

Thompson, Matthew A - DNR

From: Thompson, Matthew A - DNR
Sent: Tuesday, July 5, 2022 9:46 AM
To: Rozeboom, David B - DNR; Fassbender, Judy L - DNR
Subject: RE: Former Connor Forest Industries facility/property - 131 Thomas Street

Judy,

Thanks for passing this along. I reviewed the string of emails and attachments prior to responding to make sure I understand the situations. I have been in near constant contact with Mr. Killian regarding the former Connor Forest property for the past few years. The concerns posed in these emails to the EPA have been reviewed at length by both myself and the West Central Region Peer Review Committee on multiple occasions. As Dave stated previously, the Department has not received new information that would allow us to reopen the investigation at this property.

If you think further discussion is needed with EPA to address these concerns I can put something together that includes a more comprehensive picture of the site than what has been provided by Mr. Killian.

Thanks,
Matt

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Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

Matt Thompson

Office: 715-492-2304

MatthewA.Thompson@wisconsin.gov

From: Rozeboom, David B - DNR <David.Rozeboom@wisconsin.gov>
Sent: Wednesday, June 29, 2022 3:37 PM
To: Fassbender, Judy L - DNR <Judy.Fassbender@wisconsin.gov>
Cc: Thompson, Matthew A - DNR <MatthewA.Thompson@wisconsin.gov>
Subject: RE: Former Connor Forest Industries facility/property - 131 Thomas Street

Judy,

Matt Thompson has been the primary contact for Mr. Killian's concerns and I have participated in several conference calls with Matt and Mr. Killian. My initial reaction is that most of these issues have been previously discussed with Mr. Killian and DNR lacks the authority to require the additional work desired by Mr. Killian. These issues have been previously closed/resolved and, per RR program policy and Wis. Admin. Code § NR 727.13, unless new information is presented that indicates a previously unknown threat exists, we can't reopen a site. To my knowledge new information has not been presented.

However, there is a lot of information provided in Mr. Killian's emails. I will check with Matt to determine if there are any concerns that have not yet been addressed and we'll be in touch to recommend a path forward.

Matt, please see below and attached.

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Dave Rozeboom

West Central Region Team Supervisor
Remediation and Redevelopment Program
Wisconsin Department of Natural Resources
Phone: 715-215-2078
David.Rozeboom@wisconsin.gov



From: Fassbender, Judy L - DNR <Judy.Fassbender@wisconsin.gov>
Sent: Wednesday, June 29, 2022 12:35 PM
To: Rozeboom, David B - DNR <David.Rozeboom@wisconsin.gov>
Subject: FW: Former Connor Forest Industries facility/property - 131 Thomas Street

Are you familiar with this site/issue? Should we talk to determine strategy

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Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

Judy Fassbender

Phone: (414) 507-5571
Judy.Fassbender@Wisconsin.gov



From: Muniz, Nuria <Muniz.Nuria@epa.gov>
Sent: Wednesday, June 29, 2022 11:55 AM
To: Fassbender, Judy L - DNR <Judy.Fassbender@wisconsin.gov>
Cc: Aultz, Erica <aultz.eric@epa.gov>; Reif, Maizie L - DNR <Maizie.Reif@wisconsin.gov>
Subject: Former Connor Forest Industries facility/property - 131 Thomas Street

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Judy: I got this request for information - from an Alderman in the City of Wausau

Is there confirmation that we need or not need to look into this site any further?
There is concern about heavy metals residential yards? Can WDNR sample with XRF to see if there is a concern.
There is mention of talking to a WDNR official but the name is not mentioned.

Can somebody in your staff check into this – perhaps we have a quick call to discuss next steps?

Thanks,

Nuria

From: Triantafillou, Kathy <triantafillou.kathy@epa.gov>
Sent: Wednesday, June 29, 2022 10:20 AM
To: Muniz, Nuria <Muniz.Nuria@epa.gov>
Subject: FW: EJSCREEN Screenshot: Wausau -- 2017 Air Toxics Respiratory HI, Compared to State

From: Walts, Alan <walts.alan@epa.gov>
Sent: Tuesday, June 28, 2022 3:58 PM
To: Triantafillou, Kathy <triantafillou.kathy@epa.gov>
Subject: FW: EJSCREEN Screenshot: Wausau -- 2017 Air Toxics Respiratory HI, Compared to State

There's a lot here I know; trying to figure out what our lane is to make sure we can be helpful here and understand that that looks like. Thoughts?

Alan Walts | Director, Tribal and Multi-media Programs Office | EPA Region 5

From: Tom Kilian <Tom.Kilian@ci.wausau.wi.us>
Sent: Tuesday, June 28, 2022 1:22 PM
To: Walts, Alan <walts.alan@epa.gov>
Subject: Re: EJSCREEN Screenshot: Wausau -- 2017 Air Toxics Respiratory HI, Compared to State

Hi Alan,

My apologies in advance for the long email.

In recent weeks, I made an effort to distill down some of the records and information regarding the sites of concern in this part of the district, but it has turned out to be an unmanageable and unviable task, given the number of sites, decades of records, and the multitude of concerns. As an alternative, I was wondering if it might be possible to schedule a call or video call (that way screen sharing would be possible, if it becomes useful) in the next few weeks when there would be some convenient time on your end.

Given the above challenges, I thought that it might be easiest and most efficient to start with a discussion on just one of the three sites of concern: the former Connor Forest Industries facility/property that resided at 131 Thomas Street (Wausau, WI 54401). For your reference, this former Connor site is immediately adjacent to residential homes and yards (with produce gardens) in my district. It is also right across the street from a public park that children frequent.

I did re-review some DNR and City records about this property since we talked, and while it looks like the DNR handled the issues with which there are continuing community concerns, there was mention of some 1980s EPA activity at the site and an EPA personnel member named Rick Karl in various documents (one record from 1981 is attached as an example). If there are still some personnel at EPA Region 5 who worked on investigating the Connor Forest Industries sites in Wisconsin back in the 1980s and 1990s, they may recall that this company had a concerning, notorious reputation in terms of illegal waste disposal, dumping, and burial at multiple sites throughout the state, such as in Laona, and this included the burial of drums. The company was also pursued

by the DOJ in Wisconsin at one point. Connor Forest Industries also had involvement in one of the Midco sites, as well, if I recall.

I have communicated with a DNR rep at length and on multiple occasions about this former Connor site over the last few years and expressed my concern that it appears indications of potentially serious environmental issues noted in public records were never fully or sufficiently explored by the 1980s investigation that the DNR oversaw, and that Connor's consultant performed.

Since the property was sold by Connor to the City in the 1980s, and then divided into multiple parcels which were then sold to other owners, very little testing has occurred. In fact, oddly, at least 10 acres of the former Connor property in the middle of our neighborhood appear to have not been touched or used in the last 30 years -- instead, it sat idle inside of a barbed wire fence. Per DNR records, historical waste dumping occurred, and drums were known to exist in that southern fenced-in portion of the property in the 1980s.

Residential homes and produce gardens still reside immediately south of this property area at the bottom of a steep slope. I attached a 1974 aerial image of a portion of the southern area, which seems to show historical discharges and possible dumping, just north of some of those homes. To my knowledge, no thorough soil testing was ever required or done in that area of the photo where there may be discharge or dumping, and I do not understand why -- the soil investigations in the 1980s look perfunctory and incomplete, at best.

Records also show that in 1986 tens of drums were removed in the southern portion of the site (just from the surface or near surface where they were sticking out, perhaps from erosion). Only 75% of the drums at the time were still intact and contaminants or waste could be noted in 15 of the drums, but the DNR seemingly did not require testing of the drums' contents or soil testing in the drum deposition area. According to the document (attached), the DNR was notified of the drum removal activity and did not even show up to observe. No geophysical survey was ever done at this Wausau site to rule out drums that could possibly be buried at a deeper depth, although one survey occurred in Laona on a different Connor property and identified buried drums.

