United States
Environmental Protection
Agency

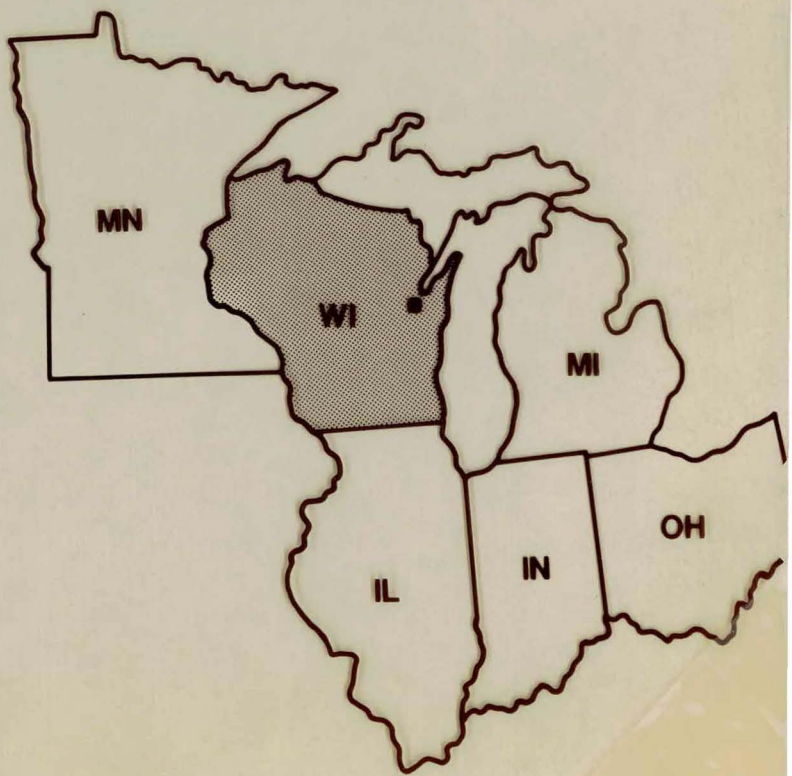
Environmental Monitoring
Systems Laboratory
P.O. Box 93478
Las Vegas NV 89193-3478

TS-PIC-92020
April 1992

Research and Development

EPA Site Analysis Better-Brite Plating DePere, Wisconsin

EPA Region 5
and OERR



X 5-5-92

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

May 1, 1992

REPLY TO THE ATTENTION OF:

Mr. Terry Koehn
Wisconsin Department of Natural Resources
1125 North Military Avenue
Green Bay, Wisconsin 54307-0448

RE: Better Brite Site Analysis Plan

Dear Mr. Koehn:

Enclosed you will find (2) two copies of the Site Analysis Plan for the Better Brite Site.

Should you have any questions, please do not hesitate to call me at (312) 886-1841.

Sincerely,

David Linnear
Remedial Project Manager

TS-PIC-92020
April 1992

Site Analysis
Better-Brite Plating
DePere, Wisconsin

by
Peter E. Bracken, Imagery Analyst
The Bionetics Corporation
Warrenton, Virginia 22186

Contract No. 68-03-3532

Technical Monitor
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Environmental Photographic Interpretation Center
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ENVIRONMENTAL MONITORING SYSTEMS LABORATORY
OFFICE OF RESEARCH AND DEVELOPMENT
U.S. ENVIRONMENTAL PROTECTION AGENCY
LAS VEGAS, NEVADA 89193-3478

FROM: Robert Kavnavskas HSI

TO: Terry Koehn LMD

SUBJECT–MESSAGE

— Better Brite - Photo Evaluation

- Please review enclosed report from EPA.
- Photos from both locations for 1971, 1973 and 1978 are addressed

REPLY

SIGNED T Koehn DATE 5-7-92

cc. G. Edelstein SW13
with copy - I will see if I can get you an original - only 2 were provided.

RETURN THIS COPY TO SENDER

SIGNED _____ DATE _____

NOTICE

This document has undergone a technical and quality control/assurance review and approval by personnel of the EPA/ORD Environmental Monitoring Systems Laboratory at Las Vegas (EMSL-LV), and is for internal Agency use and distribution only.

