241078530
ERP

Phase I Environmental Assessment Report

for

Try Chem Corporation Site
1333 W. Pierce Street
Milwaukee, WI

August 1996

Phase I Environmental Assessment Report
for

Try Chem Corporation Site
1333 W. Pierce Street
Milwaukee, WI

August 1996

Prepared by

Amy S. Parkinson
Waste Management Specialist/ Project Manager
Brownfield Environmental Assessment Pilot
Wisconsin Department of Natural Resources

TABLE OF CONTENTS

FIGURES, TABLES AND APPENDICES

Appendices continued

M. Summary of Analysis of Liquids Leaking from Try Chem Corp. Building by Milwaukee Health Department

N. Soil Testing Plan, Try Chem Corporation, June 1985.

O. US EPA On Scene Coordinator's Report for Try Chem Corporation, !987

P. US EPA Removal Assessment Report, 1994

INTRODUCTION

A Phase I Environmental Assessment is a report that includes record reviews, interviews and physical property inspections to identify areas of potential hazardous substance contamination that is of environmental significance. The Phase I is used to identify areas from which samples will be collected for analysis in the Phase II Environmental Assessment. A Phase II Environmental Assessment is a report that details the environmental conditions at the property. The details of environmental assessments will depend on the past and present usage of the property.

This Phase I was conducted utilizing guidance from the following documents:

American Standards for Testing Materials (ASTM) 1527-94, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process; and

Department of Natural Resources, Recycling Contaminated Lands in Wisconsin, Fact Sheet 3: Step One of Conducting a Thorough Environmental Instigation: Phase I Environmental Assessment and a Phase II Scope of Work.

PURPOSE

This Phase I Environmental Assessment was performed by the Wisconsin Department of Natural Resources (WDNR) as part of the U.S. Environmental Protection Agency and WDNR funded Brownfield Environmental Assessment Pilot conducted in Fiscal Year 1996. The purpose of the pilot is to conduct a Phase I Environmental Assessment (and Phase II Assessments, if necessary)for municipalities to assess site conditions and to help market abandoned and/or tax delinquent properties that are under-utilized. An application process was used to allow municipalities to submit sites they believed had development potential if not for suspected or perceived contamination. Memorandum of agreements (MOAs) were signed by the municipalities and the WDNR to ensure cooperation and define responsibilities for various aspects of the assessment. Municipalities provided in-kind services to support the Phase I.

The Try Chem Corporation site (TCC) was submitted for the Pilot by the City of Milwaukee as the property has been abandoned and tax delinquent since 1984. There is a prospective purchaser for this site but he is concerned about potential contamination at the site.

BACKGROUND

The TCC site has been utilized for steel treating for approximately 69 years. At least three different companies owned/operated the facility during this time. These companies provided metal finishing services including paint stripping, electroplating and painting. Hazardous waste regulations did not become effective until the early 1980s, therefore the disposal of hazardous wastes generated during the majority of the site's

operation are unknown. Wastes are suspected to have been discharged to the sanitary sewer, buried on-site or landfilled off-site. WDNR files document illegal hazardous waste disposal from 1975-1985, by TCC, as discharges to the sanitary sewer, on-site burial and incineration on-site.

The TCC holds a land contract with the Internal Revenue Service (IRS), a vendor appointed by the previous owner and tenant Wesley Steel Treating, to purchase the property. The property has been abandoned since 1985 when TCC filed for bankruptcy. According to the title records, TCC appears to be the owner of the site but may be in receivership by the IRS since their bankruptcy. On July 22, 1996, Ron Ahnert, the President, owner and operator of the TCC said that he still owned the property. An adjacent landowner is interested in purchasing the property to expand his current industrial facility.

PROPERTY OVERVIEW

PROPERTY INFORMATION/ SITE FEATURES

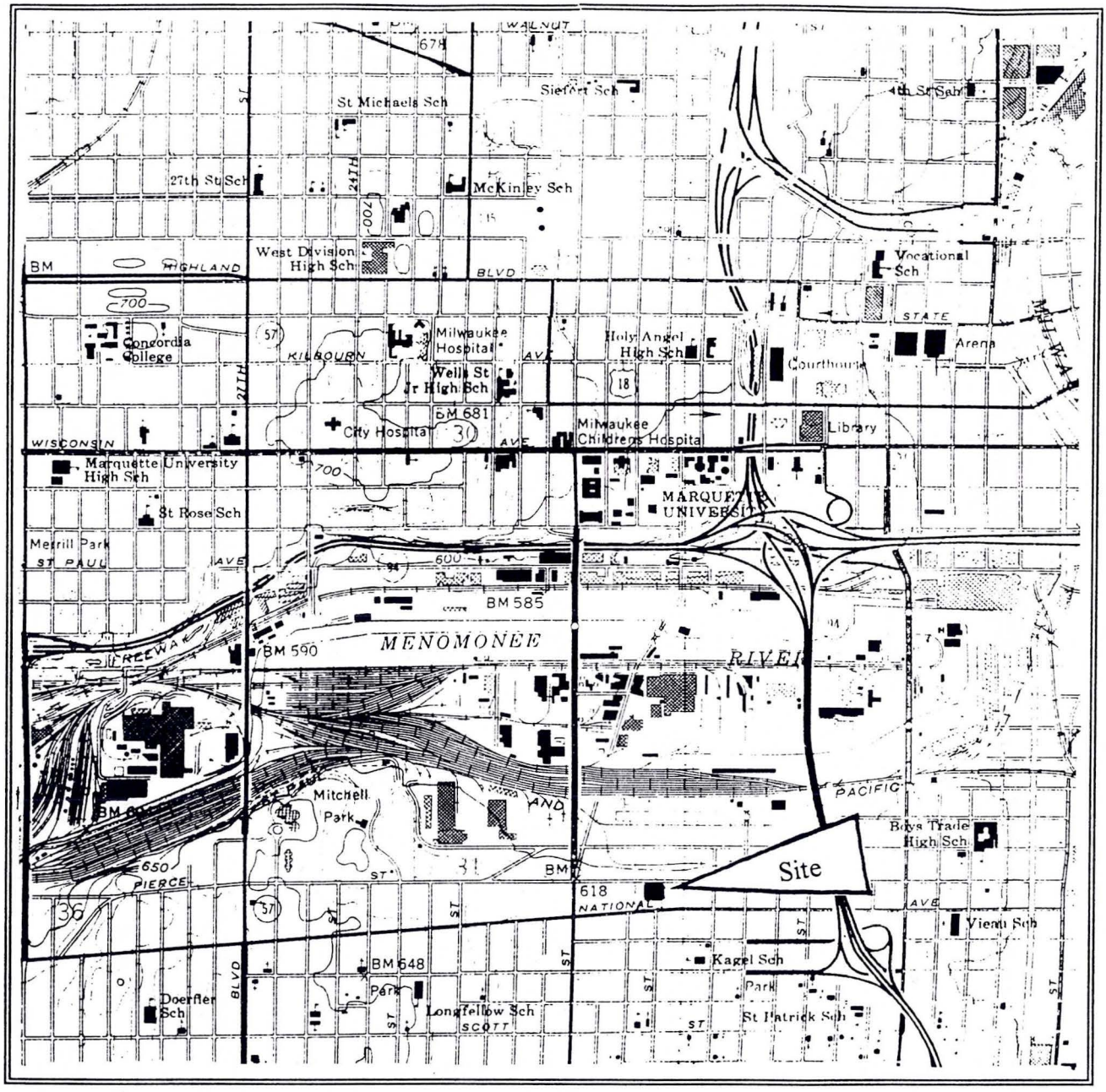
The TCC site is located at 1333 W. Pierce Street, Milwaukee, Wisconsin, one block north of National Avenue and approximately 5 blocks west of Interstate Highway I-94/43 (Figure 1). The site is located in the NE1/4 of the SE 1/4, Section 31, Township 7N, Range 22E, Milwaukee County, Wisconsin.

The site is 1.06 acres in an industrial area with residences nearby (within a block). The site is located on a bi-level parcel located between National Avenue and W. Pierce Street in the Menomonee River Valley. The majority of the site is located on the lower W. Pierce Street portion of the site. An approximately 21,552 square foot, irregularly shaped, building with numerous process areas, a transformer room, locker room, office, lab and warehouse occupied the site until July 1996 (Figures 2 & 3). The majority of the processing area was two stories high with a smaller portion, three stories high towards the rear of the building. There were loading docks on the west and east sides of the building. The upper level (8' above the lower portion) was occupied by a storage shed, outdoor storage area and an access road coming into the site from National Avenue (Figure 2). The upper and lower portions of the site are divided by a steel/concrete retaining wall (Photo 1).

A manufacturing plat map of the site shows the dimensions of the property which is approximately 42,138 square feet (roughly 315' x 123') of facility space plus 2,700 square foot (18' x 150') rear access road from National Avenue (Figure 2).

Zoning within 0.5 miles of the property is identified as industrial, manufacturing, local businesses, planned development and residential. The residential areas are primarily east of 12th Street, south of National Avenue and west and southwest of the intersection of National Avenue and 16th Street.

FIGURE 1

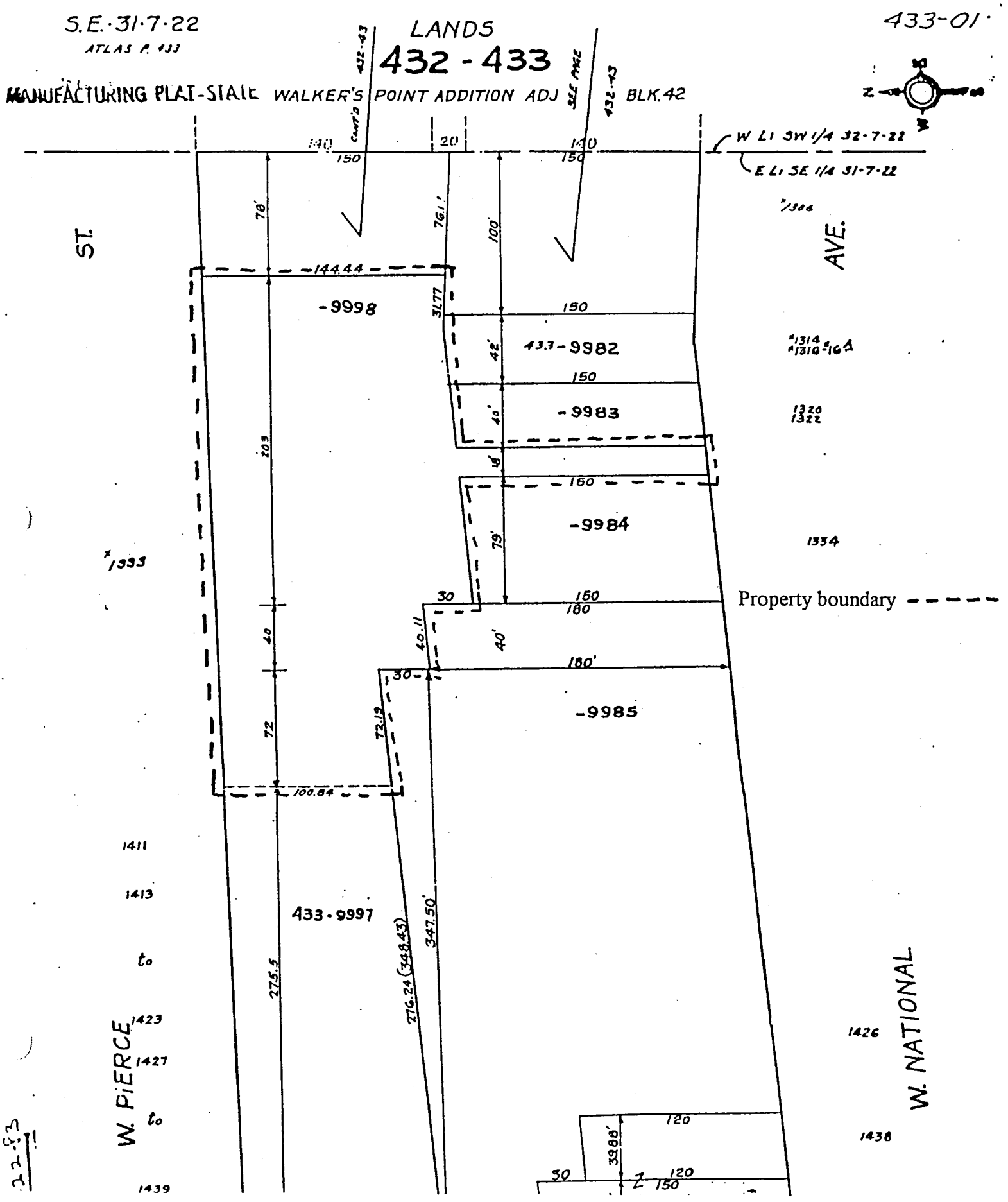


Try Chem Corporation 1333 W. Pierce Street

MILWAUKEE QUADRANGLE
7.5 Minute Series (Topographic)
Scale 1:24 000
Contour Interval 10 Feet

N

Figure 2 - Plat Map



RECORDS REVIEW

ASTM 1527 requires the review of certain governmental lists for potential contamination site which may impact the subject property. Table 1 identifies these lists, their corresponding search distances, last update of the source and the number of sites found.

The CERCLIS sites listed within a ½ mile radius are 1) International Harvester Cyanide Pits on Bruce Street, and the subject property, Try Chem Corporation at 1333 W. Pierce Street (CERCLIS identification #WID048034300) (Figure 4).

TCC was entered on CERCLIS on 08/01/80. A Preliminary Assessment was completed on 10/04/85 by the WDNR. The site received a high priority ranking which prompted WDNR to request assistance from the US EPA Removal Program to help reduce the immediate threat to human health and the environment posed by the abandoned processing chemicals and wastes. US EPA conducted a removal action at the site from 11/16/87 to 05/25/88 to remove processing liquids and waste left by TC when the facility was abandoned after bankruptcy in 1985.

In November 1991, WDNR completed the Screening Site Inspection (SSI) report for the TCC site. The SSI included sampling soil in the east lot and beneath the sidewalk. Analytical results indicated that soil samples contained low levels of PCBs, volatile organic compounds, semi-volatile organic compounds and metals, including zinc, chromium and lead (Appendix A). In September 1995, the City of Milwaukee submitted this site for the WDNR Brownfield Environmental Assessment Pilot. US EPA changed the site status on CERCLIS to a high priority when the site was chosen to be in the Pilot.

There are three RCRA - treatment, storage and or disposal facilities (TSDFs) within a one mile radius (Figure 5). Ten RCRA Generators were located on the 1300 block of W. Pierce Street and National Avenue. Eleven state Environmental Repair sites (sites with reported environmental contamination) are located within 1 mile of the site. The two closest sites are the Bank One Property and the Bruce Street Auto Salvage (Figure 6). These sites are either side gradient or down gradient from the TCC site.

Two hazardous substance discharges were documented at the TCC site and are listed below. Neither the specific substances nor quantity spilled were recorded in the spill reports. Both spills occurred while TCC was in operation. A copy of the Wisconsin State Spills database print outs are in Appendix B.

There are no current underground storage tank (UST) registrations with DILHR for the TCC site. An 8,000-gallon fuel oil tank is registered at the Milwaukee Sausage Company. The Milwaukee Sausage Company is located on National Avenue adjacent to the Try Chem access road. This UST is up gradient from the TCC site (Appendix C).

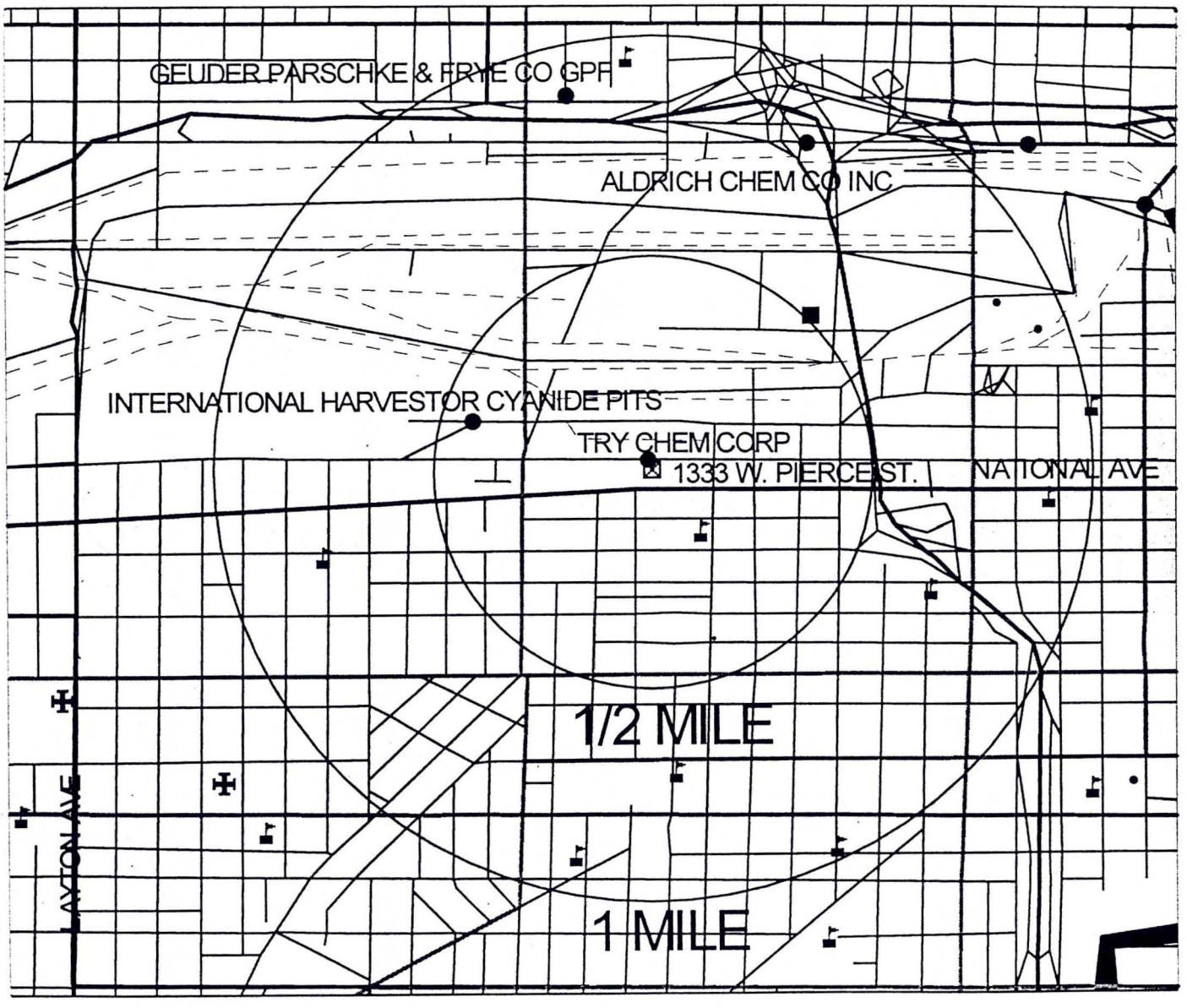
Table 1
Source Lists and Search Distances