After taking office, I requested the City's environmental records related to the former Connor property. I acquired multiple records indicating potentially unresolved or uninvestigated issues. One example is a handwritten document with the heading "CONFIDENTIAL MATERIAL" that is attached that was written to the former public works director from City staff in 1986, stating that a DNR representative had provided confidential, backchannel information to the City indicating, among other things, that barrels may be buried on the site. While some questionable exploratory trenching activities and reporting by Connor's consultant occurred in the 1980s at the site, no geophysical survey was ever done, despite the buried barrels of waste being found on other Connor properties around the state.

I have been told by a DNR rep repeatedly that the department has no authority to require any new additional environmental investigations on the former Connor site (multiple parcels now owned by multiple parties), even though it appears to me and many others that there is sufficient documentation to suggest that the property was never fully or appropriately investigated and cleaned up. I have also been told by the DNR that the department does not have authority to require testing of the residential produce gardens that immediately border the southern area of this property -- produce that my constituents pick and consume.

It should be noted that when the community finally pushed the City to test one of the multiple parcels of the former Connor property that was City-owned in the last two years, 1300 Cleveland Avenue, it identified soil contamination far above DNR standards. For example, some areas showed individual PAH compound

concentrations of up to 38,000 parts per billion, Bis(2-ethylhexyl) phthalate concentrations up to 381,000 parts per billion, and heavy metal contamination of arsenic, thallium, and others above standards. The BRRTS page for that DNR ERP site is here:

<https://dnr.wi.gov/botw/GetActivityDetail.do?dsn=587081&siteId=4374700>

I am sorry for the lack of brevity in this email, but hope it provides some helpful background and examples of concerns related to this particular site. I also hope the information demonstrates why I and some other city council members here are confused as to why the Connor property in Wausau seems to have never been fully investigated or fully tested or fully cleaned up. These concerns are heightened by the fact that this site is in the middle of a diverse, working-class residential neighborhood, and the situation definitely raises serious Environmental Justice questions.

I hope that we have the opportunity in the near future to discuss this site in my district and other relevant documentation associated with it.

Thank you very much for taking the time to communicate and correspond with me in the recent past.

Tom

From: Walts, Alan <walts.alan@epa.gov>
Sent: Friday, May 13, 2022 6:34 AM
To: Tom Kilian <Tom.Kilian@ci.wausau.wi.us>
Cc: Triantafillou, Kathy <triantafillou.kathy@epa.gov>
Subject: [EXTERNAL] Re: EJSCREEN Screenshot: Wausau -- 2017 Air Toxics Respiratory HI, Compared to State

Thank you Tom, I look forward to the additional info so we can follow up on these concerns.

Best,
Alan

On May 12, 2022, at 4:59 PM, Tom Kilian <Tom.Kilian@ci.wausau.wi.us> wrote:

Thank you very much for looking into these matters and providing this information, Alan. I appreciate it. I am planning to get some additional information together on the neighborhood sites and situation to send over to you in the near future, especially as they relate to some longstanding community EJ concerns. I hope to have that to you in the next week or two. Due to the clustering of multiple open DNR ERP sites (and closed DNR sites with continuing obligations) in the middle of this specific densely populated residential area, there is often concern here about the potential for multiple and cumulative exposures and the impact that they may have.

That DNR BRRTS page in your email is indeed the Wauleco site whose historical soil dioxin TEQs I had referenced when we talked. The pre-remedial dioxin and furan soil results from the mid-1980s are attached, and are also present in the reports on that BRRTS page. Back then in the 1980s, per those results, some of the site's soils apparently had a dioxin TEQ level as high as

174 ng/g in the top 0.5 feet of certain areas, and a dioxin TEQ as high as 2600 ng/g in the floating product layer on top of the water table. Most residents here in the neighborhood had not learned of those past levels until roughly four or five years ago, in my understanding. The dioxins and furans are from pentachlorophenol that had been used on the site for decades when it was a window factory, and I have also attached the latest map of the penta groundwater plume in the neighborhood. The plume ultimately discharges into the Wisconsin River to the east near our neighborhood park via groundwater. There is no pipe discharging pentachlorophenol into the river, rather the subsurface area where contaminated groundwater flows into the river there.

While I and others are very appreciative of the efforts to date by the DNR, there are multiple concerns related to the site that we feel have not been fully addressed, and I will communicate some of those when I send over the information in the near future.

Thanks again,
Tom

From: Walts, Alan <walts.alan@epa.gov>
Sent: Thursday, May 12, 2022 3:05 PM
To: Tom Kilian <Tom.Kilian@ci.wausau.wi.us>
Cc: Triantafillou, Kathy <triantafillou.kathy@epa.gov>
Subject: [EXTERNAL] RE: EJSCREEN Screenshot: Wausau -- 2017 Air Toxics Respiratory HI, Compared to State

Hi Tom – thanks for your patience, and for your follow-up call yesterday.

As I mentioned, a high relative EJSCREEN result doesn't always indicate a level of risk that's of concern. Thankfully, our Air program's analysis tells us that is the case here. A detailed explanation is below – in short, for the air toxics respiratory Health Impact (HI) only values above 1 indicate a possibility of adverse effects. The underlying HI in this case is .3 – not a level of potential concern.

I also looked up 3M Wausau in ECHO (which is EPA's source of general information on facility compliance and a place to get to more specific information about facilities in general). The facility record is here: <https://echo.epa.gov/detailed-facility-report?fid=110000421776>. It shows some ongoing enforcement activity related to Air and I've asked for any other information I can share in that regard.

I also followed up with our Superfund program and they have not been in contact with WDNR about the open sites you identified. (I did find the Wauleco record here: https://dnr.wi.gov/botw/GetActivityDetail.do?jsessionid=b5m0m5KeHNBjWNLpEaaQM6GAIFkQzNmu4G7JAH_Rb5yWwG-YwOso!1839152770?dsn=32728&crumb=0). EPA Superfund doesn't ordinarily get involved in this type of site without a referral from the State. Though if DNR is telling you about running into any barriers based on their authority or has any questions we might be able to help with I'd like to know more about that so I can help EPA engage as appropriate.

//////////

More information on Air Toxics Respiratory HI

Examination of this issue leads to the answer that the map does not actually show an unusual air toxics hazard. This answer might seem difficult to believe, given that the map shows an area in red, indicating that it is above the 95th percentile for "air toxics respiratory HI" in Wisconsin. In fact, the area is

estimated to be at the 98th percentile for Wisconsin, while still not having an unusual air toxics hazard. Understanding this conclusion requires some explanation.

The underlying data for the EJScreen map comes from EPA's 2017 AirToxScreen, which uses air dispersion modeling to estimate ambient air concentrations of hazardous air pollutants in each census tract across the United States. It uses these estimated concentrations to estimate cancer risk and an air toxics respiratory hazard index (HI). An HI compares concentrations of air toxics to the levels that might cause adverse health effects. If the HI is below 1, concentrations are below levels thought to cause health effects, and hazard is considered negligible. If the HI is above 1, there will not necessarily be adverse health effects, but there is more than a negligible possibility that adverse effects will occur, and the possibility increases with a higher HI. AirToxScreen generates HIs for each census tract, and rounds them to one significant digit, to reflect the uncertainties in the estimates. EJScreen uses the HIs generated by AirToxScreen for each census tract, then determines what percentile that tract falls into, in comparison with all of the other census tracts in the country and the state.

The way that the rounding methods of AirToxScreen get combined with the percentile calculations of EJScreen leads to some odd results. In the case of Wausau, the area that shows on the EJScreen map as being at the 98th percentile for air toxics respiratory HI in Wisconsin has an underlying HI of 0.3 (the underlying HI is revealed by clicking on the map). In other words, concentrations of air toxics are estimated to be 30% of the concentrations that would create concerns about respiratory hazard. In neighboring tracts, the HI is estimated to be 0.2, putting them in the 57th percentile. Note that rounding the HIs to one significant digit means that no census tracts will fall between the 57th percentile and the 98th percentile, because no tracts have HIs between 0.2 and 0.3. Therefore, a tract with an underlying HI of 0.24 gets rounded to 0.2, putting it into the 57th percentile and a tract with an underlying HI of 0.26 gets rounded to 0.3, putting it into the 98th percentile. Therefore, census tracts with very similar estimated concentrations of air toxics can be put into very different percentiles. It is also interesting to note that the US air toxics respiratory HI percentages for these census tracts are wildly different than the state-level percentiles: the HI of 0.3 is equivalent to the 47th percentile in the United States (98th percentile in Wisconsin), while the HI of 0.2 is equivalent to the 14th percentile in the United States (57th percentile in Wisconsin). The key point to understand is that when the HI is 0.2 or 0.3, it is well below levels that EPA would consider of concern, regardless of percentile.