ABSTRACT

This report presents an analysis of aerial photography of the Better-Brite Plating chrome and zinc plating facilities, located in DePere, Wisconsin. The sites, which are in separate locations, were analyzed to assist the Environmental Protection Agency (EPA)'s Region 5 in its assessment of potential sources of ground water, surface water, and soil contamination.

According to collateral information supplied by EPA Region 5 regarding the Better-Brite chrome plating facility, an estimated 20,000 to 60,000 gallons of chrome-contaminated liquid leaked from plating tanks during the seven years of plating operations, which ended in 1985. Additionally, ground water, surface water, and soil tests conducted on and near the chrome plating site during the 1980's revealed high concentrations of chromium. No collateral information was provided regarding the Better-Brite zinc plating facility.

Findings of the aerial photographic analysis which may represent potential evidence or sources of contamination at the Better-Brite chrome plating facility include stains and containers. Stains seen close to the production building are consistent with the reports of dumped and spilled liquids in this area. Stains associated with the estimated 1,000 containers seen in 1978 may indicate container leakage. Significant findings at the Better-Brite zinc plating facility include a possible drum, probable containers, and stains. The stains may indicate contamination due to liquid spillage.

The EPA's Environmental Photographic Interpretation Center in Warrenton, Virginia, a branch of the Advanced Monitoring Systems Division of the Environmental Monitoring Systems Laboratory in Las Vegas, Nevada, performed this analysis at the request of the Superfund Support Section of EPA Region 5 in Chicago, Illinois, and the Office of Emergency and Remedial Response in Washington, D.C. This analysis covers the period from 1971 to 1986, and the report was completed in April 1992.

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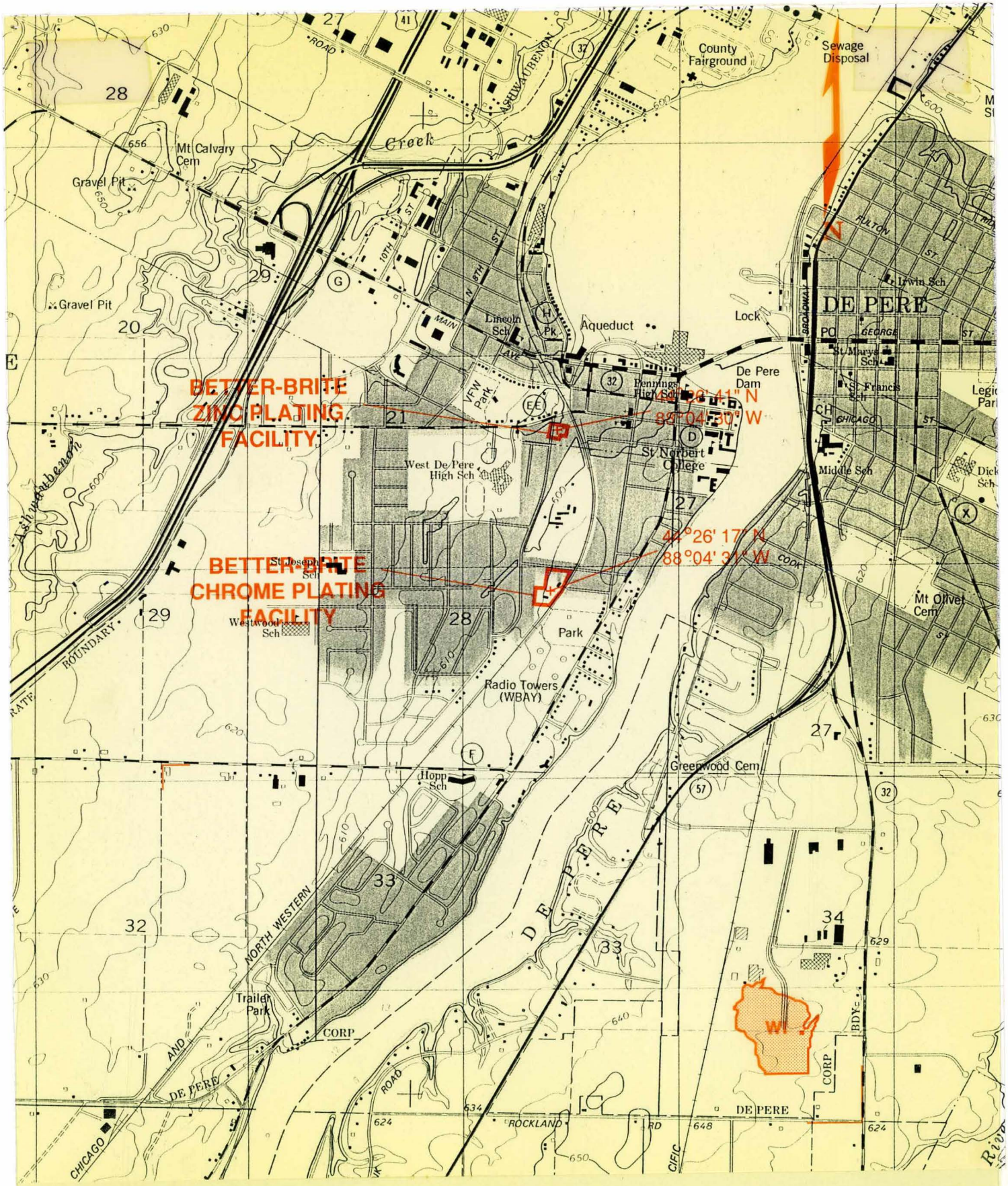