Source List	Search Distance	Last Update	Number Found
NPL	1 mile	current	0
CERCLIS	0.5 mile	05/27/96	2
RCRA - TSDFs	1 mile	05/27/96	3
RCRA - Generators	Property & Adjoining	05/27/96	10 - 1300 block of W. Pierce and National Streets
ERNS	Property	05/13/96	0
State Hazardous Substance Release Sites on ERRP Case Tracking List	1 mile	04/22/96	11
Hazardous Substance Discharges (not required by ASTM)	Property & Adjoining	03/28/96	2
State Solid Waste Sites on Solid and Hazardous Waste Inventory Management System (SHWIMS)	0.5 mile	04/96	0
State USTs	Property & Adjoining	04/22/96	1
State LUSTS	0.5 mile	04/22/96	13

Acronyms:
NPL - National Priorities List /Superfund Sites
CERCLIS - Comprehensive Environmental Response Compensation and Liabilitity Information System
RCRA -TSDFs - Resource Conservation and Recovery Act/Treament, Storage and/or Disposal Facility
RCRA - Generators - Resource Conservation and Recovery Act/Largs, Small or Very Small Quantity Generators
ERNS - Emergency Response Notification System
WRRSER - Wisconsin Remedial Response Site Evaluation Report
ERRP - WDNR's Emergency and Remedial Response Program
USTS - Underground Storage Tanks
LUSTs - Leaking Underground Storage Tanks

Figure 4

CERCLIS LISTED SITES LOCATED WITHIN ONE MILE OF FORMER TRYCHEM CORPORATION, 1333 WEST PIERCE STREET, MILWAUKEE, WI



0.5 0 0.5 1 Miles

N

Unclassified
Hospital
School
Religious
Cemetery
Air Facility

CERCLIS Listed Site

RCRIS LISTED SITES LOCATED WITHIN ONE MILE OF FORMER TRYCHEM CORPORATION, 1333 WEST PIERCE STREET, MILWAUKEE, WI

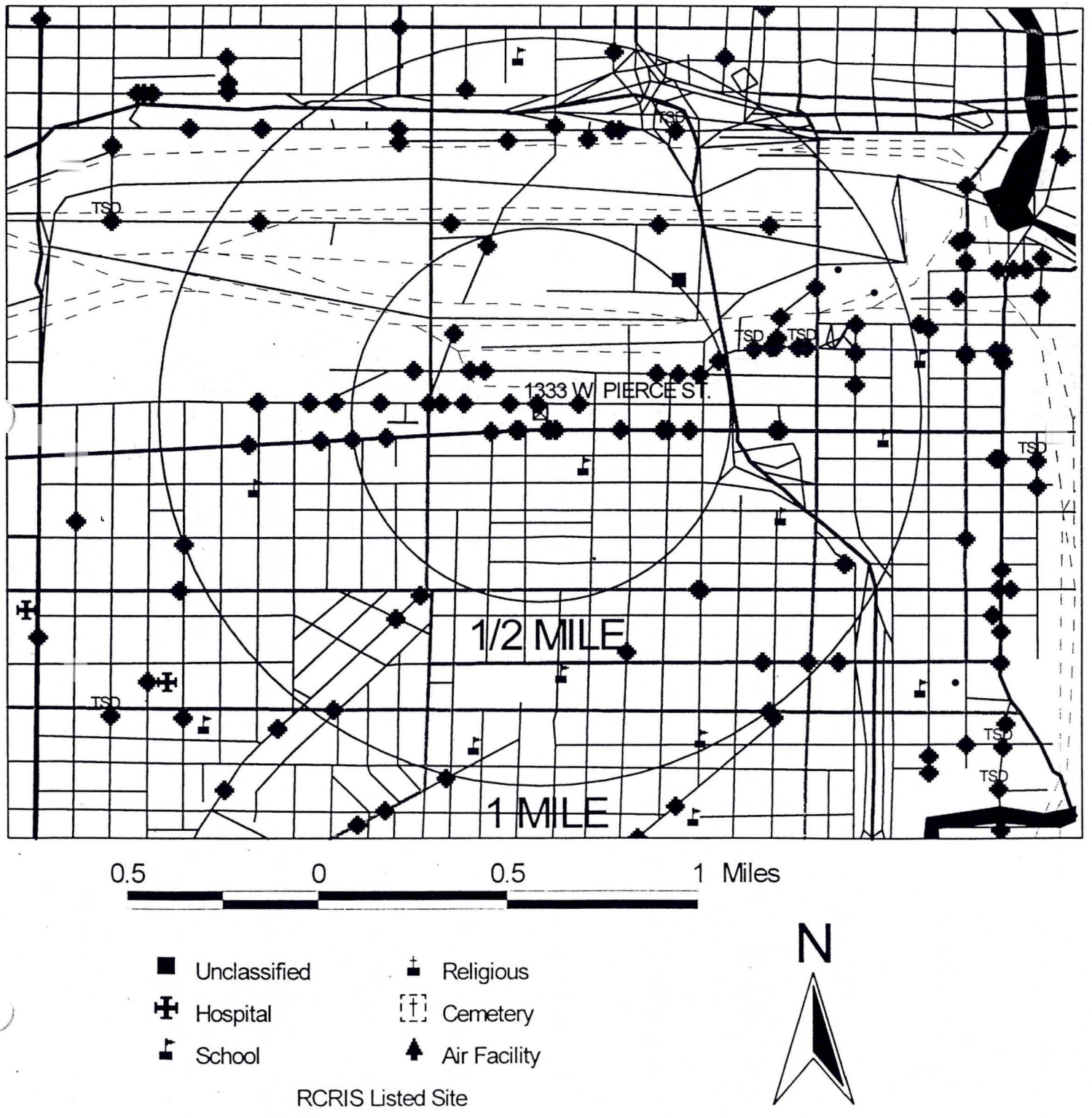
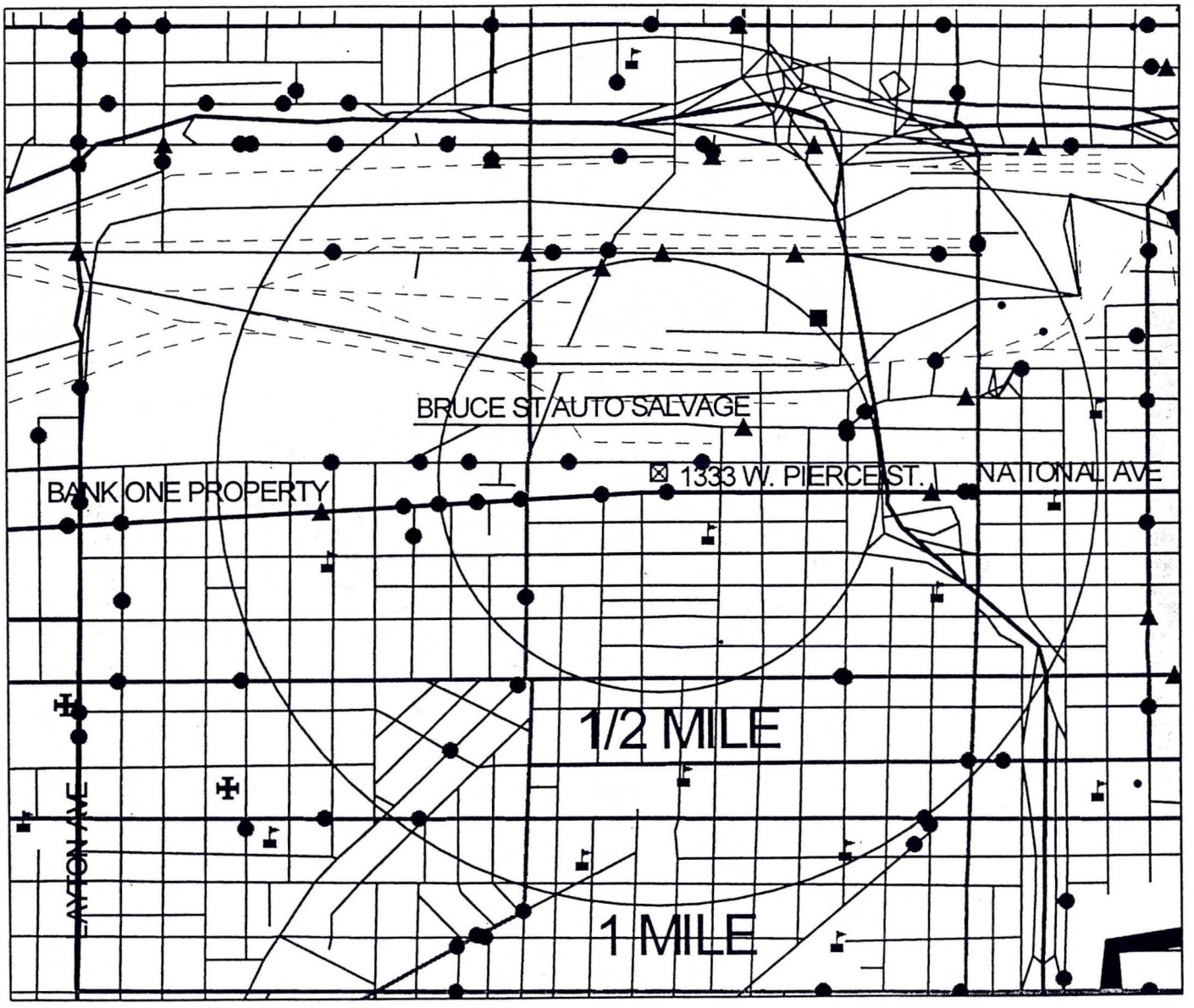


Figure 6

LUST AND ERP CASES WITHIN 1/2 AND ONE MILE OF FORMER TRYCHEM CORP, 1333 WEST PIERCE STREET, MILWAUKEE, WI



Thirteen LUST sites were identified within a ½ mile radius (Figure 6).

POTENTIAL RECEPTORS/ ENVIRONMENTALLY SENSITIVE AREAS

WDNR Water Supply files indicate no records of private wells with in a ½ mile of the site. Two production wells were noted in Section 32 (the adjacent section): Milwaukee Tallow, a 1800' well through the dolomite to the sandstone aquifer and Wisconsin Power and Light, a shallow well screened in till (Appendix F).

The Menomonee River Valley is a heavily industrialized area and has been since the late 1800's. Lake Michigan is the source of potable water for Milwaukee, supplied by the City of Milwaukee Waterworks. The two surface water intakes for the Waterworks are greater than 3 miles north and south of the outlet of the Milwaukee River into Lake Michigan.

The Menomonee River watershed is one of the five drainage areas in the Milwaukee River Basin designated as a "priority watershed" in 1984 under the Wisconsin Nonpoint Source Pollution Abatement Program. A 6.2 Mile section of the river that lies within the Menomonee Valley (including the Burnham Canal) has sustained a loss of fish and invertebrate habitat. Discharges to the storm sewer system lead directly to the river without treatment or filtering.

Documented discharges of liquids wastes to the storm sewer were documented at the Try Chem facility which may indicate a direct release of these wastes to this watershed.

The River is located $^{1}/_{8}$ mile north and down gradient from the TCC site. The storm sewer catch basins near 1333 W. Pierce Street are approximately 2400' from the discharge point in the Burnham Canal which flows into the Menomonee River, the Milwaukee River and ultimately Lake Michigan. The 1991 SSI report for Try Chem indicated that TCC, through industrial accident and intentional disposal, may have contributed to the continued degradation of surface water quality in the Menomonee River Valley.

There are no natural and conservation areas, preserves, and wildlife habitats within a 1 mile of the site.

PHYSIOGRAPHIC AND GEOLOGIC FEATURES

The site is located on a north slope of the Menomonee River Valley, an area of past and present heavy industrial use (Figure 1). Surface runoff in the area of the site drains to the north toward the Menomonee River. The Menomonee River drains to the Milwaukee River and out to Lake Michigan. There are no designated wetlands within ½ mile of the site, although there may be wetland vegetation associated with the River.

Soils in Milwaukee County are primarily products of weathering glacial deposits. Clays

are dominant with sandy soils covering less than 1% of the total area. The clays are partially lake clays and partially glacial products.

Bedrock in the vicinity of the site is the Silurian Niagara dolomite. According to area well constructor's reports, dolomite bedrock is encountered at about 130 feet below ground surface and is approximately 100 feet. The Niagara dolomite is white to grey and has an extensive system of joints and fractures which have been enlarged through solution. The Niagara dolomite serves as an important aquifer to the area, though its yield may be variable, determined by the interconnectedness of the fractures.

Overlying the dolomite are unconsolidated Quaternary deposits, a heterogeneous mixture which ranges in size from clay to boulders. These deposits consist of glacial till interbedded with proglacial lake sediments. In general, the till sheets are coarser in texture with a greater percentage of sand and gravel, than lacustrine sediments, which contain more silt and clay. The oldest and deepest till sheet is the New Berlin Formation. There have been three layers identified within this formation, though it is not certain whether all three underlie the site. The New Berlin Formation is a sandy dolomitic till. Finer proglacial lake sediments separate the New Berlin from the overlying Oak Creek till formation. There have been three till sheets identified within the Oak Creek Formation. These till deposits are interbedded with lacustrine sediments, producing a complex stratigraphy which may change rapidly within short distances. There may also be some finer alluvial and estuarine deposits overlying the till in the area of the site. However, because of the complex interbedded nature of the sediments in this area, it is difficult to determine the actual stratigraphy at the site.

PROPERTY HISTORY

The property history for this site was reconstructed by reviewing the historical sources shown in Table 2.

Table 2
Historical Sources

Source	Dates Reviewed	Notes
Aerial Photographs	1950, 1956, 1979, 1985 scale 1:20,000	Building visible in all photos
Sanborn Fire Insurance Maps	1894, 1910, 1951,1969	Good diagram of buildings
Business Street Directories	1865 - 1985	Environmental Data Resources, Southport, CT Appendix Q
Building Department Records	1916 - 1985	Building additions

Source	Dates Reviewed	Notes
Zoning/ Land Use	Not noted on maps	- - -
Land Title Records	01/66 - 03/96	Title search - 1966 to 1996
WDNR Southern District Site Files	1979 - 1995	Documentation of violations, correspondence, conversations and court decisions
City of Milwaukee Health Department Files	1983 - 1985	Documentation of violations, correspondence, conversation and court decisions

The TCC site is located on W. Pierce Street between 12th and 16th Street, with an additional rear vehicle access from National Avenue to the back of the site, behind the main building. The site is bounded on the east by the Milwaukee Scrap Metal Co. and on the west by a paved parking area. The City of Milwaukee building permits indicate that the main building was built around 1913. The main building was constructed of brick on a concrete foundation with sunken pits in the northeast portion of the building. The building had a flat corrugated metal roof. City of Milwaukee building inspection records show Wesley Steel Treating at 651-53 S. Pierce Street (currently 1321-41 W. Pierce Street) submitted permit applications for a 20' x 40' storage shed in 1915 for storage of castings by, 50' x 74' one story structure in October 1916, and an alteration of the roof in 1920.

Building permit applications indicated that a transformer was installed on site in 1956 and a second one by 1961. Due to the time of their installation, it is suspected that these transformers contain PCB oils in their capacitor fluid. In 1961, renovations were made in the repair shop and office areas due to a fire damage.

The 1951 Sanborn map shows the TCC site developed with the majority of the building structures in place (Figure 7). By 1969, the retaining wall, additional processing space and loading docks were added (Figure 8). Two above ground storage tanks used for storage of oil and ammonia were located behind the building in the outdoor storage area (south side of the building), as seen on the 1969 Sanborn Map (Figure 8). These tanks were no longer on the property at the time of the SSI in 1991.