////////////////////////////////////

I hope this is helpful.

Best,
Alan

Alan Walts | Director, Tribal and Multi-media Programs Office | EPA Region 5

From: Tom Kilian <Tom.Kilian@ci.wausau.wi.us>
Sent: Friday, April 22, 2022 1:54 PM
To: Walts, Alan <walts.alan@epa.gov>
Subject: EJSCREEN Screenshot: Wausau -- 2017 Air Toxics Respiratory HI, Compared to State

Hi Alan,

Attached is the EJSCREEN screenshot for Wausau that I mentioned of the 2017 Air Toxics Respiratory HI, compared to State. This red area of the 95-100 percentile is in the western side of my district, and stood out to me. I was wondering if the EPA may know, or may be able to determine, what factors are at play or are behind this situation that is reflected on the tool and map.

Thank you for your assistance.

Tom

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Bureau of Solid Waste
RMS
SMS



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

North Central District Headquarters
Box 818
Rhineland, Wisconsin 54501
(715)362-7616

Carroll D. Besadny
Secretary

DKS
PH
Ciesla

File Ref: 4430

{ Connors Forest
Products
Industries A/E }

September 23, 1985

Mr. E. R. Corolewski
Connor Forest Industries, Inc.
330 4th Street
Wausau, Wisconsin 54401

Dear Mr. Corolewski:

This is to confirm our meeting on September 3, 1985, concerning Connor's plant in the City of Wausau. At that time, Ken Markart and I met with you to review an old landfill site located behind the plant.

After a quick tour of your facility which is now being shut down, we walked through an area behind the plant. This area appeared to be an old dump for miscellaneous materials from your plant which included a number of barrels. During the time of the inspection, it appeared many of those barrels may have contained glues.

The Department's concern is what may be in this abandoned landfill and its potential effect on both public health and the environment. It is my understanding that you did use solvents, stains and other type of materials during the time that this plant was operated. Therefore, we are requesting Connor Company to do an in-field conditions report to determine:

1. What is in the landfill.
2. Impact on the environment.

This will include excavation of materials to see what was disposed, review of inventories of chemicals used at the plant, installation of monitoring wells, establishment of groundwater program and other related activities.

Please review NR 180.13 6(c) for an outline of what can be required in an in-field conditions report. We are asking that you submit a scope of work to the Department within the next 21 days outlining what activities will be done to determine impacts of this site.

GERAGHTY & MILLER, INC.

IN-FIELD ASSESSMENT
CONNOR FOREST INDUSTRIES, INC.
WAUSAU CABINET PLANT
WAUSAU, WISCONSIN

GERAGHTY & MILLER, INC.

IN-FIELD ASSESSMENT
CONNOR FOREST INDUSTRIES, INC.
WAUSAU CABINET PLANT
WAUSAU, WISCONSIN

March 4, 1986

Prepared for:
Foley & Lardner
777 East Wisconsin Avenue
Milwaukee, Wisconsin 53202

Prepared by:
Geraghty & Miller, Inc.
Ground Water Consultants
322 East Michigan Street
Milwaukee, Wisconsin 53202

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IN-FIELD CONDITIONS
CONNOR FOREST INDUSTRIES, INC.
WAUSAU CABINET PLANT
MARCH 4, 1986

INTRODUCTION

During a routine inspection of the Wausau Cabinet Plant property, Connor Forest Industries (CFI) personnel noted a number of drums and various metal debris along the southern fence line of the property. The Wisconsin Department of Natural Resources (DNR) was notified immediately of the site conditions. Shortly after noting this situation a more formal inspection (August 28, 1985) involving representatives of CFI, Geraghty and Miller, Inc., and Foley and Lardner was carried out. On September 3, 1985, representatives of the Wisconsin DNR carried out an inspection of the Wausau Cabinet Plant property in addition to inspecting the CFI Wausau Toy Plant.

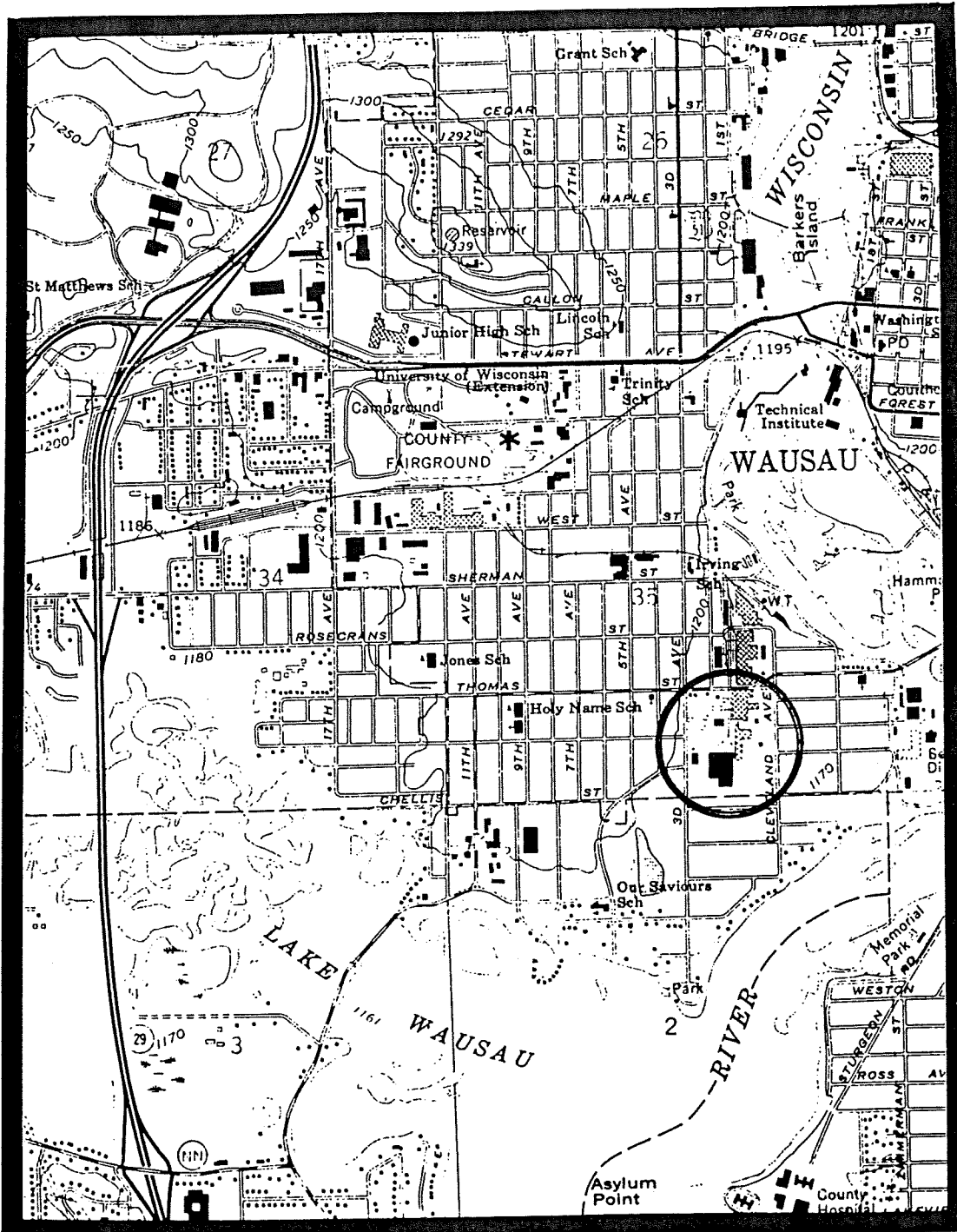
In response to a request by the Wisconsin DNR (letter to Mr. E.R. Corolowski, Connor Forest Industries, Inc., from Mr. Gary F. Kulibert, Wisconsin DNR, dated September 23, 1985), and based upon inspection of the site, a work plan was formulated. The goals of the work plan were to examine site conditions in areas where drums were found, assess whether soil or ground water contamination existed in these areas, and determine if any steps needed to be taken to protect health and the environment.