FIGURE 1
BETTER-BRITE PLATING

LOCATION MAP
DE PERE, WIS. QUAD

APPROX. SCALE 1:24,000

INTRODUCTION

An analysis of aerial photography was performed on the Better-Brite Plating chrome and zinc plating facilities, located in DePere, Wisconsin. The chrome plating facility, which is approximately 0.53 kilometer (0.33 mile) from the zinc plating facility, comprises 1.5 hectares (3.7 acres). The zinc plating facility comprises 0.25 hectare (0.61 acre). The U.S. Environmental Protection Agency (EPA)'s Region 5 requested this analysis in support of its assessment of potential ground water, surface water, and soil contamination sources.

Figure 1 shows the facilities' locations, keyed to a photocopy of a U.S. Geological Survey (USGS) 1:24,000-scale topographic map. Site boundaries or areas used in this analysis were determined from observations made from the aerial photography in conjunction with collateral data supplied by EPA Region 5 and do not necessarily denote legal property lines or ownership.

Aerial photography of the Better-Brite Plating facilities was obtained to represent the period from 1971 to 1986.[1] Black-and-white photography from 1971; color photography from 1973 and 1978; and color infrared photography from 1986 were used for this analysis. The 1986 photography was analyzed but not reproduced for this report due to the poor resolution of the photography and the lack of significant features. Any significant changes noted in 1986 will be annotated and discussed with the prior year of photography reproduced in this report.

An estimated 20,000 to 60,000 gallons of chrome-contaminated liquid leaked from plating tanks in the production building at the Better-Brite chrome plating facility during the seven years of plating operations, which ended in 1985. In addition, nine instances of dumped or spilled liquids at the west end of the production building were noted between December 1978 and July 1979. One such spill in February 1979 contained an estimated

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[1]A complete listing of maps and photography used in this report is provided in the References section.

2,200 gallons of chromic acid. Ground water, surface water, and soil tests conducted during the 1980's on- and offsite revealed high concentrations of several different forms of chromium.[1] No collateral information was provided regarding the Better-Brite zinc plating facility.

Findings which may represent evidence or potential sources of contamination at the Better-Brite chrome plating facility include stains and containers. Stains seen along the south and west sides of the production building in 1978 are consistent with the reports of dumped and spilled liquids in this area. Stains associated with the estimated 1,000 containers seen in 1978 may indicate container leakage. Significant findings at the Better-Brite zinc plating facility include a possible drum, probable containers, and stains. The stains may indicate contamination due to liquid spillage.

The EPA's Environmental Photographic Interpretation Center in Warrenton, Virginia, a branch of the Advanced Monitoring Systems Division of the Environmental Monitoring Systems Laboratory in Las Vegas, Nevada, performed this analysis at the request of the Superfund Support Section of EPA Region 5 in Chicago, Illinois, and the Office of Emergency and Remedial Response in Washington, D.C. This analysis covers the period from 1971 to 1986, and the report was completed in April 1992.