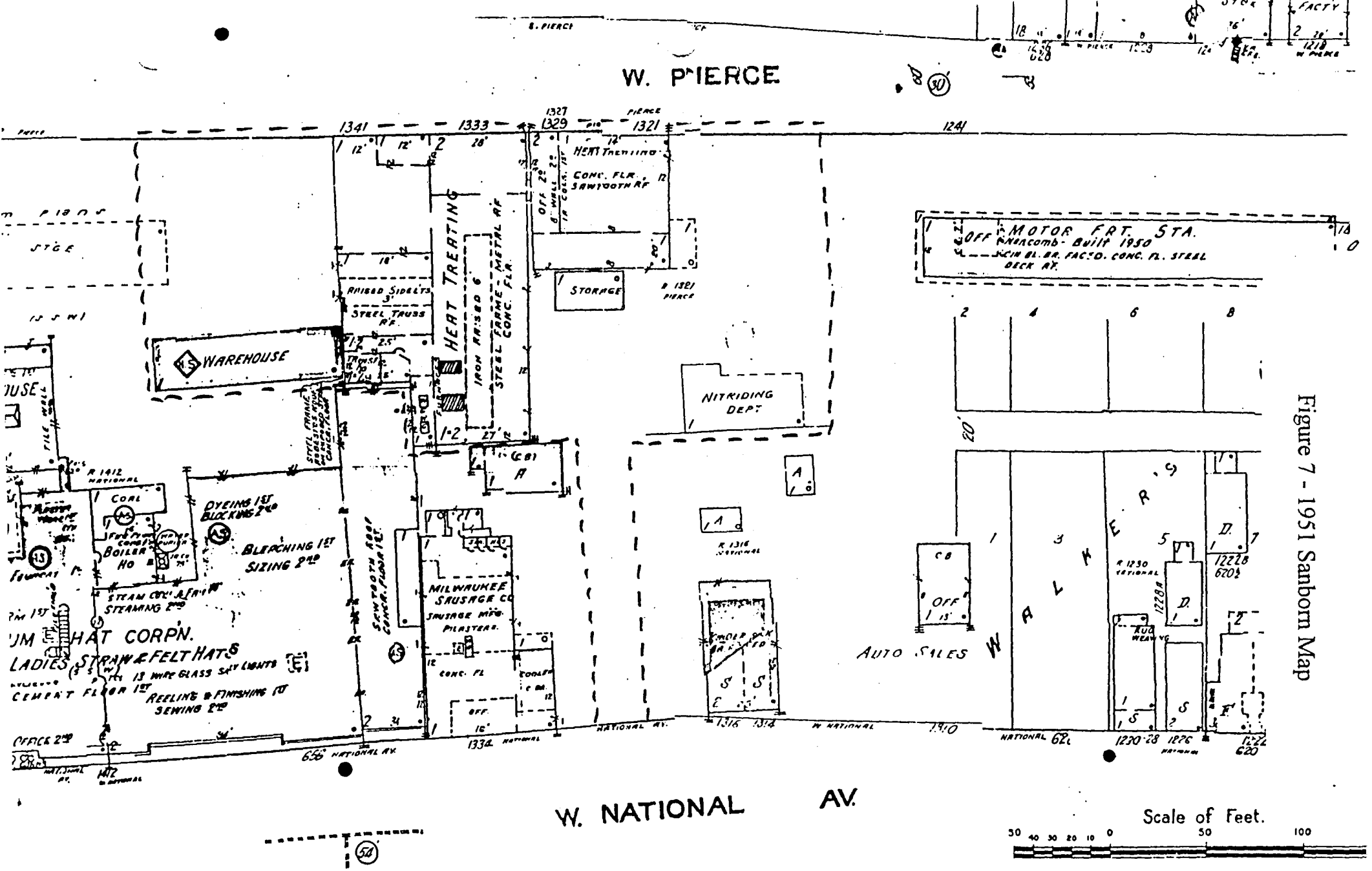
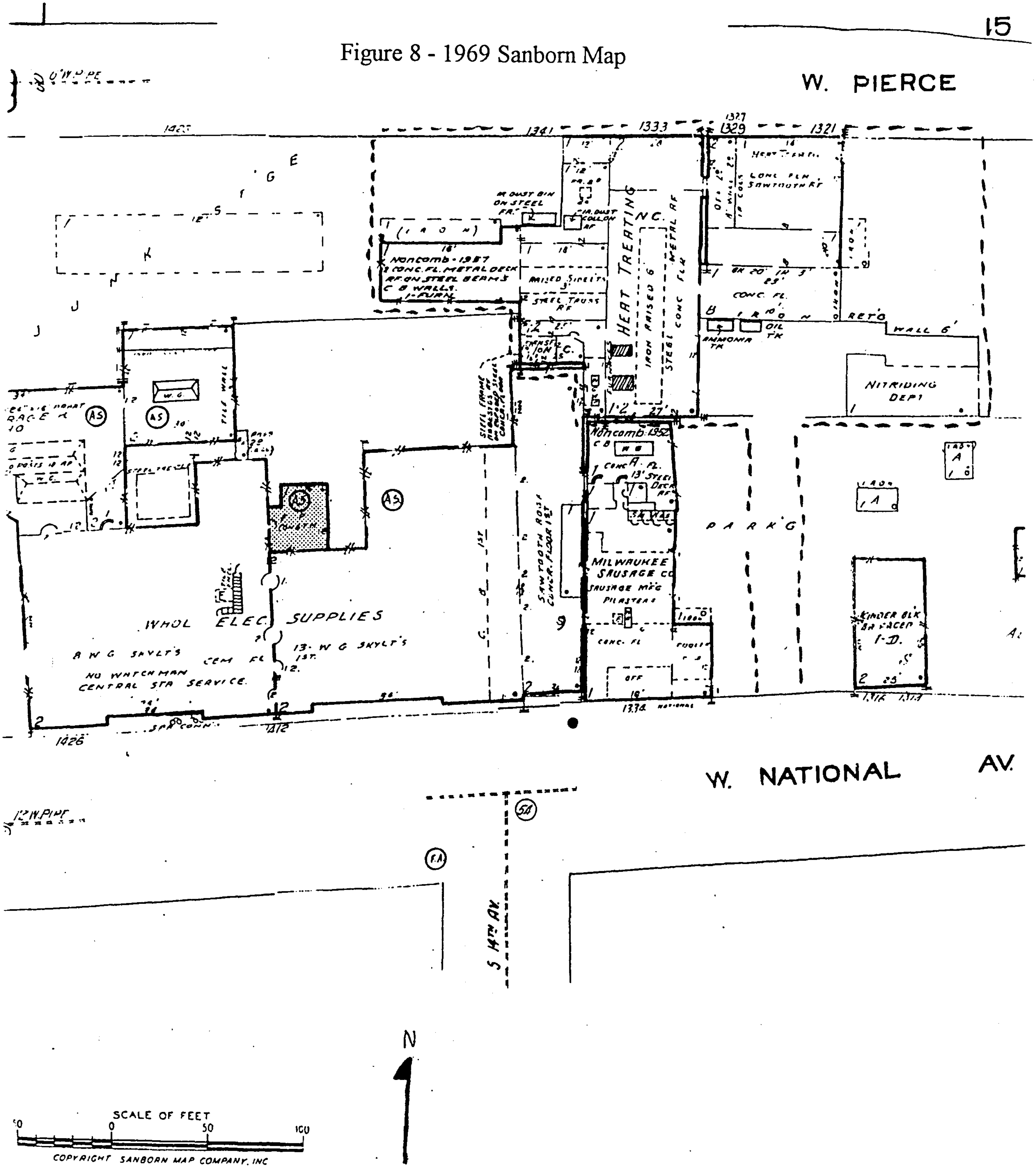


Figure 7 - 1951 Sanborn Map

Figure 8 - 1969 Sanborn Map



12-69

Sanborn maps and Building Permit applications indicate that the 600 block of South Pierce was re-named and numbered, as the 1300 block of West Pierce Street by 1934 (Appendix D). The original address of the site was 651-655 S. Pierce Street. The original operator at this site, according to Building Permit applications, was William H. Shermers who ran a "tin shop ". Numerous other companies have occupied the site which is now known as 1321-41 West Pierce Street. A summary of the companies occupying the site since 1916 is presented below.

651 - 655 S. Pierce Street
Milwaukee Heat Treating Company - 1916
Wesley Steel Treating - 1920

1321 - 1341 West Pierce Street
Wesley Steel - until 1974
Try Chem Corporation until 1985

No city records were found on the Milwaukee Heat Treating Company. Wesley Steel Treating operated a steel treating service from 1915 to 1974. An advertisement for the company found in a 1960 business telephone directory displays a list of 27 processes performed and lists the company as being "Founded July 12, 1915" (Appendix G). No records were found to indicate the location of Wesley Steel Treating prior to 1920. A general description of the processes used by Wesley Steel Treating are located in Appendix H. According to the description of the processes, numerous hazardous chemicals are suspected to have been used or generated as wastes during their approximately 55 years of operation at this site.

The storage shed, indicated on Wesley Steel facility drawings as the "Nitriding building" (approx. 22' x 68') was located on the upper level behind the main building (Photos 1, 17 & 20). Nitriding is a steel surface hardening process that requires heating ammonia gas to 500-600° Celsius. This would account for the above ground storage tank labeled "ammonia" indicated on the 1969 Sanborn Map. The shed is constructed of metal and wood sheeting.

Facility plans of the Wesley Steel and Try Chem operations show locations of treatment processes but little in the way of water supply, waste water disposal, and storage, handling, treatment and disposal facilities (Figures 9 & 10). A 1950 sewer plan by the Milwaukee Department of Public Works, Bureau of Sewers shows two lateral connections to the main sewer line from Wesley Steel Treating Company. The pipes were made of extra strength or standard strength vitrified clay (Appendix E).

United States Department of Agriculture aerial photographs from 1950, 1956, 1979 and 1986 were reviewed and indicated this area was industrialized during these time periods.

GENERAL PROCESS DESCRIPTIONS

Both Wesley Steel Treating and TCC provided metal finishing services including paint stripping, electroplating and painting. Electroplating is defined as a chemical or electrochemical process of surface treatment. The basic process runs as follows: mechanical cleaning of the work piece -- rough degreasing with organic hydrocarbons, --pickling in concentrated acids or alkalis -- washing -- electrolytic degreasing-- washing, neutralization, -- galvanisation --washing -- drying (for more details see Appendix H). Processes and some of the hazardous materials used on-site are located on the maps in Figures 9 & 10. The processes and hazardous chemical used at this facility over time were determined by reviewing literature and files. Interviews were conducted with the president/owner/operator of TCC, a former TCC chemist and a former Wesley Steel Treating Employee to confirm use of various substances and work practices (see Interview Section, page 44).

Process descriptions indicate that heat treatment in salt baths (sodium cyanide and sodium carbonate) or anhydrous ammonia baths at temperatures of 800-900° Celsius, and surface and case hardening by quenching in oil, water or air would have been utilized to perform the processes listed in their telephone book advertisement. Methane and propane gas was used for carburizing. Treatment furnaces were run by gas, oil or electric. Lead furnaces caused lead to volatilize and become airborne particulates.

An historical photo of the site shows an advertisement for Wesley Steel Treating on the side of the building which says "operating day and night" (Appendix I). No records have been found indicating the disposal methods used for hazardous wastes generated during their operation. The federal regulation of hazardous waste did not begin until 1980. It is suspected that hazardous wastes were discharged to the sewer, buried, or landfilled off-site.

LAND TITLE INFORMATION

Table 3 shows the Land Title Information for 1333 W. Pierce Street. The title information was searched from 1966 and the present. The records show Wesley Steel Treating Company sold their facility to TCC on a land contract in 1975. Wesley Steel filed for bankruptcy soon afterwards and the land contract vendor interest was assigned to the Internal Revenue Service. Several mortgages were taken out by TCC on the land contract. State and federal tax lien were placed on the property, as well as a bond by the City of Milwaukee for the replacement of the etched sidewalk. TCC and Ron Ahnert filed for bankruptcy in 1985 and 1986, respectively. In addition, the real estate taxes for the TCC site for the years 1979 through 1995 are delinquent. In 1990, USEPA placed a lien on the property for the monies expended during the removal and disposal of the abandoned processing liquids and solids. In March 1995, the City of Milwaukee issued a raze and remove order for the building at 1333 W. Pierce Street.

Table 3
Land Title Information for 1333 W. Pierce Street, Milwaukee WI
(conducted by Lawyers Title Insurance Corporation)

Vendor	Vendee	Date	Notes
Paul Noskowitz Wesley Steel Treating, Inc	Try Chem Corporation	04/01/75	Land Contract
Internal Revenue Service, Milwaukee District		04/30/75	Vendor interest assigned to the IRS
	same	05/17/79 05/23/80	Collateral assignment of vendee's interest in Land Contract to First WI Nat'l Bank of Mequon
	same	03/19/76 10/11/78	Mortgage from TCC to Small Business Administration $75,000 $55,000
	same	11/30/82	Mortgage from TCC to Badger Ford Truck Sales, Inc and Edward B. Schlagenhauf
	same	01/28/83	Mortgage from TCC to Fiorenza, Weiss, Amato, Hodan & Belongia, S. C.
		05/07/90	Notice of Lien under Superfund Amendments and Reauthorization Act of 1986
		03/27/95	Order to raze and remove building by City of Milwaukee
		 11/30/84 05/13/85 05/22/85 07/11/85	State tax lien against TCC $1,958.92 $3,397.0 $4,308.35 $1,029.35

Vendor	Vendee	Date	Notes
		09/24/86	Federal tax lien against TCC $14,266.04
		none indicated	Bond for pavement of curb, gutter and walk - principal = $118.85 plus interest

TRY CHEM CORP. PROCESS DESCRIPTIONS

The TCC became a corporation in 1969. TCC operated at 520 S. Muskego Avenue until moving to the West Pierce Street location. A brochure for the TCC describes their services as providing "Quantity with Quality in Metal Finishing". The brochure lists the metal treatment processes they perform which included: Kolene paint stripping, industrial chemical formulating and mixing, zinc plating, painting, sandblasting, pickling, phosphating, oiling, degreasing and rotor salvaging (Appendix J). Kolene is a "trademark for an anhydrous molten oxidizing salt bath of sodium hydroxide base with additives necessary to provide controlled chemical oxidizing and dissolving properties" (Appendix H). According to WDNR files and process descriptions, these processes utilized sodium hydroxide and sodium cyanide baths, zinc, tin, lead, paints, blasting sand, pickle liquor, phosphates, oils (for metal treatment, a quenching medium and fuel), and solvents. These processes were used to strip paint off metal and re-treat the surface of large industrial machinery and parts by electroplating and/or painting. TCC's brochure indicates it had an overhead crane with a 10-ton lifting capacity for moving large parts through the treatment processes.

Wastes generated in the various treatment processes by TCC include: kolene sludge (which contains the paint waste resulting from the high temperature burning of paint), pickle liquor (sulfuric acid), quenching fluids (both water and oils), and degreasing solvents. Table 4 shows a list of substances used during the life of the site for steel treatment as indicated by the WDNR and Milwaukee Health Department (MHD) files and process description (see Appendix H).

DISCHARGE OF HAZARDOUS SUBSTANCES

WDNR and MHD files indicate that during the operational history of the TCC, waste sludges were piled in and around the building and buried in the east lot; waste processing liquids were poured in the east lot and under floor grates into a concrete pit; and waste sludges were neutralized and poured into the sanitary sewer. In addition, TCC accepted paint waste and oil from other companies for treatment and disposal in the kolene baths.

WDNR and MHD have numerous documents, correspondence, sampling data and memos to the file indicating the activities and conditions witnessed at the site over a 17

Table 4
List of Substances Used at the Site (1920 - 1985)

anhydrous ammonia	phenols
calcium chloride	phosphates
chromic acid	propane
formic acid	silver
hexavalent chromium	sodium carbonate
hydrochloric acid	sodium chlorides
lead	sodium hydroxide
methane	sodium cyanide
methylene chloride & other solvent degreasers	sulfuric acid
nickel	tin
nitric acid	zinc chloride
	zinc cyanide

year period (1978 - 1995). The information reviewed in these files will be summarized and will focus only on the information that pertains to potential or actual contamination at the site.

Over the course of time, WDNR files documented events or conversations with TCC officials and employees in regards to:

* air emission exhausted by the stack associated with the kolene processing baths (1978-80);

* illegal disposal of acid wastes from Redox Industries (a nearby company also owned/operated by Ron Ahnert) and alkaline wastes from TCC that were mixed together and discharged to the sanitary sewer - 1982;

* storage of hazardous wastes generated by TCC and accepted from other companies for treatment and disposal in the kolene processing baths - 1975-82;

* pouring of cyanide wastes under the floor where the west loading dock is now located (a former employee reported "tons" of cyanide was dumped there) - 1983 complaint (Appendix K)

* pouring of methylene chloride, formic acid and phenol solutions under the metal floor plates at the east end of the building (a former employee reported 75-100 gallons were discharged each time - witnessed for 1 ½ years - frequency not documented - Appendix L);

* unlicensed installation and use of burn-off oven (1982/1985) and waste water treatment system (1984)

* burying of kolene sludge and other wastes in the east lot - 1983;

* disposal of excavated kolene sludges and other wastes containerized during the removal action at the east lot - 1984;

* leakage of liquids from the building foundation in the northeast and northwest corners along W. Pierce Street which etched the sidewalk and gutter, and drained to the storm sewer catch basin north of the east lot - documented 1983 -1984;

* abandonment of processing liquids and wastes in the building upon bankruptcy - 1985.

AIR EMISSIONS

Complaints of air emissions were investigated by WDNR in 1976, 1977, 1978, 1981, 1982, 1983 and 1984. Visible air emissions from the Kolene process were found to be caused by the burning off of coatings on specific steel pieces, and of the burning of hazardous wastes from other facilities accepted by TCC for "disposal". The wastes were accepted by TCC for disposal without analysis of the wastes and without proper permitting as a treatment, storage and disposal facility (TSD). WDNR discussed this practice with TCC and required them to stop under the authority of the Resource Conservation Recovery Act (RCRA). In March 1984, the Kolene process was discontinued due to "competition" and the machine was dismantled and disposed. A burn-off oven was installed by TCC to replace the Kolene processing unit. WDNR informed TCC that this burn-off oven could not be used for burning wastes. TCC applied for an air emissions permit and was denied by WDNR. TCC operated the burn-off oven without proper licensing.

WASTE WATER DISPOSAL

Waste water disposal practices at the site changed over time. WDNR records indicate wastes and waste water were discharged to the sanitary sewer. In 1984, TCC installed a waste water pretreatment system but did not submit the sufficient plans to WDNR for permitting. Although no permit was issued TCC proceeded to use the system which lead to a letter from the Metropolitan Milwaukee Sewage District to document their lack of a waste water permit.

The pretreatment system was located in the pit area (Figure 3). The system was fed by 3 sumps with trenches or underfloor piping, and discharged to the sanitary sewer at W. Pierce Street. One dry well was noted in the facility, 15-20 feet east of the kolene processing line.

UNDERGROUND STORAGE TANKS

A Soil Testing Plan for the TCC site was prepared by an unidentified consultant and submitted to the WDNR for comments in June 1985. This plan describes the work areas in the facility and lists the type of chemicals in each process tank (Appendix N). The plan indicates that a tank was discovered beneath the "silver" plating line while excavating a trench. "The contents are unknown or whether there is even anything in it. This will be explored further and any contents will be sampled and analyzed according to US EPA Standard Waste Management Profile." A WDNR memo documented Ron Ahnert as saying that he thought any liquids in the tank were from the previous owner, (presumably Wesley Steel Treating). Another memo indicated that Mr. Ahnert said that the former owner "has oil or tar pits in the same area as the metal grates", which is the same location as the underground tank. No records were found to document any other characteristics of this tank and no fill pipes were noted in the area of the tank.

ONSITE BURIAL OF HAZARDOUS WASTES

According to WDNR files, chemical and waste storage areas were historically located throughout the building. Kolene waste was observed piled on the floor, in drums and outside the building by WDNR and City of Milwaukee Officials. Two loading docks were used at the Try Chem facility, the east and west. The east lot was used the site of a removal action by TCC as ordered by the WDNR. Kolene sludges and drums were observed being disposed in this area with the intent of filling this area and creating a new loading dock area. The TCC conducted a removal of kolene waste and other wastes used to create a new loading dock in the east lot (Photos 7, 8, 9, & 10). The removal occurred in July 1983 but disposal of all the wastes was not completed until September 1984.

DISCHARGES OF HAZARDOUS LIQUIDS - ONSITE & OFF SITE

WDNR files document reports from two former employees that cyanide, methylene chloride, formic acid and phenols were poured either under metal floor plates or on the ground on a routine basis over time (Appendices K & L) .

Chemicals released through the northeast and northwest corners of the building, which etched the concrete sidewalk and gutter, drained into the stormsewer and discharged to the Burnham Canal and ultimately to the Menomonee River (Figure 1 & 11). MHD and WDNR files document the leaking of chemicals through the building foundation beginning in 1983 and continuing intermittantly until fall 1984. Samples of the leaking liquids were analyzed and found to contain chromium, nitrates, zinc, phosphate, fluoride, lead, cyanide, cadmium, and hydrochloric acid with pH ranging from 0.3 - 10.0. The types of chemicals and their concentrations detected in the liquids sampled varied with each sample, ranging from .01 - 10,000 parts per million (ppm) (Appendix M).

REGULATORY HISTORY

TCC was registered as a Large Quantity Hazardous Waste Generator, US EPA ID# WID048034300 (same as CERCLIS #). According to the USEPA Resource Conservation Recovery Information System (RCRIS) printed January 6, 1996, TCC was never permitted under the Resource Conservation Recovery Act (RCRA). TCC did not submit a completed Part A Application nor a Part B Permit for a RCRA hazardous waste permit for transport, storage and disposal. TCC was notified of numerous building code, employee safety and hazardous waste violations by the City of Milwaukee and WDNR from 1977 to 1985. Although WDNR informed TCC of violations and permit deficiencies many times, minimal attempts were made to comply with state and federal regulations. The WDNR files indicate that the types of environmental regulation violations were generally:

* Storage, treatment and disposal of hazardous waste without a license - no license or interim license
* Failure to use proper containers for hazardous waste
* Failure to properly train employees regarding hazardous waste and maintaining records of training
* Failure to characterize wastes generated
* Air emission exceedences

TCC was accepting unknown liquid wastes from other companies and burning them in the Kolene furnace as a treatment measure for a period of 10 years, according to WDNR files. TCC had told these companies that WDNR had given them approval to do so but WDNR had not. A WDNR memo to file indicated that TCC accepted PCB oil wastes for burning in the kolene furnace. Soil samples collected during the 1991 Screening Site Inspection (SSI), indicated low levels of PCBs across the site which may be indicative of the release of PCBs through air emissions. TCC was served a notice of violation for treatment and disposal of hazardous wastes without a license (1981). TCC was ordered to cease this practice and apply for a license through the USEPA RCRA program. An application for an interim license was denied by WDNR and US EPA.