As part of the work plan prepared for the Connor Forest Industries Cabinet Plant, and submitted to and approved by the DNR, seven separate work tasks had been identified. It was stated in the explanation of these tasks that a review would be conducted after the completion of each task in order to determine if sufficient data had been assembled to terminate the investigation. The purpose of this report is to review the results of each work task up to this point, and to provide recommendations concerning the termination of the investigation at this site.

SITE DESCRIPTION

The CFI Wausau Cabinet Plant is located west of the Wisconsin River in Wausau, Wisconsin (Figure 1). The site is approximately 22 acres in size, and is located at the southwest corner of Thomas Street and Cleveland Avenue. The site is located on what may have been an old flood plain of the Wisconsin River, approximately 40-60 feet above the current flood plain. To the north of the plant is another wood manufacturing plant operated by the Crestline Company.

The southern 1/3 of the plant site is generally underlain by a thick fill layer of fine-grained rock flour, that appears to have originated from a nearby Minnesota Mining and Minerals (3M) facility that produces dyed, coarse grained, sand for roofing materials. The deposition of this fill material has resulted in a fairly steep slope along the far eastern and southern exposures of the property. Much of this sloped area (as shown on Figure 2) is thickly forested by opportunistic types of vegetation. It is in this sloped area that the exposed drums and construction debris had been found (Figure 2).



Scale 1:24,000



SITE LOCATION MAP
CONNOR FOREST INDUSTRIES
WAUSAU CABINET PLANT

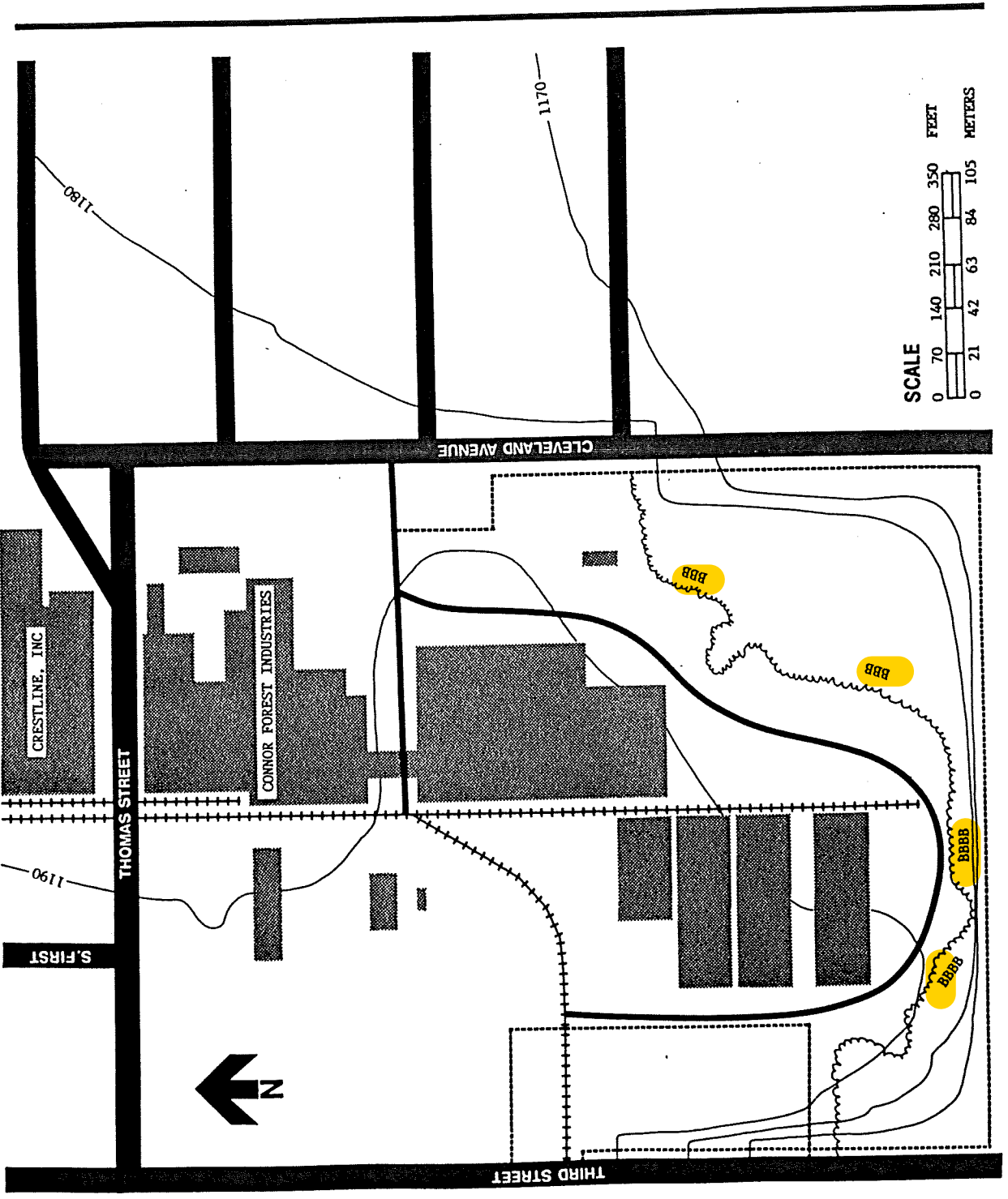
FIGURE 1: LOCATION OF CONNOR FOREST INDUSTRIES, INC.
WAUSAU PLANT, WAUSAU, WISCONSIN

FIGURE 2.