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[1]Collateral information supplied by EPA Region 5. Hereafter, an asterisk (*) denotes collateral information.

METHODOLOGY

A search of government and commercial sources was undertaken to obtain the best available aerial photography of the site spanning the desired time frame. The photography and other sources of information used in this report are listed in the References section.

The analysis was performed by viewing backlit transparencies of aerial photography through stereoscopes. Stereoscopic viewing creates a perceived three-dimensional effect which, when combined with viewing at various magnifications, enables the analyst to identify signatures associated with different features and environmental conditions. The term "signature" refers to a combination of visible characteristics (such as color, tone, shadow, texture, size, shape, pattern, and association) which permit a specific object or condition to be recognized on aerial photography.

The terms "possible" and "probable" are used to indicate the degree of certainty of signature identification. "Possible" is used when only a few characteristics are discernible or these characteristics are not unique to a signature. "Probable" is used when incrementally more characteristics are discernible. No qualifying terms are used when the characteristics of a signature allow for a definite feature identification.

Photographic prints were made from those years of aerial photographic coverage that reveal significant information about the site. The analyst's findings are annotated on overlays to prints and/or base maps and described in the accompanying text. Site boundaries or areas used in this analysis were determined from observations made from the aerial photography in conjunction with collateral data supplied by EPA Region 5 and do not necessarily denote legal property lines or ownership.

Due to factors inherent in the photographic printing process, prints do not exhibit the level of detail that is visible in the original aerial photography. Therefore, some features identified from the aerial photography may not be clearly discernible, or even visible, on the photographic prints presented in this report.

AERIAL PHOTO SITE ANALYSIS

CHROME PLATING FACILITY

April 17, 1971 (Figure 2)

The site consists of a private residence, three small utility buildings (B), and a railroad siding. Two vehicles are seen along the driveway, and an unidentifiable object is on the railroad siding (none annotated). Channelized drainage is noted along the east edge of the site. The drainage flows under the railroad tracks and continues south toward a wetland area (not annotated).

No features or activities related to chrome plating are noted this year; Better-Brite does not yet own the property.*

LEGEND

B	- Building
C	- Containers
D	- Drums
DA	- Disturbed Area
DB	- Debris
FA	- Fill Area
OS	- Open Storage
SL	- Standing Liquid
ST	- Stains
TR	- Trench
VT	- Vertical Tank
→→	- Channelized Drainage
——	- Feature Boundary
⊔⊔⊔	- Fill Face
——	- Site Boundary

FIGURE 2
BETTER-BRITE PLATING **APRIL 17, 1971** **APPROX. SCALE 1:2,800**

September 30, 1973 (Figure 3)

The site property was deeded to Better-Brite earlier in 1973.* The production building is under construction, and linear construction materials are seen onsite. The private residence is being used as a business office by Better-Brite.*

Disturbed Area (DA) - Seen adjacent to Lande Street, probably related to utility installation.

Trench (TR) - Runs between the disturbed area and the production building; probably related to utility installation.

Fill Area (FA) - A portion of the south end of the site has been filled, probably to facilitate construction of the production building.

LEGEND

B	- Building
C	- Containers
D	- Drums
DA	- Disturbed Area
DB	- Debris
FA	- Fill Area
OS	- Open Storage
SL	- Standing Liquid
ST	- Stains
TR	- Trench
VT	- Vertical Tank
→→	- Channelized Drainage
——	- Feature Boundary
LLLL	- Fill Face
——	- Site Boundary

FIGURE 3
BETTER-BRITE PLATING **SEPTEMBER 30, 1973** **APPROX. SCALE 1:2,300**

April 27, 1978 (Figure 4)

Chrome plating operations are underway.* The northernmost of the three small utility buildings seen in 1971 has been removed.

Disturbed Area (1973) - No longer visible; its former location is covered with containers.

Trench (1973) - No longer visible. This was probably filled; most of its former location is covered with containers.

Fill Area (1973) - No longer active; remains unchanged since 1973.

Probable Debris (DB) - Consists of two small collections of what appears to be dismantled/discarded equipment.