TCC was also illegally disposing of wastes by combining its kolene sludges (basic substances) with the acid wastes from the Redox Industries (also owned and operated by Ron Ahnert) which neutralized the wastes (acid + basic) and discharged them into the sanitary sewer system.

Numerous operational, structural and code violations were observed by City of Milwaukee and WDNR officials. Both the City of Milwaukee and WDNR issued numerous citations, notice of violations and orders to correct emergency conditions to TCC and the owner/operator Ron Ahnert. Numerous WDNR correspondences and memos to the file indicate direct and phone contact with TCC employees and Ron Ahnert regarding air emissions, illegal treatment and disposal of hazardous wastes and

leakage of chemicals from the building to the storm sewer. The files indicate that TCC repeatedly said they "lacked resources" (money) to correct or comply with regulations.

WDNR filed a criminal suit against Ron Ahnert in 1984 for hazardous waste violations. Mr. Ahnert pleaded no contest to the charges in February 1985 with a request for probation. Mr. Ahnert was granted probation with deadlines for preparing a site investigation and cleanup plan. When it became clear that Mr. Ahnert was reluctant to make the necessary financial investment toward the investigation and cleanup of the site, his probation was revoked and he began serving a 1-year jail term in 1986.

ENVIRONMENTAL INVESTIGATIONS AND CLEANUPS

TCC conducted a removal action in the east lot and loading dock area in 1983, after WDNR discovered barrels buried under a new concrete loading dock pad. More than 200 barrels of kolene and other wastes were removed from this 150' x 300' area by TCC (Photos 7-12). The barrels and other wastes were placed on the original concrete pad in the east lot. No excavation was conducted below the original concrete pad. No confirmatory soil or groundwater samples were collected in this area when TCC completed the removal due to lack of resources. Some of the uncontainerized wastes from this removal were stored in the storage shed on the upper level of the site prior to disposal (Photo 12).

Environmental investigations were also conducted by WDNR and US EPA. WDNR prepared a Superfund Site Assessment Preliminary Assessment Report and collected soil samples under the side walk and in the lots, during a Superfund Site Inspection in May 1989 (Appendix A). US EPA conducted two environmental assessments, collecting samples of liquid and solid wastes and soil, in October 1987, and December 1994 (Appendices O & P).

The 1987 assessment lead to an emergency removal to reduce the immediate threat to human health and the environment posed by the abandoned plating wastes. The US EPA On Scene Coordinator's Report indicates removal of "approximately 13, 750 gallons of liquid wastes, more than 12 tons of solid waste, four roll off boxes of crushed drums, contaminated soil and miscellaneous debris from the site to various treatment/disposal facilities. Following waste removal, the building was decontaminated and secured to prevent unwarranted access".

The 1994 assessment lead to a "no removal action warranted" designation based on the sample analysis. Although no removal action was warranted based on this assessment, this does not mean there is no contamination on the site. The US EPA Removal Program conducts removal actions based on contaminant concentrations found in the samples collected during the removal assessment. This data is compared with removal action limits, which are health/risk based concentrations used to

determine whether their authority will allow them to take an action.

SITE RECONNAISSANCE AND INTERVIEWS

SITE RECONNAISSANCE

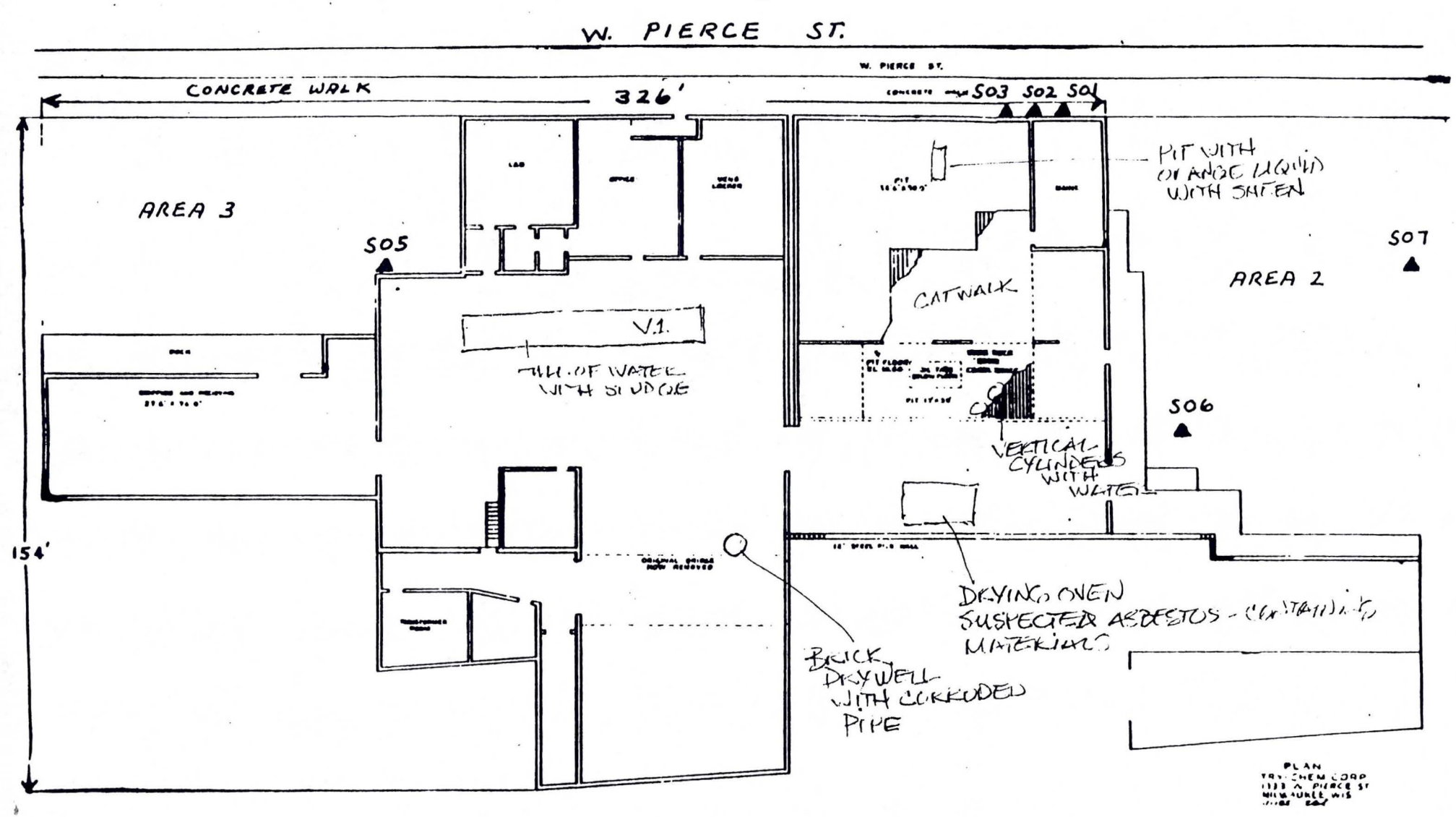
The project manager, Amy Parkinson, visited the site on four separate occasions, December 6, 1994; April 4, 1996; May 20, 1996; and June 10, 1996. Asbestos-containing materials, lead-based paint and radon were **not** evaluated as part of this Phase I. The December 6, 1994, site inspection consisted of a walkthrough of building and east lot. Ms. Parkinson was unable to inspect all areas of the main building due to poor lighting (electricity was no longer connected in the main building). This inspection occurred in conjunction with US EPA's Removal Assessment. On April 4, 1996, Ms. Parkinson, accompanied by Mr. Kenneth Bro of the Wisconsin Division of Health (DOH), inspected the outdoor storage area and the National Avenue access driveway. On May 20, 1996, Ms. Parkinson returned to take additional photographs of the site. Ms. Parkinson did not enter the main building during the April 4, 1996 or May 20, 1996 inspections due to the condition of the roof and presence of damaged asbestos containing materials. On June 10, 1996 after the asbestos-containing materials had been professionally removed, Ms. Parkinson observed the interior of the building briefly during a meeting with the City of Milwaukee's building demolition contractor, Walter's Wrecking. Observations made on these four separate inspections are summarized below.

DECEMBER 6, 1994

The building was abandoned with boarded up windows and doors. Window glass throughout the building was broken and the roof was heavily damaged allowing rainwater and snow to enter the building.

The east and west lots were paved with concrete but the concrete was cracked with vegetation growing in the cracks. A 3' orange plastic snow fence was being used to reduce vehicle access to the west lot and a 3' wooden rail-like fence was barring access to the east lot. There were loading docks in each lot. One door had been removed and provided easy access into the warehouse portion of the building. The City of Milwaukee believed that people had been living in the building due to the presence of mattresses and food wrappers.

Vats and pits were visible in the main area of the building and in the area of the sunken pit. The vats were full with liquid, suspected to be rainwater. Pieces of metal debris were on the floor. The pit area had no processing equipment in it. There was at least one small pit within the large pit which contained a orange liquid with a petroleum sheen. In addition, a pile of solidified material was observed underneath the catwalk (Figure 12). A long stick was used to probe the bottom of a vat (V1) containing the suspected rainwater liquids. The vats were probed and appeared to have a sludge-like



TRY-CHEM CORP.

Source: Try-Chem Soil Sampling and Analysis Plan August, 1985

Figure 12 - Map of Inspection 1

material in the bottom. A brick drywell was noted in the middle portion of the building. The well was about 6' deep with a 10" diameter pipe coming in from the side and continuing down the hole. The top side of the elbow had a large irregular hole in it. No flash light was available for further investigation. A drying oven with suspected asbestos-containing insulation was noted as well as two vertical cylinders containing a liquid, suspected to be water. Not all areas of the building were observed due to lack of light.

During this inspection, US EPA collected samples of the orange liquid found in the pit (S02), the solidified materials beneath the catwalk (S01)and a composite soil sample from the east lot (S03). The sample results are shown in the report in Appendix P. No removal action was warranted based on these results.

APRIL 4, 1996

On April 4, 1996, photos were taken of the outdoor storage area and access driveway from National Avenue (see Photos 4,5,17,18, &19). The photos show approximately 25 drums of unknown substances located in the outdoor storage area behind the building. These drums were not evident in photos taken by WDNR in 1987. A close-up photo of the drums shows a bulging drum bottom and stained areas around the drums. Six to eight abandoned cars were also located in the driveway to the rear of the site. (The City of Milwaukee subsequently removed and disposed of the drums and vehicles.)

The driveway leading from National Avenue is sloped down to the site. The outdoor storage area (the upper lot) and access road from National Avenue, constructed of concrete, was damaged, oil stained and covered with patches of soil and debris washed down the steep driveway presumably by surface runoff. Sand, litter and debris had accumulated at the bottom of the slope due to surface water runoff (see Photo 17). Trenches were used to direct surface water runoff around the retaining wall. A view of the inside of the building from a hole in the wall showed processing vats filled with liquids (presumably rain water) and metal and processing debris on the floor (Photos 13, 14 &15).

The storage shed was boarded up and appeared to be emptied of the kolene wastes that were piled there after the removal action by TCC in 1983-84 (Photo 12). The roof was damaged allowing rain and snow to enter the building. A few rusted drums were noted in the building but there was no access inside to investigate further. Photos of the east lot from the storage shed document deterioration of the building foundation at the loading doors, presumably from spilled chemicals (Photos 4& 6).

MAY 20, 1996

On May 20, 1996 additional photos were taken of the site. By this time, the City of Milwaukee had removed and disposed of the drums and abandoned cars located behind the building (see Photos 1,2,3 & 20). The City had also installed a 6' chain link

fence on both sides of the building and had begun the preparations for demolition of the building (note environmental contractors truck in Photo 2).The majority of the site was covered by the building or paved with concrete. Surface runoff from the site flows north to Pierce Street and into two storm sewers (catch basins) in the street in front of the building. The two catch basins appear to be clogged; standing water was located in the basins, above the height of the side outlet. The sidewalk and gutter from the northeast corner of the building foundation to the easterly catch basin was etched due to chemicals leaking from the building (Photos 21-25). The previously etched area around the easterly catch basin appeared to have been patched. Orange-brown stains on the driveway concrete of the east lot appeared to indicate liquids flowing from the east lot directly to the storm sewer. This may have occurred during the removal of the kolene wastes. This east-west running storm sewer turns north at 12th Street and discharges to the Burnham shipping canal which discharges to the Menomonee River. The two lots were paved with concrete but the concrete is cracked with vegetation growing in the cracks. There was only a small strip of soil behind the warehouse.

JUNE 10, 1996

The building was secured and a 6' chain link fence prevented access to the east and west lots and the upper storage area. Inside the building the floors were covered with debris (scrap metals, dust, etc - Photos 13 & 14). A portion of the warehouse ceiling has collapsed and the roof of the building was in severe disrepair. Not all areas of the building were accessible due to the dangerously damaged nature of the building. The large pit and the smaller pit appeared to be connected via a hole in the wall separating them. The mortar in the brick wall separating these two pits was severely eroded. The drain of the former wastewater pretreatment unit appeared to be purposely closed off. The drywell near the former zinc cyanide line was open but a manhole cover was noted nearby. Little exploration of the remainder of the building was attempted due to the condition of the structure.

Table 5 documents the ASTM 1527 disposal sites and other features **not** observed at the TCC site.

INTERVIEWS

Project Manager Amy Parkinson conducted interviews with Ron Ahnert, President of TCC; Sid Arthur, former Chemist at TCC, May 1983 - July 1985; and Jim Brosek, former employee at the Wesley Steel Treating Company.

RON AHNERT

Ms. Parkinson spoke with Ron Ahnert, the owner, operator and President of the Try Chem Corporation on July 18 and 21, 1996 regarding the east lot removal action, alleged complaints by former employees, leakage of liquid from the building foundation and access to the property.

Table 5
Disposal sites and other features NOT observed at the TCS as of 05/20/96

lagoons	spray fields
dumps	open pipe discharges - surface water and ditches
burning pits	landfarming areas
past and present waste water treatment facilities and septic systems	settling ponds
oil water separator	fill pipes
condensate disposal	degreasers
non-contact cooling water discharge point	rail spurs or sidings
grease traps	above or below ground pump stations
sump	storm water retention ponds
outlets	fire protection water ponds
silos	roof drains
	pools of liquid

Mr. Ahnert said that during the removal of barreled Kolene wastes in the east lot, they excavated all materials to the depth of the original concrete pad in the east lot. No additional fill was brought in. He said he did not install any underground storage tanks but there may be one below the former "silver line" (as shown in Figure 3) from the former owner.

Mr. Ahnert was asked what he knew about the two complaints by former employees regarding the discharge of cyanide into the west lot and discharge of methylene chloride, formic acid and phenols below the floor grates in the building near the east loading docks. Mr. Ahnert said that "no cyanides were used at all" at TCC, only zinc chloride. He also said TCC "didn't use formic acid and phenol solutions". He reported that the leakage from the northeast corner of the building foundation was due to the pickle tank in the northeast corner near the maintenance room. When asked about the existence of floor drains he mentioned a drain in the "big room" that was plugged in the early 1980's which was then pumped to the pre-treatment unit in the pit.

On July 21, 1996, Mr. Ahnert said that he owned the property and gave WDNR verbal permission to conduct sampling at the site during the Phase II Environmental Assessment.

SID ARTHUR

Ms.Parkinson spoke with Sid Arthur on July 17 and 21, 1996. Mr. Arthur was the former chemist at the TCC for two years from 1983-1985. Mr. Arthur began work at TCC 1-2 weeks before the first complaint of liquids leaking from the building foundation across

the sidewalk. He said the acid tank in the northeast corner of the pit was leaking but was subsequently fixed. After a rainfall, the City of Milwaukee Health Department officials came by and checked the pH of the discharge in the gutter and found no problem from the area of the leaking acid tank. However, they conducted pH testing along the gutter toward the catch basin and found high alkaline readings near the east lot which lead to the discovery of the buried kolene wastes.

Mr. Arthur said the kolene salts contained sodium nitrate and sodium hydroxide (caustic soda). He recalled the removal of kolene wastes in the east lot and loading dock area but he had no recollection of wastes being discharged to or removed from the west lot. He did not recall the discharge of methylene chloride under the floor grates. He did recall that the roof of the building was in disrepair, requiring employees to wear coats, gloves and hats to work in during the winter. They also had to chip ice off the process line before starting up on Mondays.

Mr. Arthur met Ms. Parkinson at the TCC site, on July 21,1996, after the building had been demolished to point out drains and other features about the site and its past use. Mr Arthur's recollections coincided with the drawings in the Soil Testing Plan (Appendix N). He recalled a methylene chloride tank was also located in the pit with the acid tank. He also mentioned that it was not unusual (approximately once a month) to have black smoke coming from the kolene baths that was so thick that he could not see from the lab to the first plating line, approximately 10-15 feet.

Mr. Arthur reported that TCC did use cyanide in the zinc cyanide baths, located east of the kolene baths, while he was working at the site.

Mr. Arthur believed the orange staining on the driveway in the east lot was rust from the drums previously buried there. He recalled the floor drain in the lab was in the middle of the floor towards the north wall. The outdoor storage area on the upper level was used to store empty tanks. The storage shed contained a hoist which was used by employees to work on their automobiles.

Mr. Arthur also reported that the vacant lot across from the site was a vacant lot when he worked at TCC.

JIM BROSEK

Jim Brosek, a former employee at Wesley Steel Treating Company, reported that he had driven a forklift for a summer and recalled constant oil slicks on the floor. Mr. Brosek did not recall anything about the underground storage tank beneath the pit.

SUMMARY AND CONCLUSION

Due to the history of poor work practices and illegal disposal of hazardous wastes, the

potential for contamination of soil and groundwater at this site is likely.

Four inspections were conducted at this site with limited access to the interior of the building were limited due to the lack of electricity, debris on the floor and collapse of walls or ceilings in some areas. Asbestos-containing materials, lead-based paint and radon were **not** evaluated as part of this Phase I.

Although the building was razed on July 15,1996, leaving only the building foundation, retaining wall and concrete pads, the areas of concern at the site are described by their locations within the building or surrounding areas, and include a list of the processes or activities conducted in each area. The areas of concern are labeled on Figure 13.