CONNOR FOREST INDUSTRIES, INC
WAUSAU PLANT
WAUSAU, WI

- KEY**
- +++++ RAILROAD
 - FENCE
 - ===== ROAD
 - ~~~~~ TREELINE
 - █ BUILDING
 - BBB EXPOSED DRUMS
 - TOPOGRAPHIC CONTOUR (FT ABOVE MSL)

322 East Michigan Avenue
Suite 200
Milwaukee, Wisconsin 53202



SITE HISTORY

The CFI facility is no longer operating, but was once the site of an extensive cabinet making operation. The operation consisted of the entire cabinet making process: the production of the plywood for the cabinets, construction of the cabinets, and the various phases of finishing the final product. The cabinet operation was closed in July, 1985, and the plant is permanently closed down. Prior to the CFI operation (1951) the property was owned by the Underwood Veneer Company and was the site of a plywood and veneer manufacturing operation.

Waste products generated at the plant consisted primarily of spent glue resin, and the scrapings and solid portion of machine cleaning operations. The primary chemicals used at the site include:

- o Various glues
- o Paints, stains, finishes and solvents for cleanup
- o Petroleum products

In the past, glue residues and scrapings from machine cleaning operations were disposed of on-site in a shallow pit to the southeast of the plant. This disposal area was investigated by the DNR and by CFI in 1981 and 1982. The area has since been excavated and regraded. Contamination of soils at this site was minor and it was determined by the DNR that in the future these non-hazardous wastes were to be disposed of in the Marathon County Sanitary Landfill. Landfill disposal of wastes was carried out until the plant closure in 1985.

During inspection of the CFI site numerous drums and construction debris were noted along the toe of a slope along the southern fence line of the site (Figure 2). The drums were rusted, crushed, and partially buried. The condition of the drums, and the age of the trees growing among them, indicated that the drums had been in place for an estimated 15-25 years. Many of the drums appeared to have been covered at one time, and have subsequently been exposed by erosion along the toe of the slope and along drainages perpendicular to the slope. The drums have not been inventoried, but it was estimated that 50-75 of them were distributed along the site boundary. Many of the drums were inspected to see if they contain solids, liquids, or if they were empty. A few drums contained some liquid, however, based on their condition it is probable that the liquid was rain water. Other drums contained solids; either soil or in some cases glue resins were identified.

Construction debris was also identified along the slope. This debris included wood, metal strapping, stone, and other

GERAGHTY & MILLER, INC.

material. The soil matrix surrounding much of the waste, and around the site, is sand. This sand was brought to the site and was used as fill material. This fill material is tailings (rock flour) from a local 3M operation. The sand is mined for roofing material and is often dyed, therefore much of the sand at the site is colored.

RESULTS OF IN-FIELD ASSESSMENT

The following tasks were proposed to address, in a phased approach, the concerns of the Wisconsin DNR and CFI in evaluating the impact of waste disposal activities at the Wausau Cabinet Plant. It was expected that review would occur at the completion of each task in order to determine if sufficient data had been assembled to terminate the investigations or if further investigations were necessary.

TASK 1: PREPARATION OF SITE MAP

Several maps exist that cover the area around the CFI plant site in Wausau. A base map was prepared that combined features from the available sources (Figure 2). The maps and sources of information used included: a CFI plant drawing, the USGS Wausau West 7.5' topographic quadrangle, an area map prepared for an on-going investigation at the Crestline Cabinet Plant adjacent to the site, and on-site observations.

The base map depicts site topography, the location of buildings and key facilities, roads and trails, and the location of past and present waste disposal activities. It is important to note that the property is relatively flat with the exception of a bluff or ridge along the southern and eastern boundaries of the site.

TASK 2: DOCUMENTATION OF CHEMICAL USAGE

Five groups of industrial chemical products were used at the Connor Forest Industries Wausau Plant Site during the manufacturing of plywood and kitchen cabinets and are described below.

Finishes and Additives

This group of products includes a long list of various wood stains, toners, topcoats, glazes, sealers, and paints, most of which were spray-applied during the manufacture of kitchen cabinets. Also included are a group of catalysts and reducers which were used to decrease or increase the cure time of the various finishes. The quantity of finishes and additives used at the Wausau Plant Site is estimated to be 6000 gallons/month.

The disposal practices for this group of products varied with each finish or additive, but if there was a residue from use of the product, (and often there was none), the residue or waste

GERAGHTY & MILLER, INC.

material was generally dealt with by one of three methods: 1) the residue was collected in cloth rags which were picked-up by Industrial Towel & Uniform of Neenah, Wisconsin, for cleaning and reuse; 2) solidified material, including ash from the boiler, was stored in drums after cleanup, then removed for disposal, or; 3) cheese-cloths, which were used to wipe frames, were burned when dirty.

