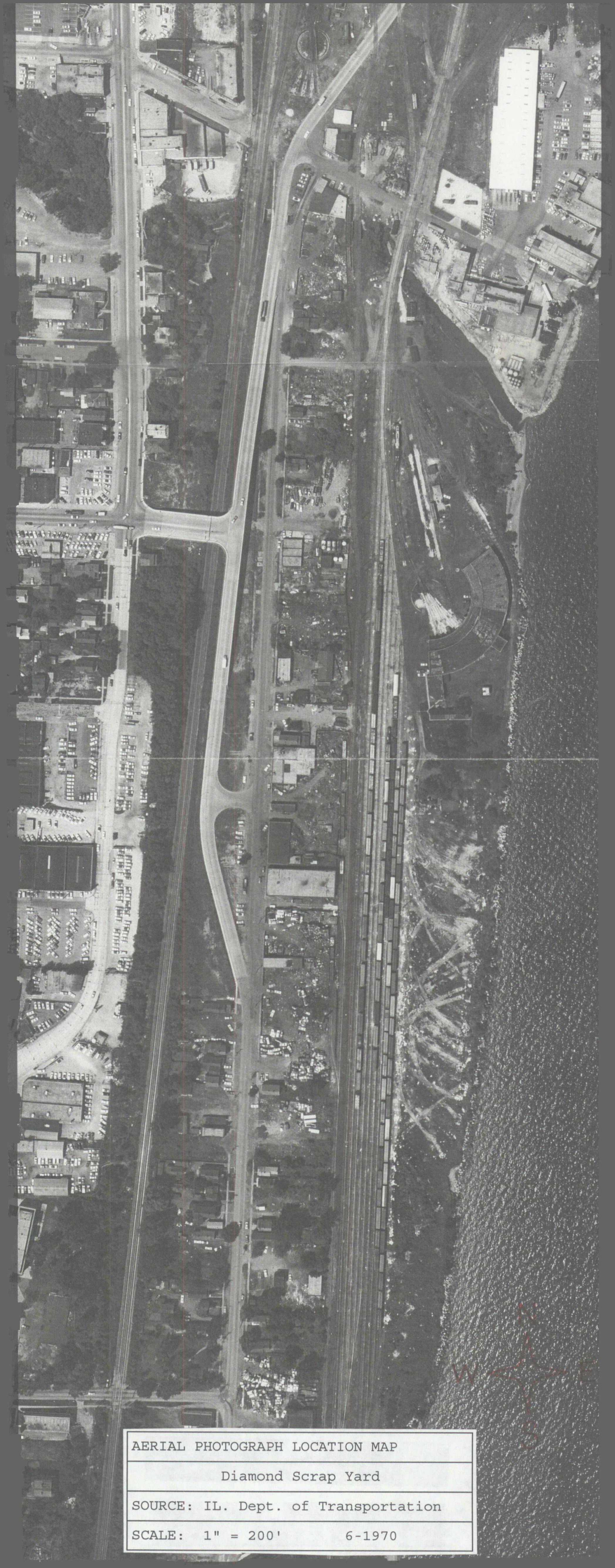
APPENDIX H

AERIAL PHOTOGRAPH LOCATION MAPS

OF DIAMOND SCRAP YARD



AERIAL PHOTOGRAPH LOCATION MAP	
Diamond Scrap Yard	
SOURCE: IL. Dept. of Transportation	
SCALE: 1" = 200'	5-1967



AERIAL PHOTOGRAPH LOCATION MAP	
Diamond Scrap Yard	
SOURCE: IL. Dept. of Transportation	
SCALE: 1" = 200'	6-1970

AERIAL PHOTOGRAPH LOCATION MAP	
Diamond Scrap Yard	
SOURCE: IL. Dept. of Transportation	
SCALE: 1" = 200'	3-14-74

AERIAL PHOTOGRAPH LOCATION MAP
Diamond Scrap Yard
SOURCE: IL. Dept. of Transportation
SCALE: 1" = 200' 10-29-80