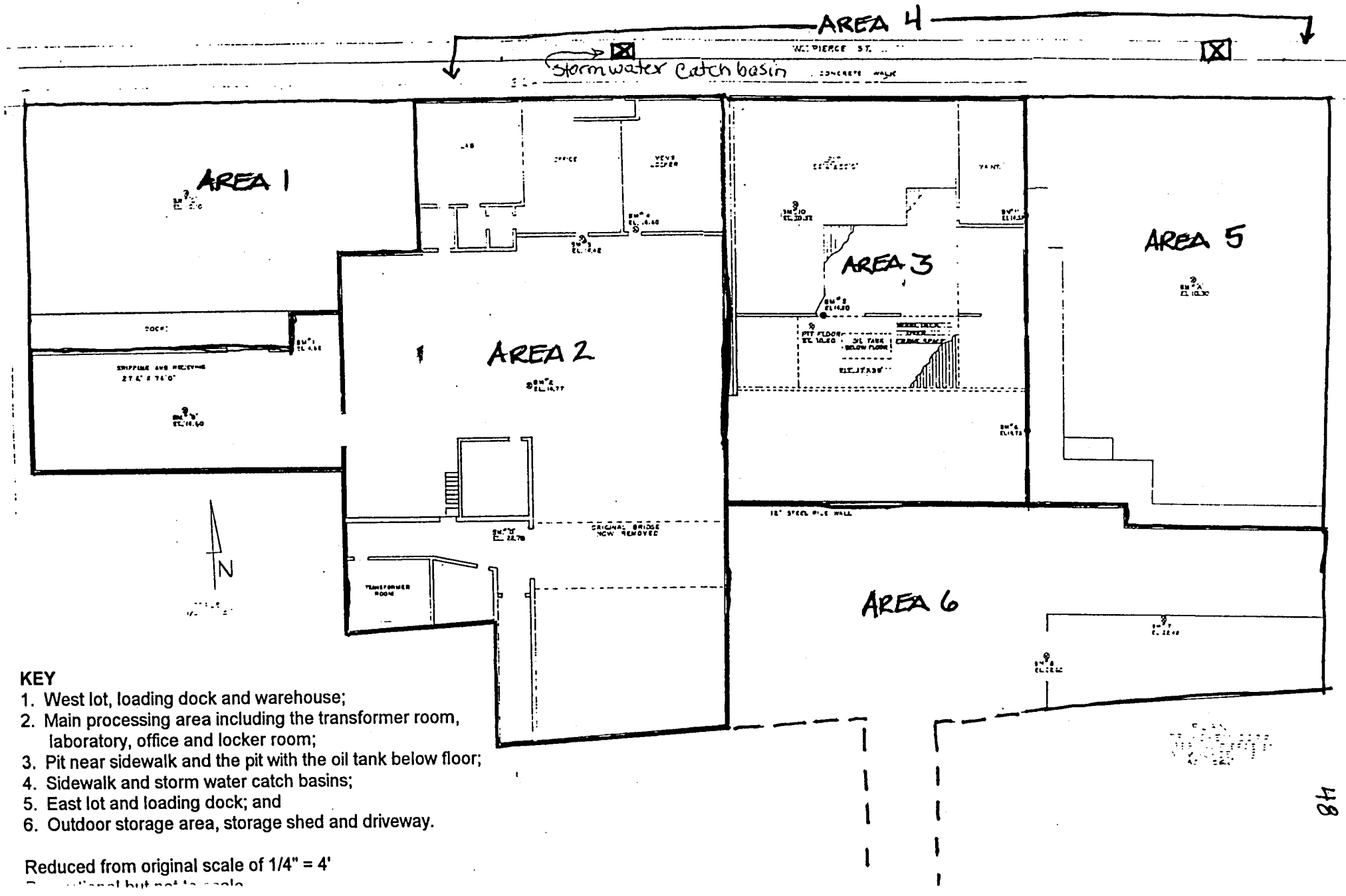
The site has been divided into **six areas of concern**:

1) the west lot and loading dock;
- loading/unloading docks
- chemical storage areas
- storage pads and areas including drum and waste storage
- dumpsters
- stained areas - pavement, soils, wall, and etc.
- stressed vegetation
- areas where chemicals were mixed and loaded
- hazardous substance release documentation - on-site/off-site
- discoloration including any oil sheen

2) the main processing area including the warehouse, transformer room, laboratory, office and locker room;
- chemical storage areas
- Kolene furnace
- process areas, plating, manufacturing, etc.
- painting operations
- drains and drywells
- transformers
- storage pads and areas including drum and waste storage
- above ground vats/storage tanks and associated piping
- transformers and capacitors
- underground piping
- stained areas - pavement, soils, wall, and etc.
- areas where chemicals were mixed and loaded
- areas where machinery was washed and tanks were rinsed
- hazardous substance release documentation - on-site/off-site

Figure 13 - Areas of Concern

Try Chem Corporation, 1333 W. Pierce Street, Milwaukee, WI



KEY

1. West lot, loading dock and warehouse;
2. Main processing area including the transformer room, laboratory, office and locker room;
3. Pit near sidewalk and the pit with the oil tank below floor;
4. Sidewalk and storm water catch basins;
5. East lot and loading dock; and
6. Outdoor storage area, storage shed and driveway.

Reduced from original scale of 1/4" = 4'

3) the large pit and the adjacent smaller pit with the suspected oil tank below the floor;
   chemical storage areas
   process areas, plating, manufacturing, etc.
   drains and drywells
   storage pads and areas including drum and waste storage
   above ground vats/storage tanks and associated piping
   underground piping
   stained areas - pavement, soils, wall, and etc.
   drainage ways
   areas where chemicals were mixed and loaded
   areas where machinery was washed and tanks were rinsed
   hazardous substance release documentation - on-site/off-site

4) the sidewalk and storm water catch basins;
   drains and drainage ways
   underground piping
   hazardous substance release documentation - on-site/off-site

5) the east lot and loading dock; and
   loading/unloading docks (photos document erosion of foundation at east loading dock due to chemical releases)
   chemical storage areas
   storage pads and areas including drum and waste storage
   stained areas - pavement, soils, wall, and etc.
   stressed vegetation
   areas where chemicals were mixed and loaded
   hazardous substance release documentation - on-site/off-site

6 7) the upper storage area and storage shed.
   loading/unloading area
   chemical storage areas
   process areas, plating, manufacturing, etc.
   drains and drywells
   storage pads and areas including drum and waste storage
   above ground storage tanks and associated piping
   stained areas - pavement, soils, wall, and etc.
   drainage ways
   discoloration including any oil sheen

All of the areas of concern had documented and /or suspected releases of chemicals during the course of operations at this site. The known site history is sufficient to conclude that soil beneath the building are suspected to be contaminated. Further

investigation is warranted to determine the types and levels of contaminants in the soil and potentially groundwater beneath the site. A Phase II Environmental Assessment is recommended to confirm the presence of contamination.

Potential contaminant pathways include: surface runoff to storm sewer lines which discharge to the Burnham Canal, migration of soil contaminants to groundwater via infiltration, groundwater transport via fill material surrounding buried utilities such as water mains and gas lines, and groundwater to surface water discharge.

Potential off-site sources of contamination include: the UST directly up gradient of the site and other numerous industrial facilities, which are located downgradient to the west and north of the site.

Environmental Professional
Qualifications Statement
for
Amy S. Parkinson

Ms. Parkinson has a Bachelor of Science Degree from the University of Wisconsin - Madison in Natural Resources with an emphasis on environmental impact assessment. Additional technical training includes Hydrogeology (University of Wisconsin-Madison), design and installation of monitoring wells (USEPA), environmental field monitoring, Hazardous Waste Site Assessment (University Of Wisconsin-Milwaukee) and 40 Hour Health & Safety Training (annual 8 hour refresher course).

As a Senior Environmental Consultant, Ms. Parkinson researched, conducted and wrote over 20 Phase I and II Environmental Assessments; conducted asbestos abatement monitoring; lead paint testing and monitoring; and radon testing. During the past 5 years at the Wisconsin Department of Natural Resources (WDNR), she has worked in the Superfund Site Assessment Program coordinating field and lab activities and providing project management and technical guidance, and preparing reports on numerous sites. In 1992-93, Ms. Parkinson developed and conducted the State of Wisconsin Single Site Assessment Pilot Project under the United State Environmental Protection Agency (USEPA) Superfund Accelerated Cleanup Model. This pilot combined USEPA & WDNR removal, site assessment and remedial expertise and authorities to streamline activities and the reporting process. Much of her effort was spent coordinating teams to facilitate direct communication and sharing of information and documents. Ms. Parkinson also served as the project manager/team leader of a 15- person team (USEPA & WDNR district staff) for 2 years, coordinating efforts and expertise to evaluate a potential National Priorities List (NPL) site. Ms. Parkinson prepared the Hazard Ranking System documentation package for the site (which is now listed on the NPL). Since August 1994, she has been assigned as the Federal Removals Coordinator to work with USEPA management and field staff on removal activities in the state by providing regular communication between USEPA and WDNR central office and district staff on potential and on-going removal activities.

Site Contacts

Ron Ahnert
President, owner/ operator of Try Chem Corporation
(414) 871-1444 / 283-8733 Stakleen (janitorial services)

Steve Hiniker
Milwaukee Department of Public Works
(414) 286-8072

Paul Biedrzycki
City of Milwaukee Health Department
(414) 286-3538

References

Geology Sources:

Foley, F.C. et al., *Ground-Water Conditions in the Milwaukee-Waukesha Area, Wisconsin*, Geological Survey Water-Supply Paper 1229, 1953.

Mickelson, David M. and Lee Clayton, *Late Pleistocene History of Southeastern Wisconsin*, Geoscience Wisconsin, Volume 7, Geological and Natural History Survey, University of Wisconsin-Extension, July 1983.

Menomonee River Watershed Source:

WDNR et al., April 1990, *A Nonpoint Source Control Plan for the Menomonee River Priority Watershed Project.*

File Information

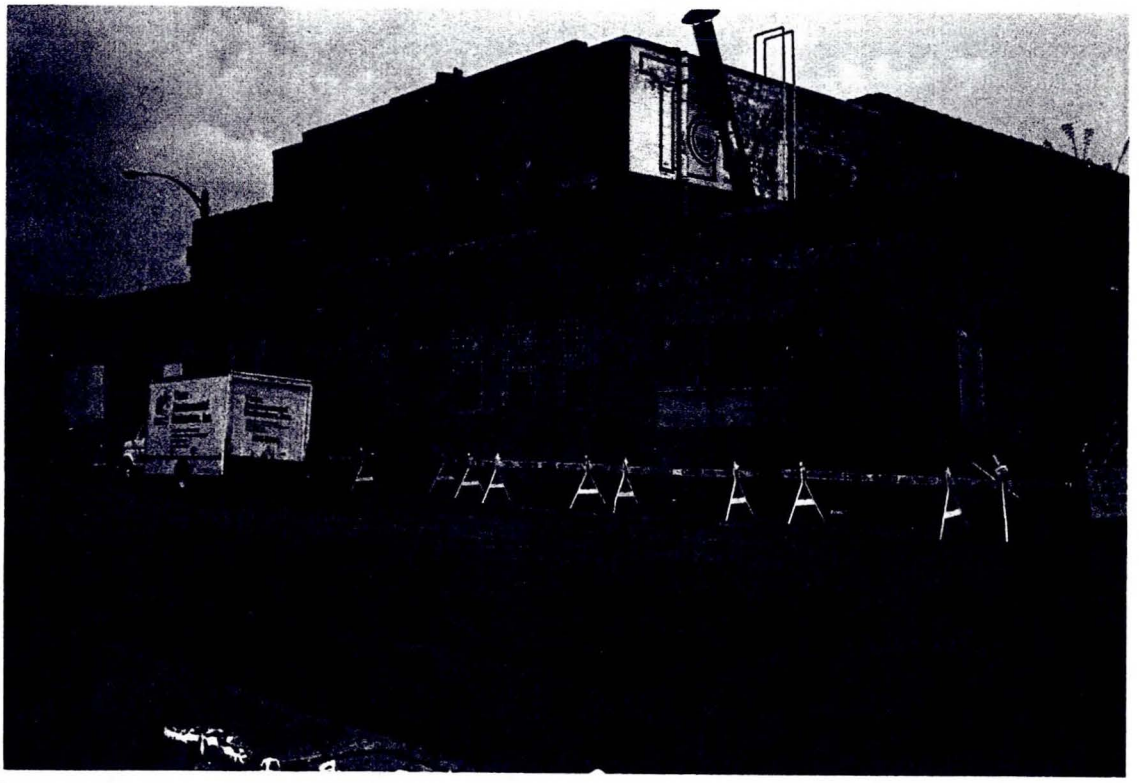
Wisconsin Department of Natural Resources, Southeast District Annex, 4041 N. Richards Street, Milwaukee, WI 53212

City of Milwaukee Health Department , Building Inspection, and Department of Development, Municipal Building 841 North Broadway, Milwaukee, WI 53202-3653

FIELD PHOTOGRAPHY LOG SHEET

1 TRY CHEM
SITE: 1333 W. PIERCE
DATE: 05/20/96
TIME: ~12:30
DIR: SW
PHOTOGRAPHED BY:
A. PARKINSON
SAMPLE ID #: N/A
DESCRIPTION:

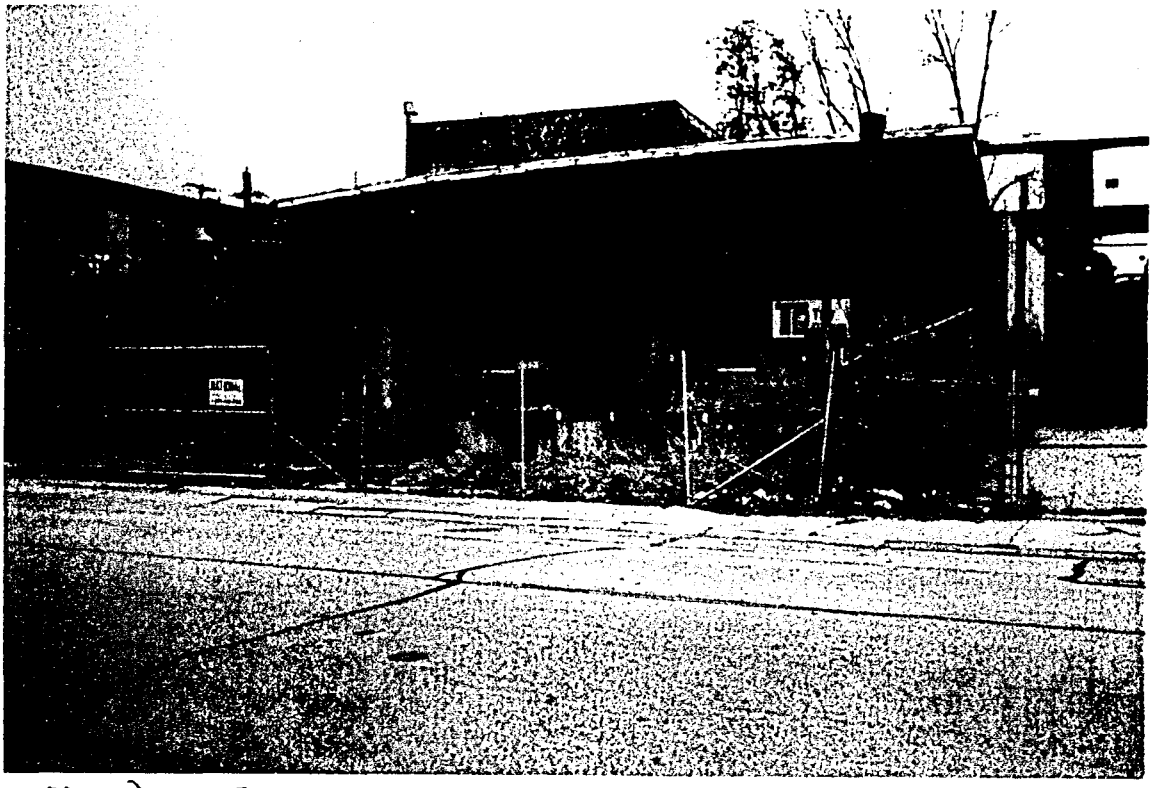
EAST LOT AND LOADING DOCKS. MAIN BUILDING ON RIGHT
NITRIDING SHED LEFT BACKGROUND.



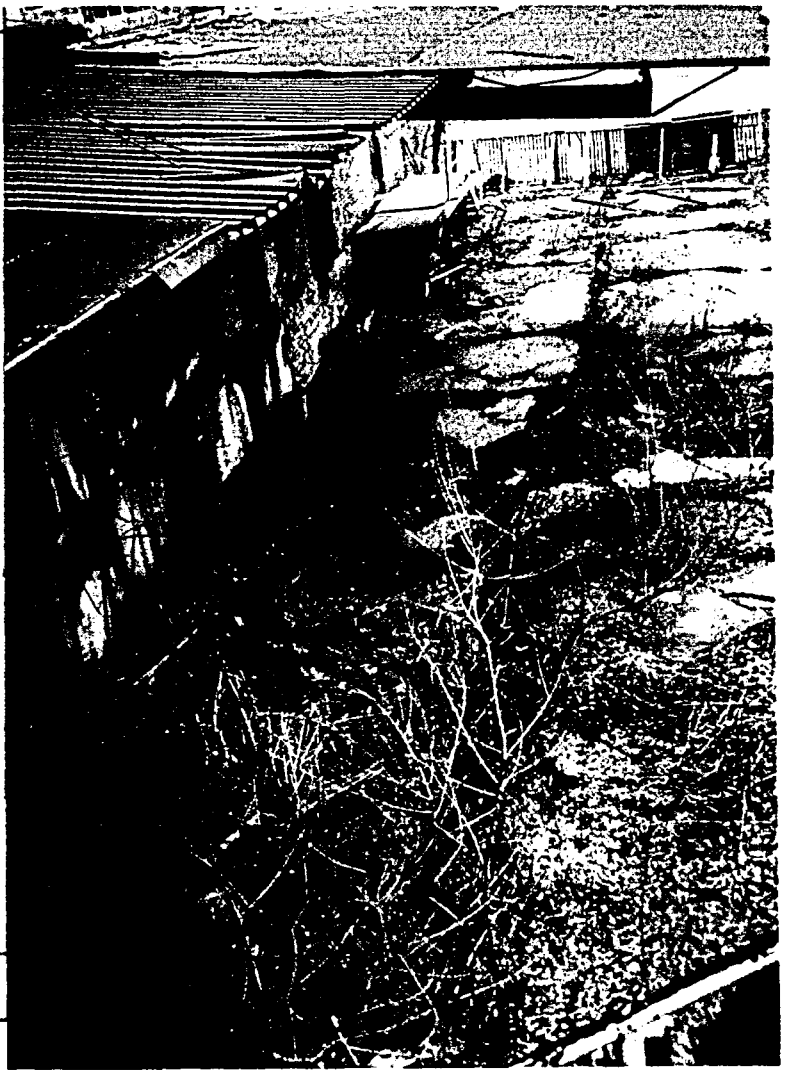
2 TRY CHEM
SITE: 1333 W. PIERCE
DATE: 05/20/96
TIME: ~12:30
DIR: SE
PHOTOGRAPHED BY:
A. PARKINSON
SAMPLE ID #: N/A
DESCRIPTION:

MAIN BUILDING FROM W. PIERCE STREET.

FIELD PHOTOGRAPHY LOG SHEET



3 TRY CHEM
SITE: 1333 W. PIERCE
DATE: 05/20/96
TIME: ~12:30
DIR: S
PHOTOGRAPHED BY:
A. PARKINSON
SAMPLE ID #: N/A
DESCRIPTION:
WEST LOT, LOADING DOCKS + WAREHOUSE.