The chemical composition of each of the various finishes or additives differs from product to product. A typical product, lacquer sealer, contains:

1. Toluene
2. Isopropanol
3. BIS Phthalate
4. 2-Butanone
5. 2-Butoxyethanol
6. Butanol
7. Methyl Alcohol
8. Dimethyl Ketone

A compendium of information related to chemicals used at the Wausau Plant is included in "Materials Used at Connor Forest Industries, Inc., Wausau, Wisconsin, Cabinet Division." The following paragraphs summarize information from the report.

Glues and Additives

Two different types of glues were used in the manufacturing operations. Urea formaldehyde resin was used to laminate wood veneer to core stock in the manufacture of plywood, and polyvinyl acetate was used as an assembly glue in the manufacturing process. Any residue of the glues was collected in drums and analyzed for proper disposal.

Additives added to the glues included an ammonium salt compound (used to speed curing time of the glue) containing 100 ppm of ammonia and 500 ppm of ammonium thiocyanate, and furfuryl alcohol (used to slow curing time of the glue). These additives were consumed in the manufacturing process. Approximately 815 gallons of glues and additives were used each month.

Petroleum Products

Petroleum Products used at the Wausau Plant site include motor oils used as engine and transmission lubricants for all gasoline and diesel powered vehicles, lubricants for air compressors, bearing grease, pipe cutting fluid, gear lubricants, brake fluids and antifreeze. Any residues or used fluids which were not sent to a recycling center on Town Line Rd., were generally small

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amounts which were swept up with sawdust and burned. Approximately 240 gallons of petroleum products were used each year.

Boiler Chemicals

Chemicals were added to the boiler water at the Wausau Plant site in order to inhibit scale precipitation, oxygen corrosion, and condensate-line acidic corrosion. No residues were produced in the use of these products since the boiler operations were a closed system. An example of a chemical which was added to the boiler water to inhibit scale precipitation was a sodium hydroxide polymer, of which a major component was sodium hydroxide. Another chemical added to the boiler water was catalyzed sodium sulfite, which was used to protect the boiler from oxygen corrosion. Approximately 7400 pounds of boiler chemicals were used each year.

Booth Coating

An aqueous emulsion of oil and paraffin wax was used to prevent glue build-up on work tables ahead of electronic gluers. Any residue produced during clean-up was collected and burned with sawdust. Approximately 20 gallons of booth coating was used each year.

TASK 3: AIR PHOTO ANALYSIS

An analysis of air photos covering the Connor Forest Industries site in Wausau was carried out and consisted of studying sets (stereo pairs) of air photos for the years 1960, 1968, and 1978. The primary goal of the assessment was to determine the probable source, the time of emplacement, and extent, of the 55-gallon drums and construction debris. Interpretations of the photos are shown in three maps for the site: Figure 3 (1960), Figure 4 (1968), and Figure 5 (1978). The features of the site for the three time periods are described below:

1960 - The site consists of one major building in the northeast corner of the property, a parking lot, an outside wood storage area, and two small out buildings. The southern half of the site is grass-covered with two small cleared areas. The southern perimeter of the property is wooded. These trees appear to be along the toe and base of the bluff along the southern part of the site. The top and face of the slope appear to be covered with grass or small brush. There are no obvious piles of fill material and there is little topographic relief other than the bluff along the southern part of the site.

FIGURE 3.

CONNOR FOREST INDUSTRIES, INC
WAUSAU PLANT
WAUSAU, WI

1960 SITE CONDITIONS
BASED ON AIR PHOTO INTERPRETATION
(8/16/60 PHOTO)

KEY

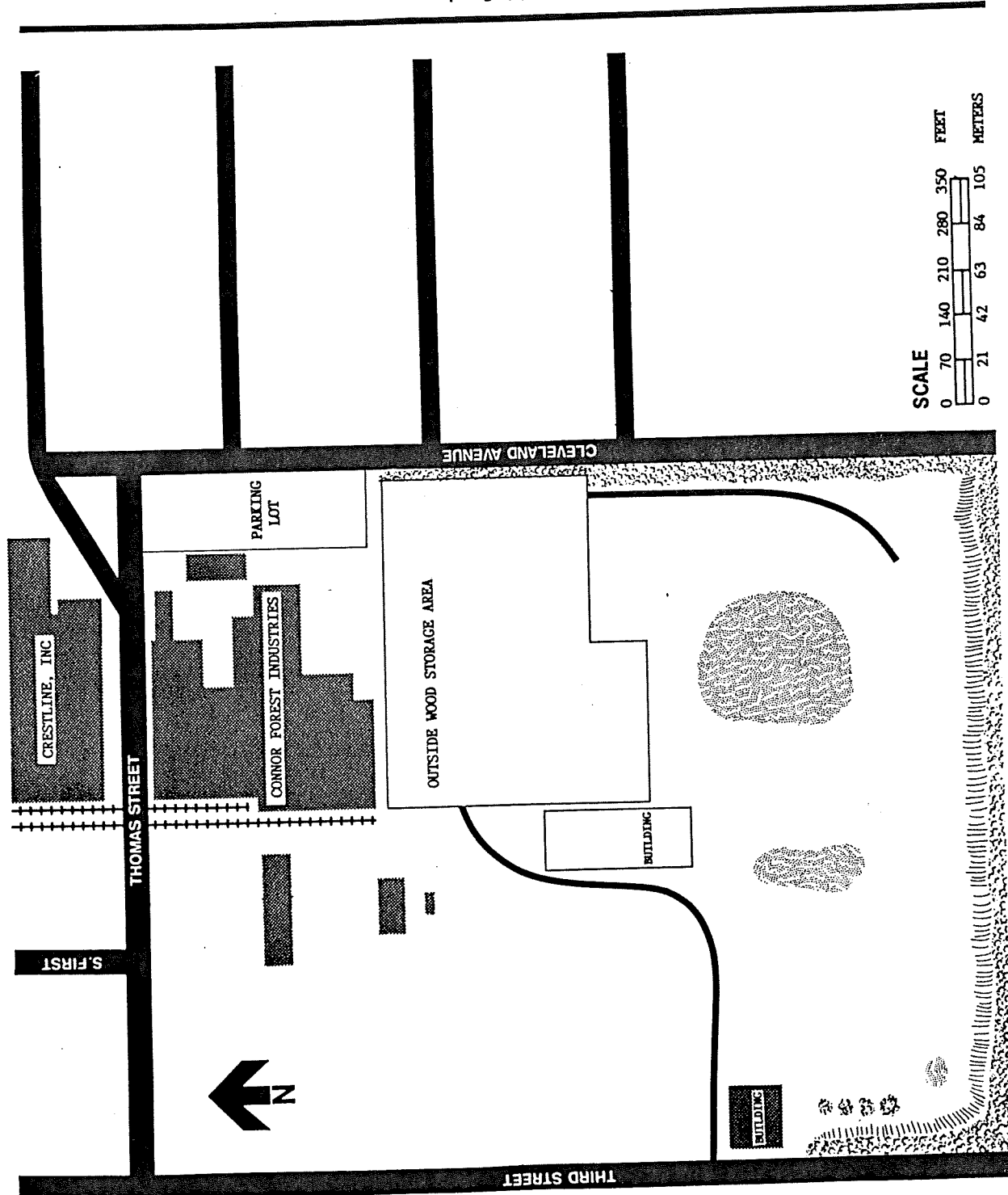
+++++ RAILROAD

— ROAD

WOODED AREA

CLEARED AREA
(LITTLE OR NO GRASS/BRUSH)

SLOPE



322 East Michigan Avenue
Suite 200
Milwaukee, Wisconsin 53202

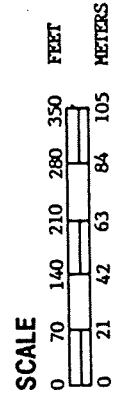
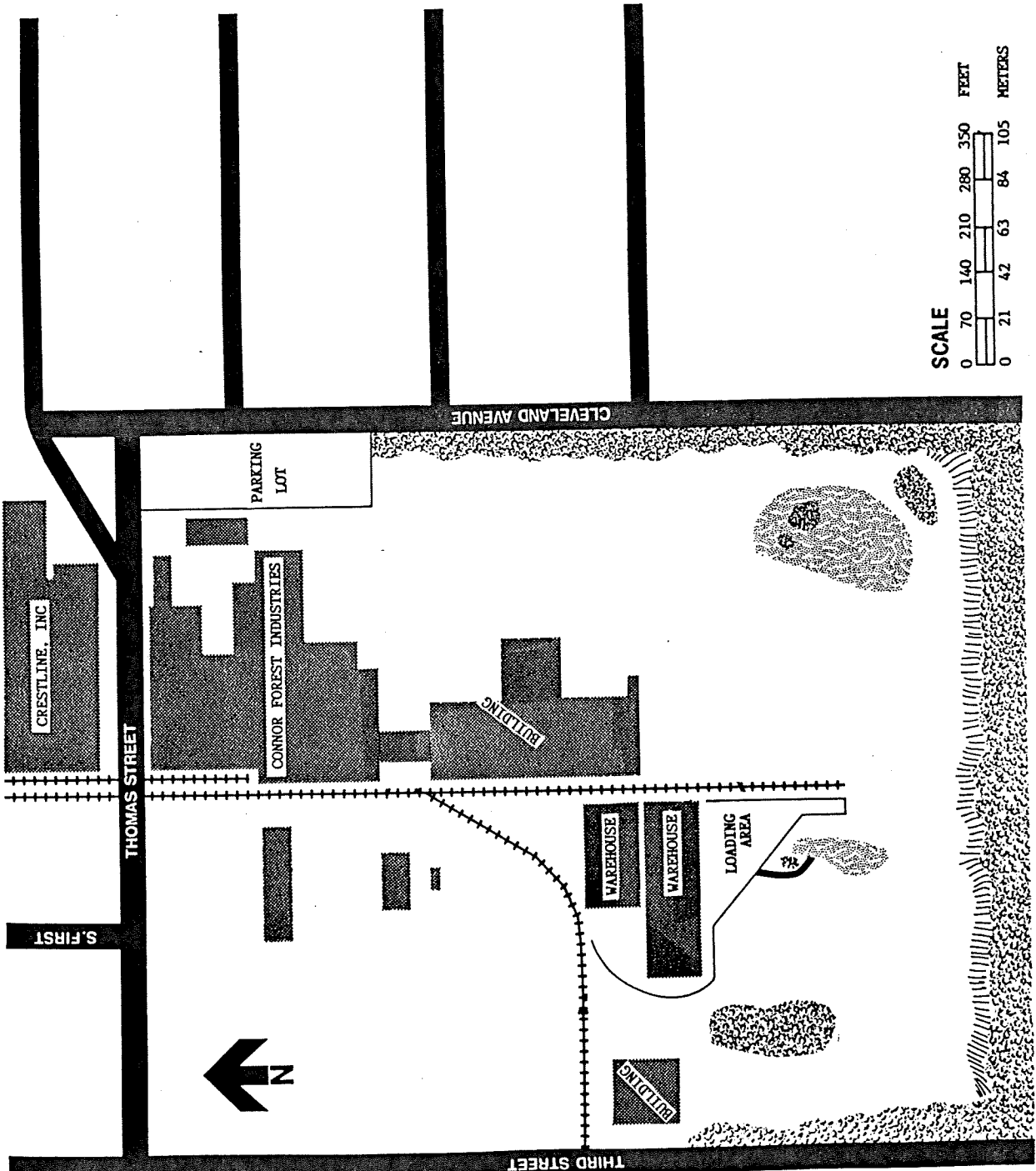
FIGURE 4.

CONNOR FOREST INDUSTRIES, INC
WAUSAU PLANT
WAUSAU, WI

1968 SITE CONDITIONS
BASED ON AIR PHOTO INTERPRETATION
(5/15/68 PHOTO)

KEY

- +++++ RAILROAD
- ROAD
- ▨ WOODED AREA
- ▧ CLEARED AREA (LITTLE OR NO GRASS/BRUSH)
- ||||| SLOPE



322 East Michigan Avenue
Suite 200
Milwaukee, Wisconsin 53202

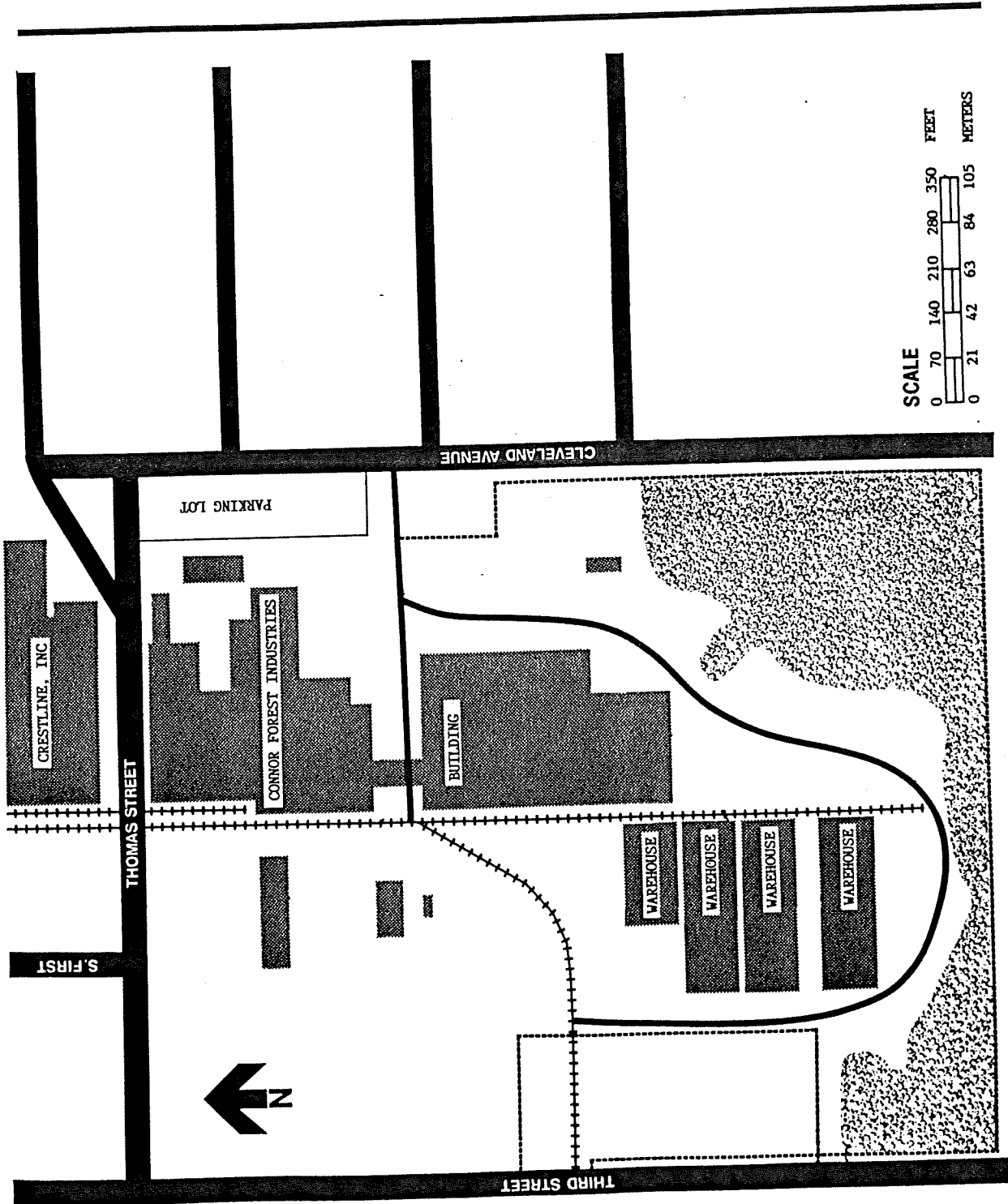
FIGURE 5.

CONNOR FOREST INDUSTRIES, INC
WAUSAU PLANT
WAUSAU, WI

1978 SITE CONDITIONS
BASED ON AIR PHOTO INTERPRETATION
(9/23/78 PHOTO)

KEY

- +++++ RAILROAD
- FENCE
- ===== ROAD
- ▨ WOODED AREA
- BUILDING



322 East Michigan Avenue
Suite 200
Milwaukee, Wisconsin 53202

1968 - The site consists of the main plant building in the northeast corner of the site, a parking lot, four out buildings, and a loading area. The southern half of the property is grass covered with a single cleared area and several small wooded areas. The extreme southern boundary of the site is wooded (along the toe and base of the bluff) and the slope along the southern perimeter is covered with grass and small brush. The slope in the 1968 photo is very apparent due to the bright southern sun. The two out buildings present in 1960 have been removed as have the wood piles stored outside.