Containers (C) - A collection of at least 1,000 light-toned containers occupies approximately 0.30 hectare (0.74 acre). The containers are crate-like in appearance and most are stacked two or three high.

Possible Drums (D) - Seen as a small group in the southeast corner of the site.

Stain, Probable Stains (ST) - Three dark-toned probable stains are noted adjacent to the large collection of containers. This may indicate container leakage. Two other dark-toned probable stains originate from the south side of the production building. A large brown stain is flowing downhill from the west side of the production building towards a drainage channel.

Possible Standing Liquid (SL) - Noted within the large brown stain at the west end of the production building.

June 8, 1986

Photography from 1986 was analyzed but not reproduced for this report due to its poor resolution and lack of significant features. Plating operations had ceased by 1986.* The northern of the two small utility buildings seen in 1978 had been removed. No stains, liquid, containers, drums, or debris were seen onsite.

FIGURE 4
BETTER-BRITE PLATING **APRIL 27, 1978** **APPROX. SCALE 1:2,600**

ZINC PLATING FACILITY

April 17, 1971 (Figure 5)

Plating operations appear to be active. The site consists of a production building and another building that appears to be a warehouse.

Probable Stains - Dark-toned probable stains are noted in the northwestern and eastern portions of the site.

Possible Vertical Tank (VT) - Located just north of the production building.

FIGURE 5
BETTER-BRITE PLATING **APRIL 17, 1971** **APPROX. SCALE 1:2,100**

September 30, 1973 (Figure 6)

The basic site configuration has not changed since 1971.

Possible Vertical Tank (1971) - No longer present.

Possible Drum - Seen in the approximate center of the site.

Open Storage (OS) Areas - Three distinct open storage areas are seen onsite. All of them appear to contain equipment and/or raw materials.

Stains, Possible Stain - Three small dark-toned stains are noted west of a large dark-toned stain. The large stain is in the same general location as a dark-toned probable stain seen in 1971. A small dark-toned possible stain is seen along the south side of the production building. A dark-toned probable stain seen in the northwest corner of the site in 1971 is no longer present.

LEGEND

B	- Building
C	- Containers
D	- Drums
DA	- Disturbed Area
DB	- Debris
FA	- Fill Area
OS	- Open Storage
SL	- Standing Liquid
ST	- Stains
TR	- Trench
VT	- Vertical Tank
→→	- Channelized Drainage
——	- Feature Boundary
⊔⊔⊔	- Fill Face
——	- Site Boundary

FIGURE 6
BETTER-BRITE PLATING SEPTEMBER 30, 1973 **APPROX. SCALE 1:700**

April 27, 1978 (Figure 7)

The basic site configuration remains unchanged since 1973.

Possible Drum (1973) - No longer present.

Open Storage Areas - The three open storage areas noted in 1973 are still present; stored materials consist mainly of equipment. Two open storage areas include probable containers.

Probable Stain - A dark-toned probable stain is in the same general location as several stains seen in 1973. The dark-toned possible stain seen along the south edge of the production building in 1973 is no longer visible.

Probable Containers - These are light-toned and appear to be square; possibly crates.

June 8, 1986

Photography from 1986 was analyzed but not reproduced for this report due to its poor resolution and lack of significant features. The building seen along the northern site boundary from 1971 to 1978 had been removed by 1986.

FIGURE 7
BETTER-BRITE PLATING **APRIL 27, 1978** **APPROX SCALE 1:1,500**

REFERENCES

AERIAL PHOTOGRAPHY

Date	Agency	Mission Code	Agency Frame #	Orig. Scale	EPIC Frame #
April 17, 1971	USGS[1]	VCQW	1:28-30	1:30,000	36473-36475
September 30, 1973	NOS[2]	73L	8330-8333	1:10,000	36787-36790
April 27, 1978	NOS	78E	9795-9798	1:20,000	36783-36786
June 8, 1986	USGS	NHAP2	343:156-158	1:58,000	36834-36836

MAP

Source	Name	Scale	Date
USGS	DePere, WI	1:24,000	1982

[1]U.S. Geological Survey, U.S. Department of the Interior

[2]National Ocean Survey, U.S. Department of Commerce