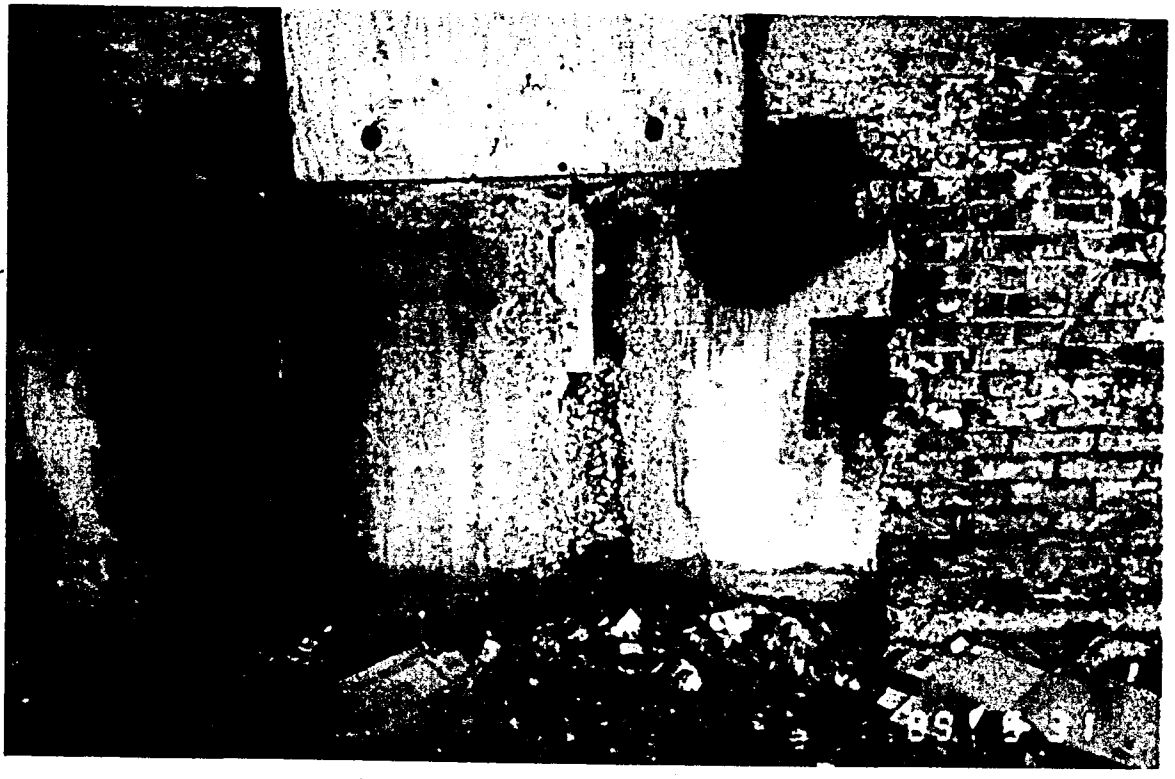


4 TRY CHEM
SITE: 1333 W. PIERCE
DATE: 04/04/96
TIME: ~13:00
DIR: N
PHOTOGRAPHED BY:
A. PARKINSON
SAMPLE ID #: N/A
CRIPTION:
EAST LOT AND LOADING DOCKS FROM NITRIDING SHED

FIELD PHOTOGRAPHY LOG SHEET

5 TRY CHEM
SITE: 1333 W. PIERCE
DATE: 04/04/96
TIME: ~13:00
DIR: NE
PHOTOGRAPHED BY:
A. PARKINSON
SAMPLE ID #: N/A
DESCRIPTION:
EAST LOT

6 TRY CHEM
SITE: 1333 W. PIERCE
DATE: 1987?
TIME: —
DIR: W
PHOTOGRAPHED BY:
WDNR
SAMPLE ID #: N/A
DESCRIPTION:
CLOSE UP OF FOUNDATION DAMAGE AT EAST LOADING DOCKS.



FIELD PHOTOGRAPHY LOG SHEET

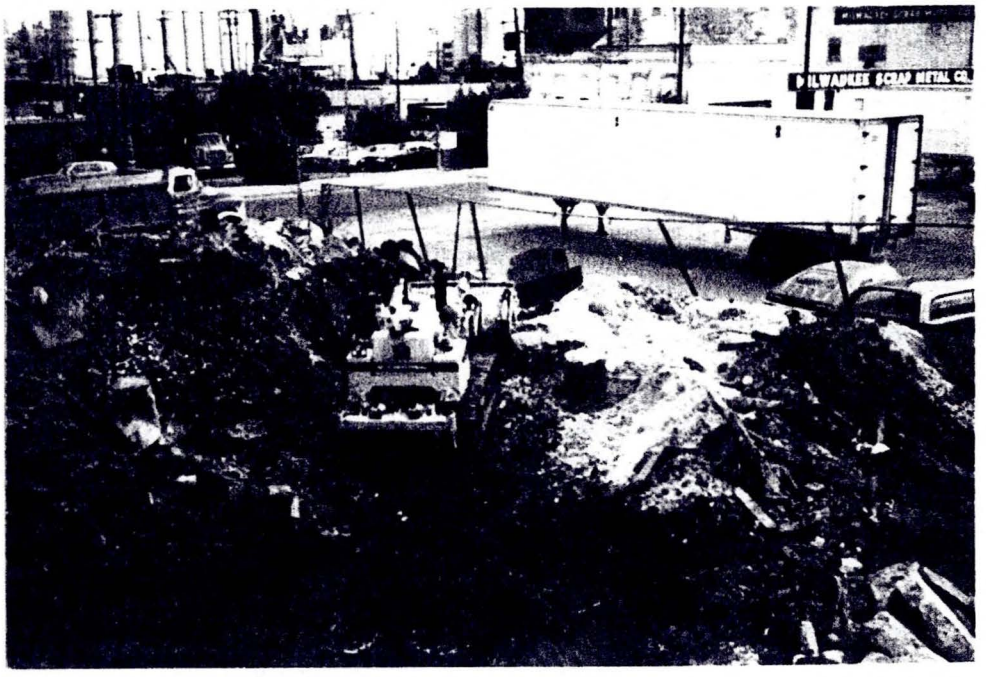
7 TRY CHEM
SITE: 1333 W. PIERCE
DATE: 07/14/83
TIME: —
DIR: SE
PHOTOGRAPHED BY:
V. PAPPAS
SAMPLE ID #: N/A
DESCRIPTION:

EAST LOT DURING REMOVAL OF KOLENE + OTHER WASTES. NOTE HEIGHT OF CONCRETE PAD.

8 TRY CHEM
SITE: 1333 W. PIERCE
DATE: 07/22/83
TIME: —
DIR: E.
PHOTOGRAPHED BY:
V. PAPPAS
SAMPLE ID #: N/A
DESCRIPTION:

DRUMS OF WASTE IN FILL DURING REMOVAL ACTION IN EAST LOT.

FIELD PHOTOGRAPHY LOG SHEET



9 TRY CHEM
SITE: 1333 W. PIERCE
DATE: 07/22/83
TIME: —
DIR: N
PHOTOGRAPHED BY:
V. PAPPAS
SAMPLE ID #: N/A
DESCRIPTION:
REMOVING WASTE FROM FILL IN EAST LOT.

10 TRY CHEM
SITE: 1333 W. PIERCE
DATE: 07/19/83
TIME: —
DIR: N
PHOTOGRAPHED BY:
V. PAPPAS
SAMPLE ID #: N/A
CRIPTION:
VIEW OF EAST LOT DURING REMOVAL ACTION
FROM NITRIDING SHED.

FIELD PHOTOGRAPHY LOG SHEET

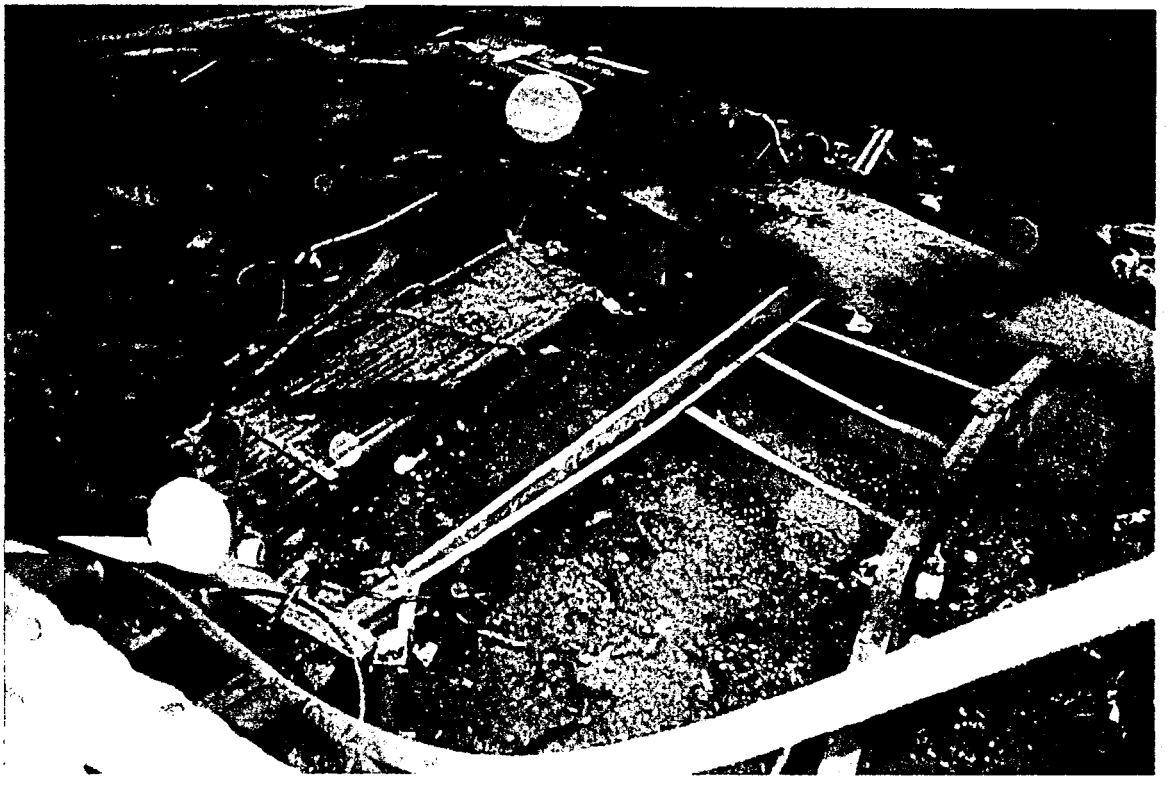
11 TRY CHEM
SITE: 1333 W. PIERCE
DATE: 07/19/83
TIME: —
DIR: —
PHOTOGRAPHED BY:
V. PAPPAS
SAMPLE ID #: N/A
DESCRIPTION:
DRUMS OF KOLENE SLUDGE EXTRACTED FROM FILL IN EAST LOT.

12 TRY CHEM
SITE: 1333 W. PIERCE
DATE: 07/15/83
TIME: —
DIR: W
PHOTOGRAPHED BY:
V. PAPPAS
SAMPLE ID #: N/A.
CRIPTION:
EXTRACTED WASTE FROM EAST LOT IN NITRIDING SHED.

FIELD PHOTOGRAPHY LOG SHEET

13 TRY CHEM
SITE: 1333 W. PIERCE
DATE: 04/04/96
TIME: ~13:00
DIR: N
PHOTOGRAPHED BY:
A. PARKINSON
SAMPLE ID #: N/A
DESCRIPTION:

INTERIOR OF BUILDING IN MAIN PROCESSING AREA.
TAKE THROUGH HOLE IN WALL.



14 TRY CHEM
SITE: 1333 W. PIERCE
DATE: 04/04/96
TIME: ~13:00
DIR: —
PHOTOGRAPHED BY:
A. PARKINSON
SAMPLE ID #: N/A
DESCRIPTION:

DEBRIS ON FLOOR IN PROCESSING AREA, TAKEN
THROUGH HOLE IN WALL.

FIELD PHOTOGRAPHY LOG SHEET

15 TRY CHEM
SITE: 1333 W. PIERCE

DATE: 04/04/96

TIME: ~13:00

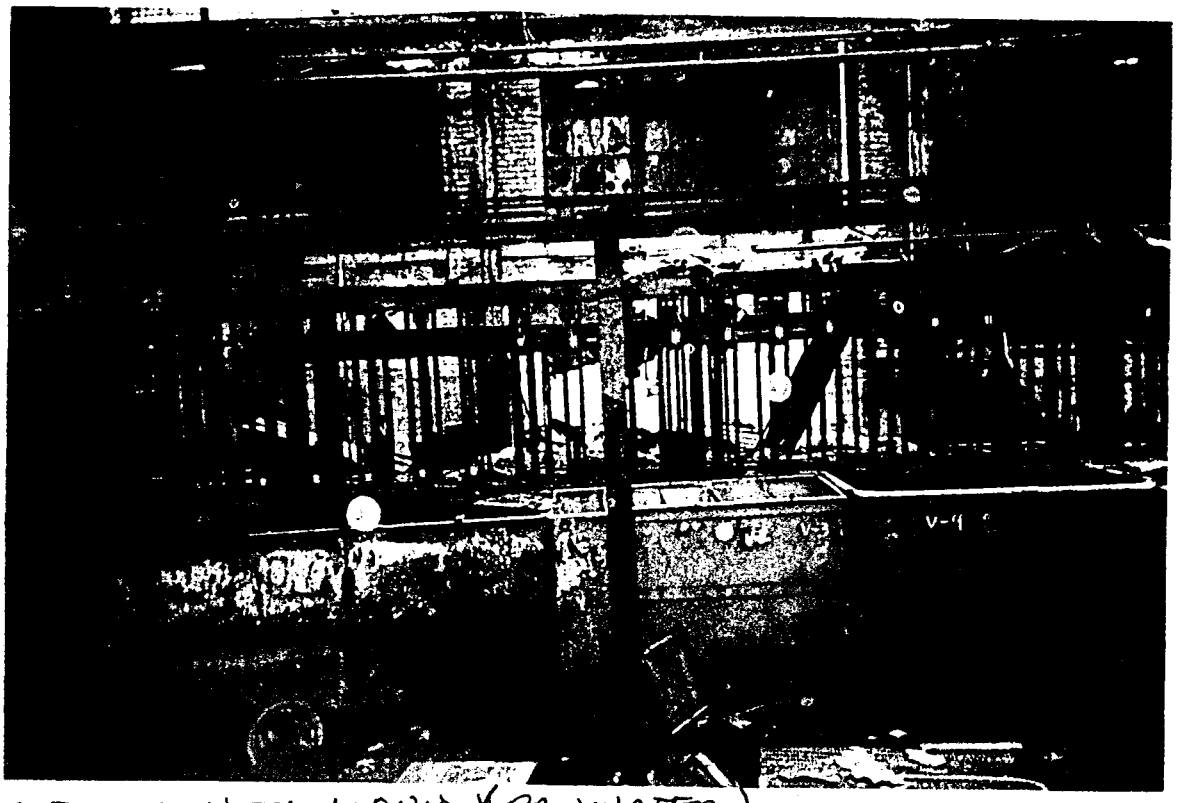
DIR: W

PHOTOGRAPHED BY:

A. PARKINSON

SAMPLE ID #: N/A

DESCRIPTION:



PROCESSING VATS FILLED WITH LIQUID (RAINWATER).
TAKEN THROUGH HOLE IN WALL.

16 TRY CHEM
SITE: 1333 W. PIERCE

DATE: 09/24/87

TIME: 10:00

DIR: NE

PHOTOGRAPHED BY:

R. COOKS
BUILDING INSPECTOR

SAMPLE ID #: N/A

DESCRIPTION:

OUTDOOR STORAGE AREA - 1987.

FIELD PHOTOGRAPHY LOG SHEET

17 TRYCHEM
SITE: 1333 W. PIERCE

DATE: 04/04/96

TIME: ~ 13:00

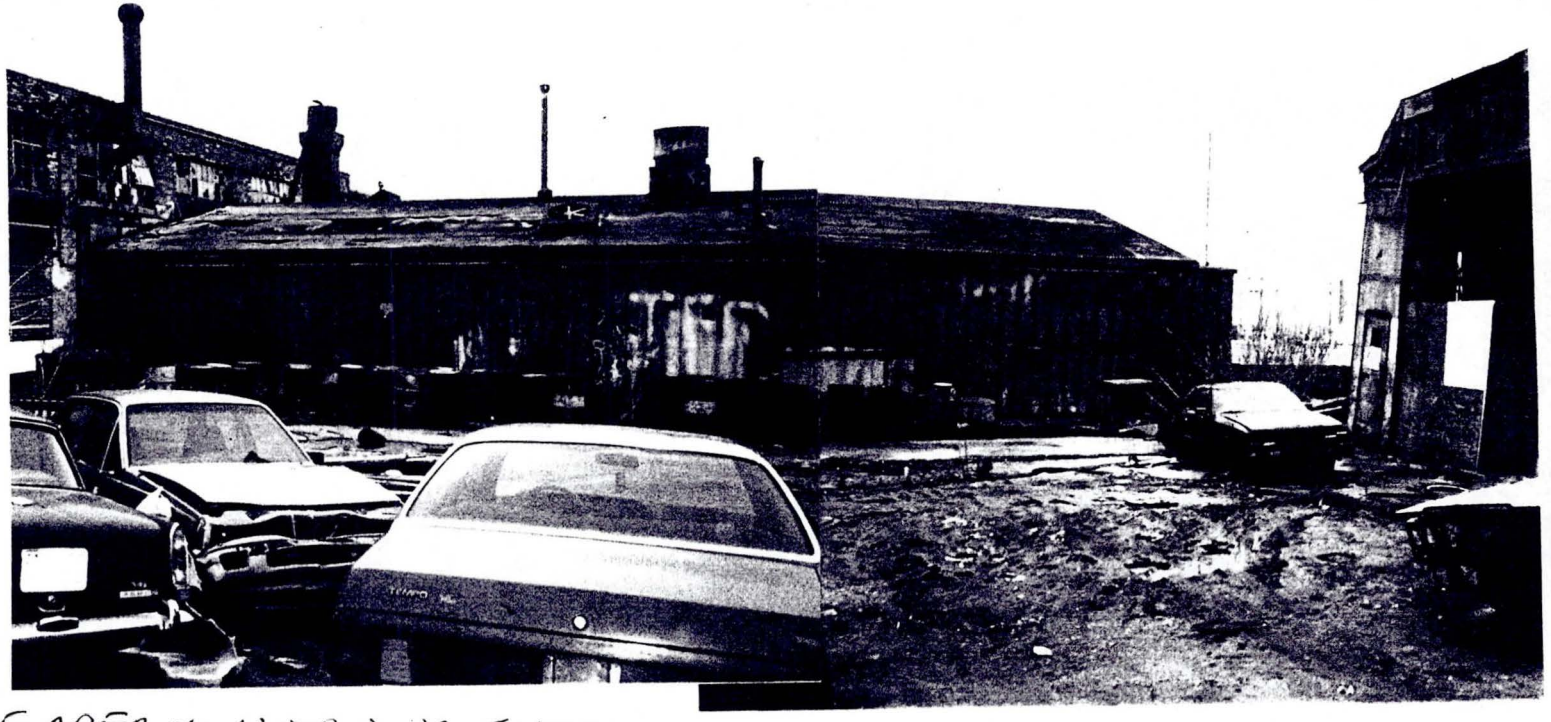
DIR: N.

PHOTOGRAPHED BY:

A. PARKINSON

SAMPLE ID #: N/A

DESCRIPTION:



OUTDOOR STORAGE AREA + NITRIDING SHED.
~ 25 DRUMS + ABANDONED CARS PRESENT.