1978 - The site is essentially the same as current conditions. The building south of the main plant has been expanded, the small storage area previously identified (cleared area) has been replaced by two large warehouses, the area is now fully wooded south of the on-site buildings. The heavy vegetation covers all aspects of the slope as well as a significant portion of the flat areas of the site (southeast and southwest corners of the property).

Interpretation of Results

It is evident from the air photos that several on-site changes occurred between 1960 and 1978. One important change is that the pair of buildings that were present in 1960 had been removed prior to 1968 to make room for two new warehouses. The removed buildings were located in the central portion of the property and along the western perimeter of the property. It is possible that the drums and construction debris recently identified on-site may be a result of the removal of these buildings.

An additional change in site conditions that is important to note is the destruction of the small cleared area (storage area) and the construction of the two large warehouses. This operation is reported to have required grading and filling (fill from the nearby 3M operation is evident in this area). The very minor changes in site topography indicate that fill thickness was not extensive and is probably thickest immediately behind the southernmost warehouse.

Both phases of new construction may have yielded debris that was likely to have been pushed "south" towards the bluff behind the plant. The USGS quadrangle, and the general pattern of tree growth in the area, indicate that this bluff is not a recent addition to the landscape, but is a geomorphic feature related to the nearby Wisconsin River.

The extent and age of the trees in the southern portion of the site is also important. The majority of the trees appear to have grown around the drums and debris. Many of the trees are 4 to 8 inches in diameter.

Based on the air photo interpretation, the extent of the waste is not great. The areal distribution is uncertain, but the areas of greatest waste concentration are likely to be those currently exposed (four major areas). The thickness of waste is probably not greater than 3 to 10 feet. Waste deposition probably occurred between 1968 and 1978, most likely in the early 1970's. The source of the waste may have been from material stored from earlier construction activities (pre-1968), but is more likely to have been from post-1968 activities (such as the clearing that appears to have been used for outside storage since 1960). In general, it does not appear that deposits of drums, other than those already identified, are likely to be found on the property. The above interpretations are based upon the following:

1. Site topography has not been significantly altered since 1960.
2. The base of the slope has been wooded since 1960.
3. Grading was likely to occur during the final construction phase on-site (southern warehouses).
4. Heavy tree growth on the slope, and remainder of the property, occurred after 1968.

TASK 4: SOIL SAMPLING

Soil sampling activities described in Task 4 of the work plan were not carried out. During a meeting held on December 5, 1985, by personnel from CFI, DNR, Geraghty & Miller, and Foley and Lardner, it was concluded that initial exploration by soil trenching would be appropriate. The use of a backhoe to explore the areas of identified waste was recommended and approved.

Task 5: GEOPHYSICS

Geophysical methods were not utilized at the Wausau Plant Site because it was determined that the probable lateral extent of waste burial was not great. This was determined by use of the air photo analysis, and later verified by the exploratory trenching.

TASK 6: EXPLORATORY TRENCHING

In order to determine the lateral and vertical extent of on-site waste and to verify the interpretation of the air photos, a number of excavation sites were identified, and submitted for approval to the DNR. On the morning of January 7, Geraghty & Miller personnel met at the Wausau Plant Site with representatives from: Connor Forest Industries; Ken Marquardt from the Antigo Office of the Wisconsin Department of Natural Resources; and the local contractor hired by Connor Forest Industries to conduct the trenching. The preliminary selection of trenching sites was reviewed, changes or additions were made as deemed necessary, and the final locations were approved by the DNR representative. An example of a change which had to be made was the location of Trench #1, which had to be altered slightly to ensure that no damage would occur to a nearby fire-hydrant line. The location of trenches dug at the CFI site are shown in Figure 6.

The six trenches were dug at distances that averaged between 150 and 200 feet apart along the tree line on the southern edge of the Wausau Plant Site. Geraghty & Miller personnel and the DNR representative were on site to oversee the trenching operation, collect samples of the earth material from the trenches, and to ensure that evidence of any extensive deposits of buried drums was not overlooked. No buried drums, no visible soil contamination, nor any material indicative of buried drums, were uncovered at any of the trench locations.