FIELD PHOTOGRAPHY LOG SHEET

18 TRY CHEM
SITE: 1333 W. PIERCE
DATE: 04/04/96
TIME: ~13:00
DIR: N
PHOTOGRAPHED BY:
A. PARKINSON
SAMPLE ID #: N/A
DESCRIPTION:

CLOSE UP OF DRUMS + STAINING ON GROUND IN OUTDOOR STORAGE AREA.

19 TRY CHEM
SITE: 1333 W. PIERCE
DATE: 04/04/96
TIME: ~13:00
DIR: N
PHOTOGRAPHED BY:
A. PARKINSON
SAMPLE ID #: N/A
DESCRIPTION:

DEBRIS, STAINING + DRUMS IN OUTDOOR STORAGE AREA.

FIELD PHOTOGRAPHY LOG SHEET

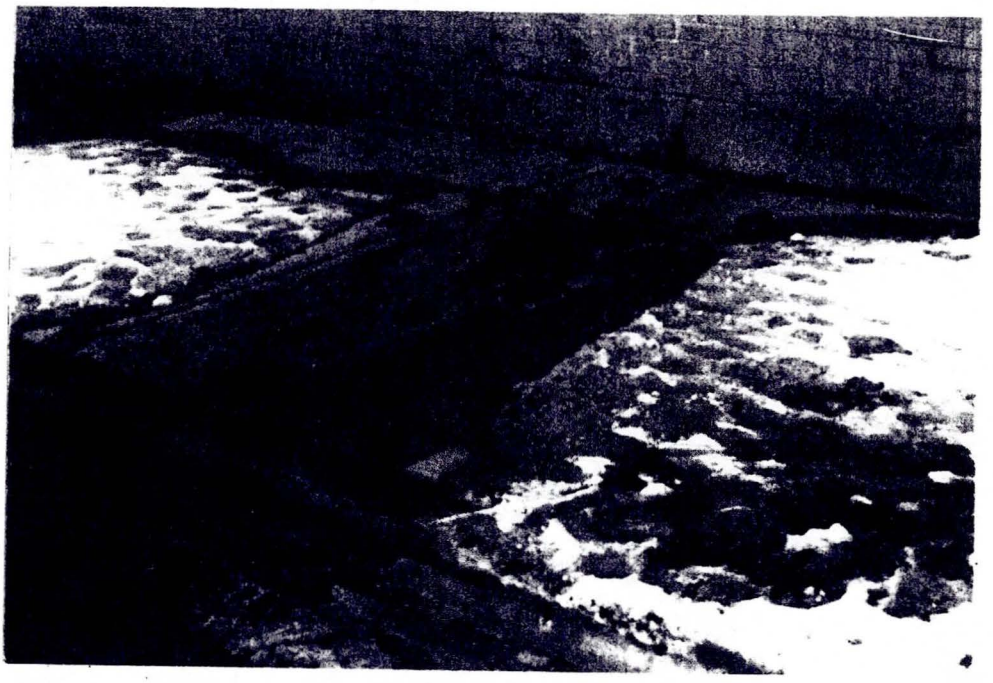
20 TRY CHEM
SITE: 1333 W. PIERCE
DATE: 05/20/96
TIME: ~ 12:30
DIR: N
PHOTOGRAPHED BY:
A. PARKINSON
SAMPLE ID #: N/A
DESCRIPTION:

DRIVEWAY FROM NATIONAL AVENUE TO OUTDOOR STORAGE AREA + NITRIDING SHED (ON RIGHT).

21 TRY CHEM
SITE: 1333 W. PIERCE
DATE: 07/19/83
TIME: —
DIR: W
PHOTOGRAPHED BY:
V. PAPPAS
SAMPLE ID #: N/A
DESCRIPTION:

DISCHARGE FROM BUILDING ENTERING STORM SEWER ON W. PIERCE.

FIELD PHOTOGRAPHY LOG SHEET



22 TRY CHEM
SITE: 1333 W. PIERCE

DATE: 1983?

TIME: —

DIR: —

PHOTOGRAPHED BY:

V. PAPPAS

SAMPLE ID #: N/A

DESCRIPTION:

DISCHARGE OF LIQUIDS FROM BUILDING ACROSS SIDEWALK TO GUTTER

23 TRY CHEM
SITE: 1333 W. PIERCE

DATE: 1983?

TIME: —

DIR: —

PHOTOGRAPHED BY:

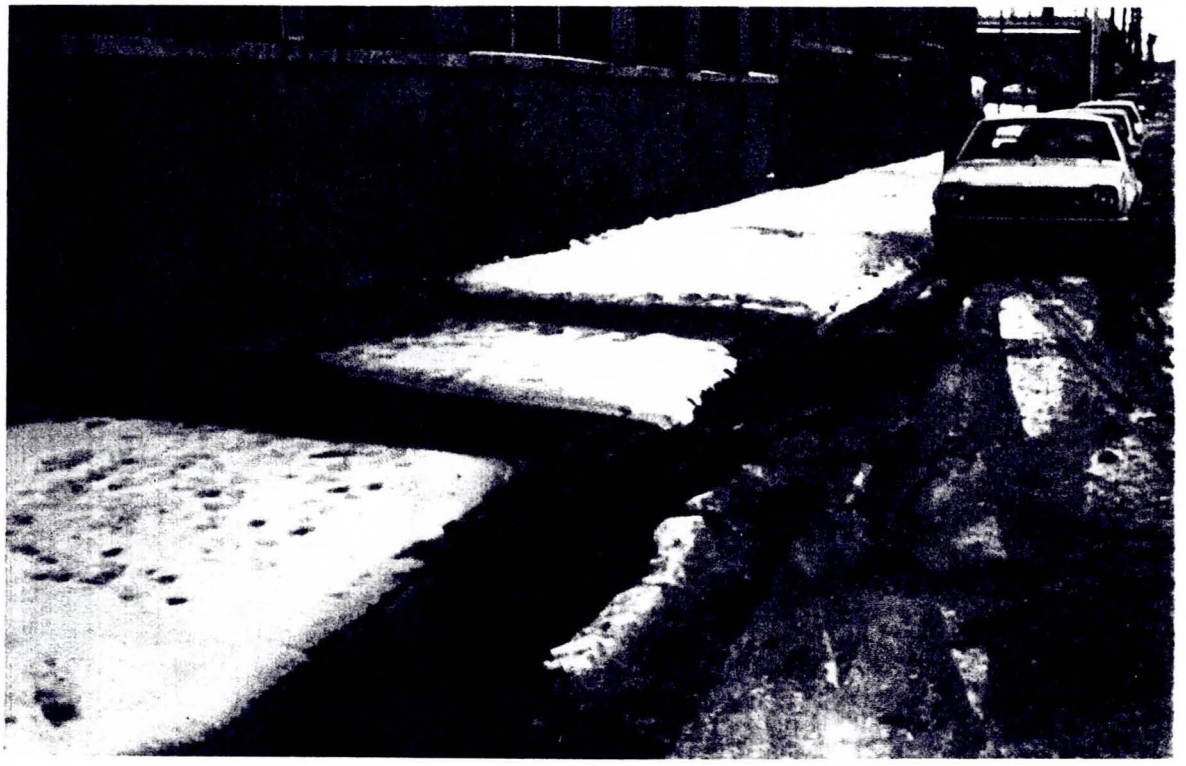
V. PAPPAS

SAMPLE ID #: N/A

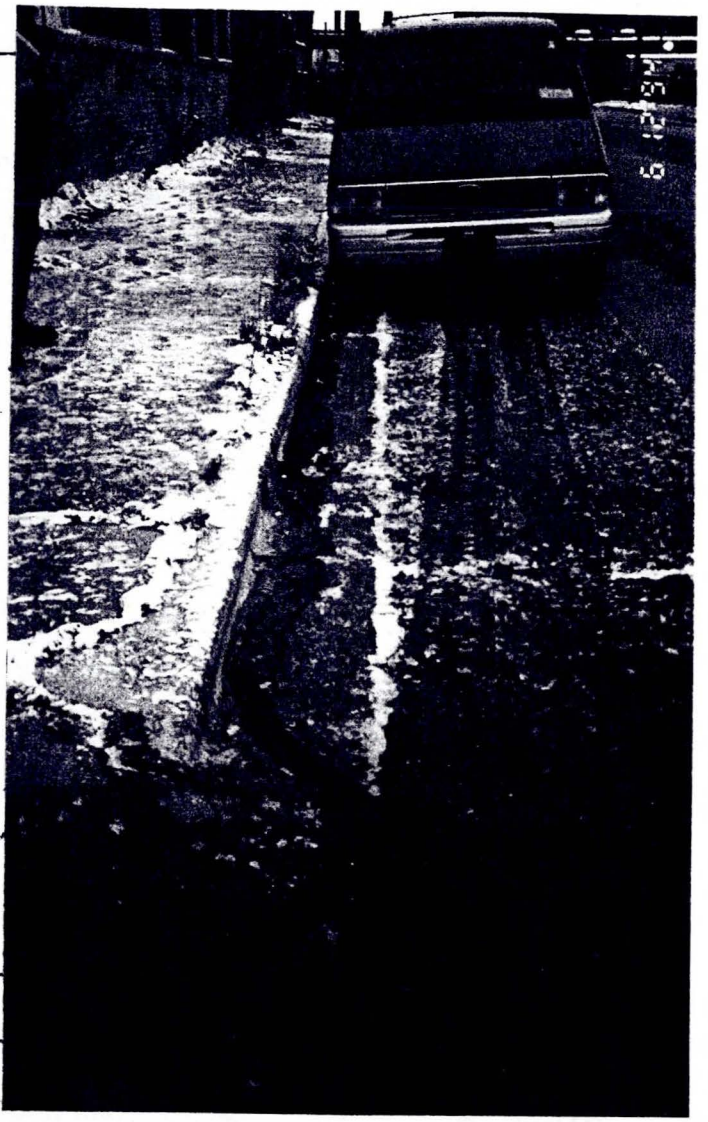
DESCRIPTION:

DAMAGED SIDEWALK + GUTTER FROM BUILDING DISCHARGE.

FIELD PHOTOGRAPHY LOG SHEET



24 TRY CHEM
SITE: 1333 W. PIERCE
DATE: 1983-84?
TIME: —
DIR: SW
PHOTOGRAPHED BY:
V. PAPPAS
SAMPLE ID #: N/A
DESCRIPTION:
DISCHARGE FROM BUILDING FLOWING ACROSS SIDEWALK INTO GUTTER.



25 TRY CHEM
SITE: 1333 W. PIERCE
DATE: 12/06/94
TIME: ~15:00
DIR: W
PHOTOGRAPHED BY:
A. PARKINSON
SAMPLE ID #: N/A
SCRIPTION:
ETCHED GUTTER ON W. PIERCE STREET IN FRONT OF TRY CHEM

W. PIERCE ST.

17

Figure 9

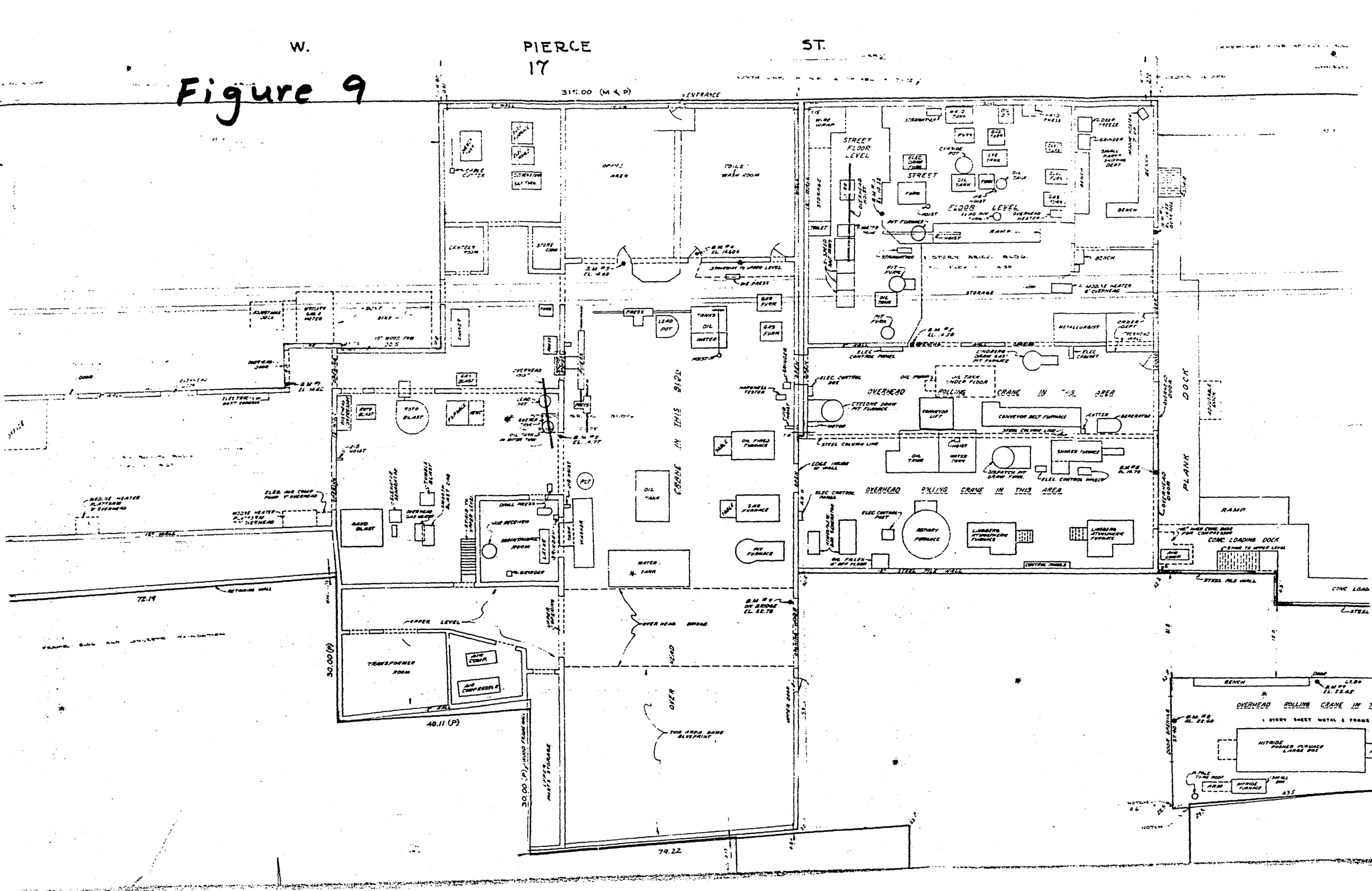
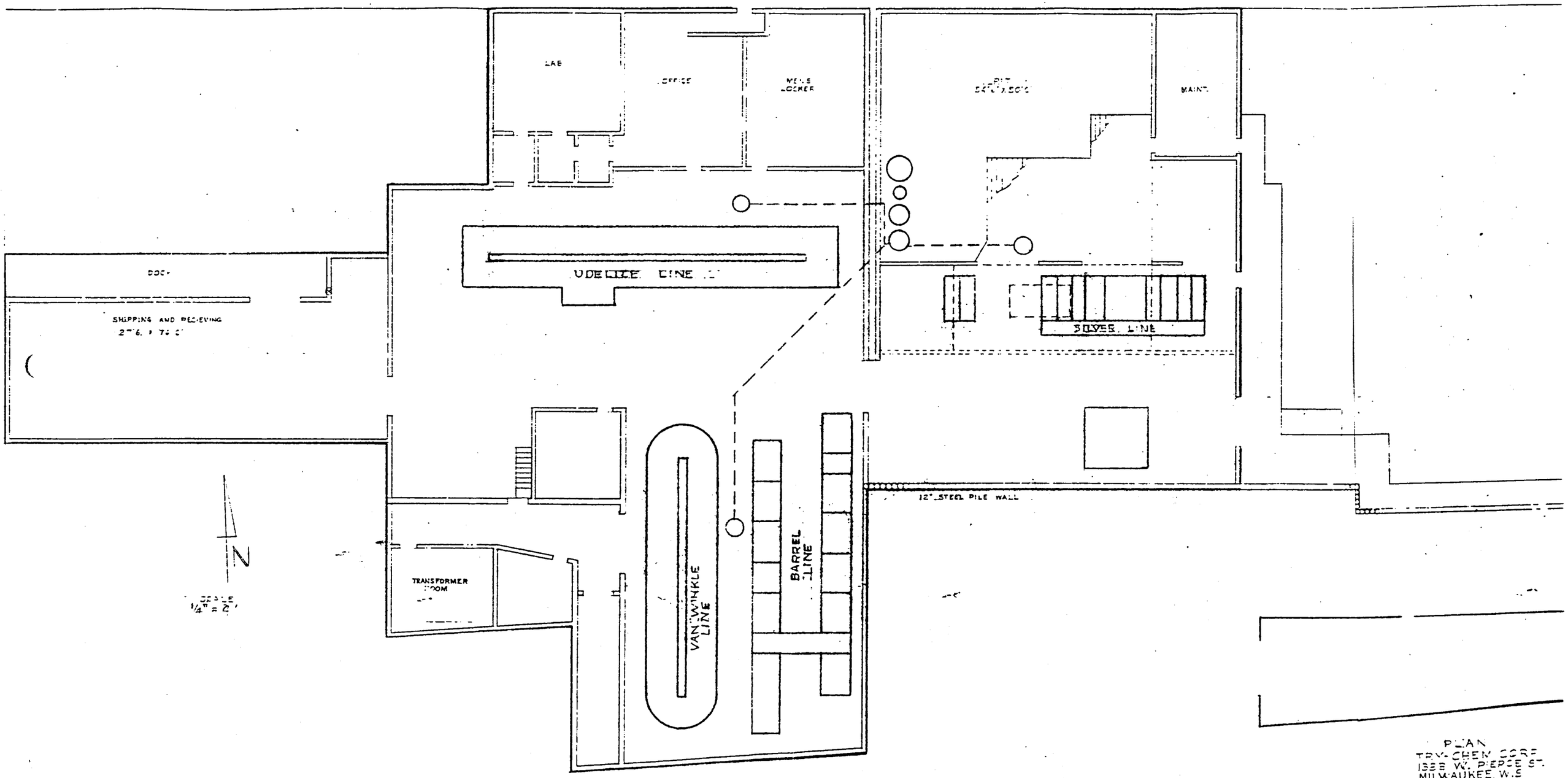


Figure 10 - Try Chem process lines



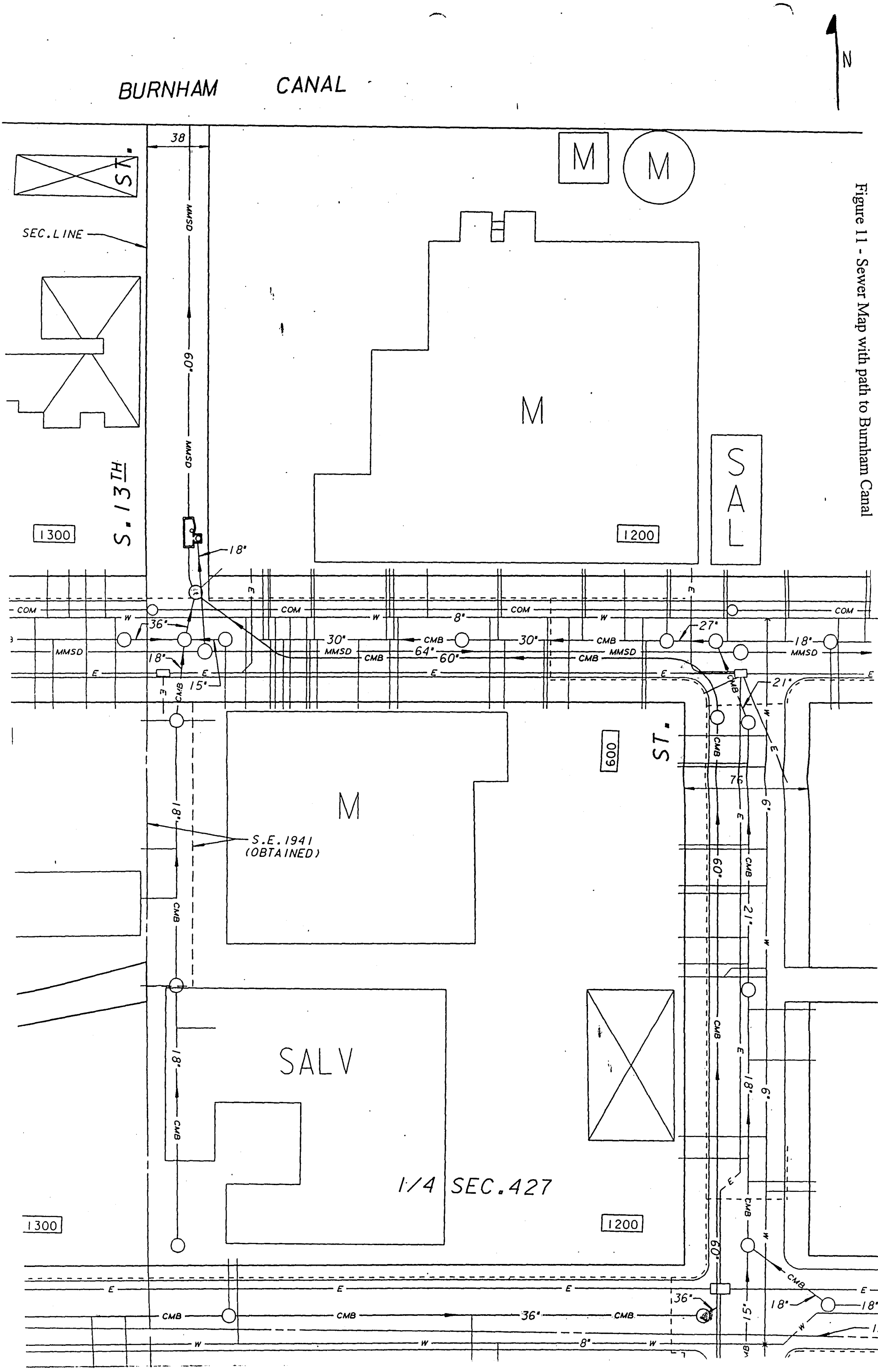


Figure 11 - Sewer Map with path to Burnham Canal

ENVIRONMENTAL ENGINEERING SECTION

DIVISION OF ENGINEERS
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE, WISCONSIN

SEWER MAIN PLAN

AREA IN S. 12TH ST. TO S. 14TH ST.
BURNHAM CANAL TO W. PIERCE ST.

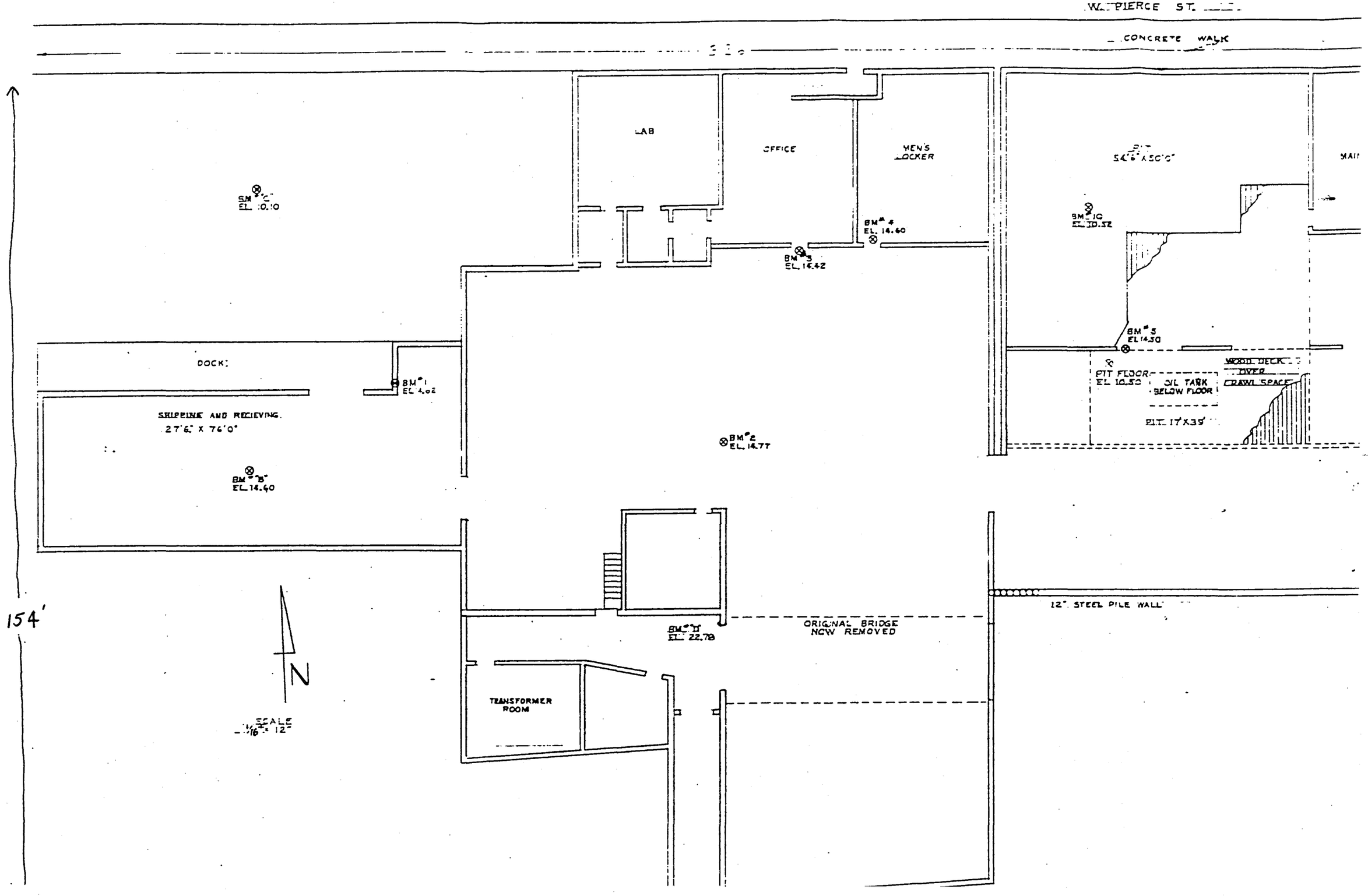
SCALE HORIZ. 1" = 50'	APPROVED	DATE
1/4 SEC. NO. 426 & 427		
PLAN DATE 3-11-95		DESIGN ENGINEER
DRAWN BY BUCHHOLZ		CHIEF DESIGN ENGINEER
CHECKED BY		
DESIGNED BY		ENGINEER IN CHARGE
SYSTEM NO.		
EASEMENT NO.	CITY ENGINEER & SPECIAL DEPUTY COMMISSIONER OF PUBLIC WORKS	
M.W.W. WORK ORDER	PROGRAM NO.	C.C. FILE NO.
D.O.E. WORK ORDER	O.N. AND PROJECT	DATE ADOPTED

SHEET NO. OF PLAN FILE NO. SPLAN1

LINE CODE LEGEND

SANITARY SEWER	SAN	STREET LIGHTING	
STORM SEWER	STO	COMMUNICATION	COM
COMBINED SEWER	CMB	FIRE & POLICE	F&P
SEW. DISTRICT SEWER	MMSD	PAVING LIMITS	
WATER MAIN	W	STRUCTURE / BUILDING	
SEWER/WATER OVER 24"		FENCE	
GAS	G		
ELECTRIC	E		
TELEPHONE	T		
CABLE TELEVISION	TV		
FIBER OPTICS	FO		

Figure 3


W. PIERCE ST.
CONCRETE WALK
LAB
OFFICE
MEN'S LOCKER
BM #4 EL. 14.60
BM #3 EL. 14.42
BM #5 EL. 14.30
BM #10 EL. 10.52
PIT FLOOR EL. 10.50
OIL TANK BELOW FLOOR
WOOD DECK OVER CRAWL SPACE
PIT 17'X35'
DOCK
BM #1 EL. 4.02
SHIPPING AND RECIEVING 27'6" X 76'0"
BM #9 EL. 14.40
BM #2 EL. 14.77
BM #11 EL. 22.78
ORIGINAL BRIDGE NOW REMOVED
12" STEEL PILE WALL
TRANSFORMER ROOM
154'
N
SCALE 1/16" = 1'2"

BOTH THE SOIL SAMPLES AND THE WATER SAMPLES WERE ANALYZED FOR CYANIDE THOUGH CYANIDE WASN'T DETECTED.
A WATER SAMPLE AND DUPLICATE WERE ANALYZED FOR VOLATILES THOUGH NONE WERE FOUND.

TRY-CHEM CASE #12036 VOLATILE ANALYSIS FOR SOIL SAMPLES

Sample Number	CRDL	S01		S02		S03		S04		S05		S06		S07		D02	
Traffic Report Number		EAN79		EAN80		EAN81		EAN82		EAN83		EAN84		EAN85		EAN87	
methylene chloride	5	64		78		60		29		28		32		68		67	
acetone	5	12	U	12	U	12	U	12	U	17		13	U	19	RE*	12	
1,2-dichloroethane	5	6	U	6	U	22		6	U	6	U	13	U	6	U	6	U
2-butanone	10	12	U	58000	D	15000	D	12	U	11	U	6	U	12	U	12	U
1,1,1-trichloroethane	5	6	U	6	U	20		6	U	6	U	7		6	U	6	U
carbon tetrachloride	5	6	U	6	U	5	J	6	U	8	RE*	6	U	6	U	6	U
trichloroethene	5	6300	D	290000	D	190000	D	4	J	20		13	U	40		130000	D
1,1,2-trichloroethane	5	32		6	U	22		6	U	6	U	6	U	6	U	6	U
tetrachloroethene	5	180		17		26		13		27	RE*	22		16	RE*	65	
toluene	5	8		7		22		6	U	2	J	3	J	22		11	
chlorobenzene	5	9		5	J	6	J	6	U	6	U	6		7		7	

TRY-CHEM CASE #12036 SEMI-VOLATILE ANALYSIS FOR SOIL SAMPLES

Sample Number	CRDL	S01		S02		S03		S04		S05		S06		S07		D02	
Traffic Report Number		EAN79		EAN80		EAN81		EAN82		EAN83		EAN84		EAN85		EAN87	
dimethyl phthalate	330	770	J	47000	U	710	U	780	U	120	J	780		7800	U	810	U
fluoranthene	330	120	J	47000	U	180	J	1300		640	J	860	U	1400		810	U
pyrene	330	92	J	47000	U	150	J	1200		380	J	710	J	1100		810	U
chrysene	330	100	J	47000	U	110	J	860		330	J	860	U	1000		810	U
bis(2-ethylhexy)phthalate	330	680	J	8700	J	570	J	570	J	2200		860	U	1100		3000	
benzo(b)fluoranthene	330	150	J	47000	U	170	J	1300		620	J	690	U	1800		170	J

UNITS = UG/KG

Table 4-1 Results of Chemical Analysis of WDNR Collected Soil Samples

TRY-CHEM CASE #12036 PESTICIDE ANALYSIS FOR SOIL SAMPLES

Sample Number	CRDL	S01		S02		S03		S04		S05		S06		S07		D02	
Traffic Report Number		EAN79		EAN80		EAN81		EAN82		EAN83		EAN84		EAN85		EAN87	
aroclor-1260	160	370	U	2800	U	380	U	370	U	350	U	2000		3700		340	

ppb

UNITS = UG/K

TRY-CHEM CASE #12036 METALS ANALYSIS FOR SOIL SAMPLES

Sample Number	CRDL	S01		S02		S03		S04		S05		S06		S07		D02	
Traffic Report Number		MEAD76		MEAD77		MEAD78		MEAD79		MEAD80		MEAD81		MEAD82		MEAD84	
aluminum	40	7600		8450		6000		7940		1170		6400		4430		10800	
arsenic	2	4.5	B	5		4.3	B	5.6		1	B	6.8		8.4		3.3	
barium	40	276		236		95.3		96.1		71.3		3840		6940		123	
cadmium	1	2.6		1.4		9		2.4		0.54	U	5.3		2.4		4.5	
calcium	1000	73600	EJ	21200	EJ	89400	EJ	70800	EJ	166000	EJ	99500	EJ	94600	EJ	88000	EJ
chromium	2	318	EJ	718	EJ	34.4	EJ	24.4	EJ	119	EJ	187	EJ	92	EJ	143	EJ
copper	5	65	EJ	103	EJ	51.5	EJ	306	EJ	60.5	EJ	95.6	EJ	252	EJ	125	EJ
iron	20	57900	EJ	76400	EJ	23600	EJ	23200	EJ	6040	EJ	24800	EJ	33900	EJ	28500	EJ
lead	1	664	EJ	719	EJ	117	EJ	364	EJ	45.2	EJ	304	EJ	450	EJ	827	EJ
magnesium	1000	43100		12900		40100		30200		97600		45000		32200		41200	
mercury	0.008	0.12	U	0.12	U	0.11	U	0.14		0.09	U	0.12	U	0.1	U	0.11	U
nickel	8	48.6		52.7		21.1		25.7		10		288		76.8		80.2	
potassium	1000	1120	B	3160		1260		1610		336	B	788	B	863	B	3070	
silver	2	2	B	4.4		0.97	U	1	B	0.85	U	0.97	U	1.2	B	0.97	U
sodium	1000	306	B	1350		477	B	211	B	221	B	550	B	510	B	569	B
vanadium	10	18		22.4		22.2		21.5		6.1	B	15.1		16.6		23.5	
zinc	4	26300	EJ	2310	EJ	999	EJ	1120	EJ	2380	EJ	10400	EJ	331	EJ	3300	EJ

UNITS = MG/KG

Table 4-1 (Cont.)

TRY-CHEM CASE #12036 SEMI-VOLATILE ANALYSIS FOR WATER SAMPLES

Sample Number	CRDL	S09		D09	
Traffic Report Number		EAN88		EAN89	
phenol	10	39		50	
benzyl alcohol	10	14	J	17	
bis(2-ethylhexy)phthalate	10	12	J	15	

UNITS = UG/L

TRY-CHEM CASE #12036 METALS ANALYSIS FOR WATER SAMPLES

Sample Number	CRDL	S09		D09	
Traffic Report Number		MEAD85		MEAD86	
beryllium	5	6.6		1.7	U
cadmium	5	5.8		2.6	U
calcium	5000	23400		30100	
chromium	10	12.2		4.3	U
iron	100	10000		11200	
lead	5	10.6		4.56	
magnesium	5000	10300		11100	
potasium	5000	52900		57700	
silver	10	19.8		4.1	U
sodium	5000	5960		6450	

UNITS = UG/KG

check background levels - referenced

Table 4-1 (Cont.)

DATA REPORTING QUALIFIERS

U Indicates that the compound was analyzed for but not detected. The associated numerical value is the estimated sample quantitation limit.

J Indicates that the value was estimated due to not meeting quality control criteria. It could also indicate that the result indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit and greater than zero.

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

B For inorganic data this flag is used when the value falls between contract required detection limit (CRDL) and the instrument detection limit (IDL).

R Data is unusable.

E The value given has been estimated or not reported due to interference.

N This flag indicates that the sample spike recovery is not within control limits, though there is evidence of compound present.

S This flag indicates that the value was determined by method of standard addition.

RE This flag indicates that the data was obtained from the second analysis of the same sample.

D This flag indicates that the data was obtained from the sample after dilution. The number reflects the actual level of detection in the original sample.

* This flag indicates that the duplicate analysis is not within control limits for this compound.

EJ This flag indicates that the data was estimated due to interference and poor precision at the lab (non-quantifiable).

ID-NUMBER: 830720-02
Date: 20-Jul-83
County: MILWAUKEE
Military time:
Spill-location: E LOT NEAR PIERCE ST
Dw: WE
Lc: 1
Dc: SED
T:
R:
S:
Qq1:
Qq2:
Destination: SOIL
Waterbody:
Dnr-a: 2
Sp-a: 5
Spill-city: MILWAUKEE
Cause: LEAK INSIDE BUILDING
Spiller-and-city: TRY CHEM CORP., MILWAUKEE
Spiller address:
Spiller city:
Spiller state:
Spiller zip:
Notification:
Dnr-investigator:
Cmt:

ID-NUMBER: 840516-04
Date: 16-May-84
County: MILWAUKEE
Military time:
Spill-location: 1333 W PIERCE
Dw: WE
Lc: 1
Dc: SED
T:
R:
S:
Qq1:
Qq2:
Destination: STORM SEWER
Waterbody:
Dnr-a: 2
Sp-a: 5
Spill-city: MILWAUKEE
Cause: UNREPORTED DISCHARGE
Spiller-and-city: TRY CHEM CORPORATION, MILWAUKEE
Spiller address:
Spiller city:
Spiller state:
Spiller zip:
Notification:
Dnr-investigator: PAPPAS
Cmt:

```
Ctrl-Z = HELP        É͸͸͸͸͸͸͸͸͸͸͸͸͸͸͸͸͸͸͸͸͸͸͸͸͸͸͸͸͸͸͸͸͸»      3165 OF 768
                     ° WISCONSIN UNDERGROUND STORAGE TANKS °
                     °          FIRE DEPT = 40200          °
                     È͸͸͸͸͸͸͸͸ CITY OF MILWAUKEE ͸͸͸͸͸͸͸͸͸¼

TANK ID       LOCATION                          OWNER
402003601     MILWAUKEE SAUSAGE CO              MILWAUKEE SAUSAGE CO
              1334 W NATIONAL AVE               1334 W NATIONAL AVE
              MILWAUKEE, WI  53204              MILWAUKEE, WI  53204

LAST UPDATE: 10/28/86                 FED REG?   :
INSTALLED  :                          USER TYPE  : UTILITY
ASSESSED   :                          CONTENTS   : FUEL OIL
ABANDONED  :                          CAPACITY   : 008000
OUT OF SERV:                          CHEM CODES:
STATUS     : IN USE OR NEW
TANK CONSTR: UNKNOWN
TANK LEAK DETECTION METHOD(S):
SPILL CONTAINMENT?:


PIPE CONSTR:
PIPING SYSTEM TYPE:
DOUBLE WALL PIPING?:     PIPING LEAK DETEC METHOD(S):
OVERFILL PROTECTION?:
Press F1 or Ctrl-Z for HELP on using this program                Ctrl-G = E
```