As an additional assessment method, a portable "Total Ionizables Present" vapor analyzer was utilized at each of the trench locations to evaluate the amount of volatile organic chemicals present in the soil material. None of the trench locations contained any indications of volatile organic chemicals at a concentration higher than background levels. Soil samples were also collected from each trench location to be taken back to the lab and tested with the vapor analyzer after the samples had equilibrated to room temperature. The concentration of volatile organic chemicals in each soil sample at room temperature was equal to or lower than background level concentrations.

Detailed Description of Exploration Trenches

Trench #1 : Located approximately 105 feet east-southeast of the Assembly building (Figure 6), Trench #1 was 41 feet long, 12 feet deep, and 5 feet wide. This is the only trench which contained evidence of multiple backfill operations. Three separate intervals of rock flour were visible, separated by what appeared to be local surface soil material. This rock flour material is the fill material deposited from the nearby 3M plant. No evidence of buried drums or contaminated material was uncovered at this pit location.

Trench #2 : Located approximately 84 feet south of the fire hydrant (Figure 6), Trench #2 was 69 feet long, 6 to 8 feet deep, and 5 feet wide. This trench was not identified on the trench location map submitted to the DNR, but was requested by Ken Marquardt of the Wisconsin DNR in the field. Rock flour was the predominate material present in the pit except for a section of the trench which cut through a portion of the glue resin landfill. In this section, a lens of what appeared to be sawdust and glue resins was present. No evidence of buried drums or contaminated material was uncovered at this pit location.

Trench #3 : Located approximately 104 feet east-southeast of Warehouse #4 (Figure 6), Trench #3 was 28 feet long, 12 feet deep, and 5 feet deep. Rock flour was the predominate material of the trench, with some cement scraps present. No evidence of buried drums or contaminated material was uncovered at this pit location.

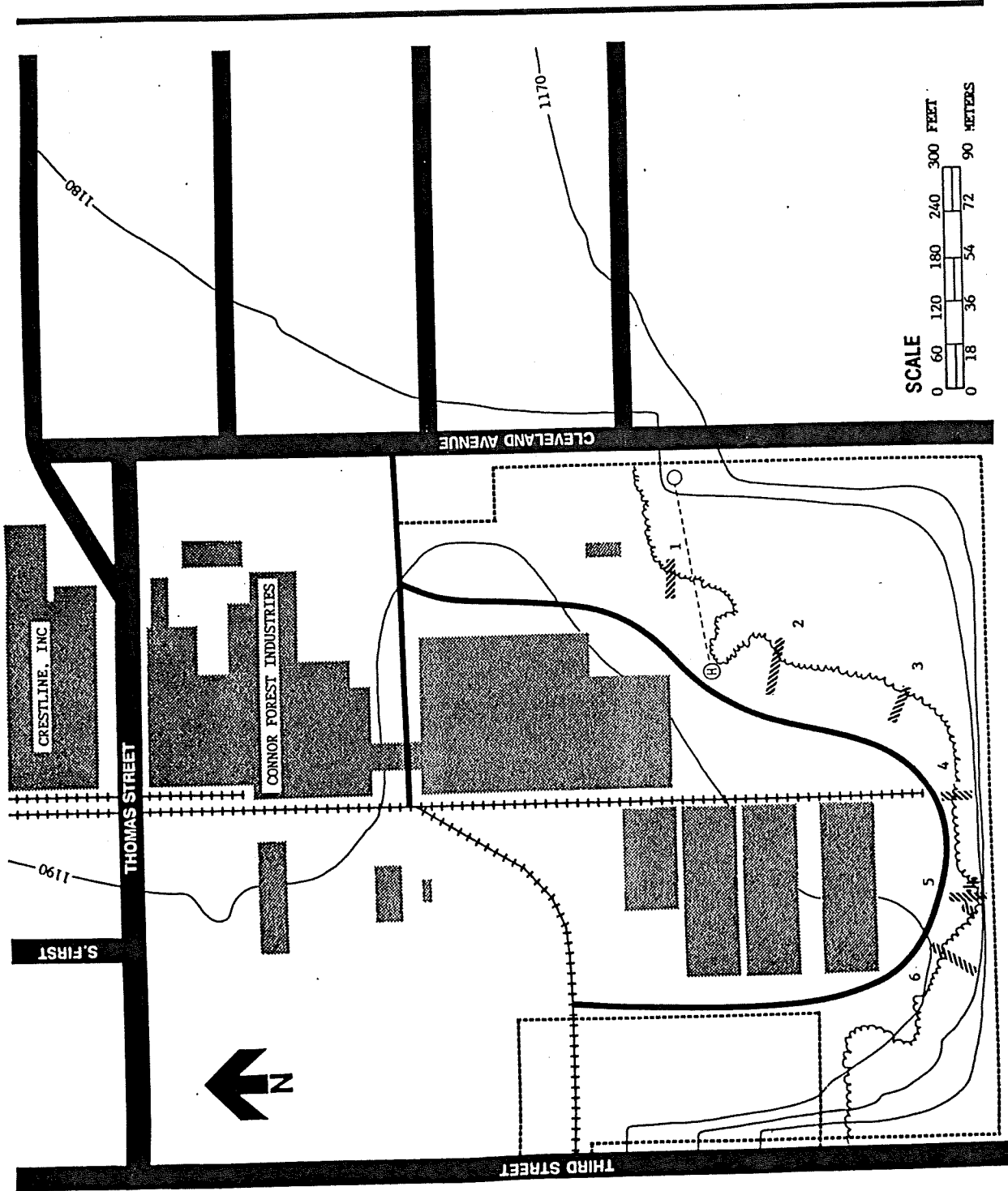
Trench #4 : Located 1 foot south of the road, directly south of the southeast corner of Warehouse #4 (Figure 6), Trench #4 was 31 feet long, varied from 7 to 11 feet deep, and was 5 feet wide. Rock flour was the only material exposed throughout the entire pit, indicating the probability of a single fill occurrence. No evidence of buried drums or contaminated material was uncovered at this pit location.

Trench #5 : Located 119 feet directly south of Warehouse #5 and 140 feet west of Trench #4 (Figure 6). The main trench at Trench #5 was 24 feet long, 9 feet deep, and 5 feet wide. Two smaller trenches were also dug, at angles off to either side. These trenches were 13 feet long, 13 feet deep, and 5 feet wide. Rock flour was the only material exposed throughout the entire pit, indicating the probability of a single fill occurrence. No evidence of buried drums or contaminated material was uncovered at this pit location.

Trench #6 : Located 102 feet south-southeast of the southwest corner of Warehouse #4, and 67 feet west of Trench #5, Trench #6 is 69 feet long, 8 feet deep, and 5 feet deep (Figure 6). This trench was not identified on the trench location map submitted to the DNR, but was requested by Ken Marquardt of the Wisconsin DNR in the field. Rock flour was the only material exposed throughout the entire pit, indicating the probability of a single fill occurrence. No evidence of buried drums or contaminated material was uncovered at this pit location.

FIGURE 6.

CONNOR FOREST INDUSTRIES, INC
WAUSAU PLANT
WAUSAU, WI
LOCATION OF TRENCHES
JANUARY 7, 1986



CONCLUSIONS AND RECOMMENDATIONS

An in-field assessment program for Connor Forest Industries Wausau Plant Site has been carried out to examine site conditions in areas where drums were found, assess whether soil or ground water contamination existed in these areas, and determine if any steps are needed to protect health and the environment.

The following conclusions can be made from the results of the on-site exploration trenches, the soil sample analyses, the air photo analysis, and the site history:

- o The occurrence of abandoned drums at the Wausau Plant Site is limited to the surface or near surface, and no extensive deposits of buried drums are likely to be present.
- o No evidence of soil contamination related to the drums identified on-site was found.
- o The extent and age of the identified drums, and the lack of visible soil contamination, would likely preclude the existence of extensive ground water contamination beneath the site.

Representatives of the Wisconsin DNR were on-site during the trenching and sampling operations and have indicated that the Wisconsin DNR is satisfied that the Wausau Plant Site has been sufficiently investigated and concur that no unidentified deposits of buried drums or related areas of contaminated soil or ground water are present.

Based upon available on-site investigations, Geraghty & Miller recommends that the in-field assessment of the Connor Forest Industries Wausau Plant Site be terminated. However, it is recommended that the exposed drums at the CFI Wausau Plant Site be removed for both safety and aesthetic concerns.

Respectfully Submitted,
Geraghty & Miller, Inc.



Edward R. Rothschild
Senior Scientist



William Seevers
Vice-President

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