

State of Wisconsin

To: Nichol Mamolou SD - Horicon
DEPARTMENT OF NATURAL RESOURCES

Carroll D. Besadny
Secretary

BOX 7921
MADISON, WISCONSIN 53707

October 14, 1986

IN REPLY REFER TO: 4430

Mr. Edward Marshall, President
Oconomowoc Electroplating Company, Inc.
W2573 Oak Street
Ashippun, WI 53303

SUBJECT: Oconomowoc Electroplating Company, Inc.
RCRA Facility Assessment
WID 006100275

Dear Mr. Marshall:

Enclosed is a copy of RCRA Facility Assessment (RFA) prepared by the Department of Natural Resources for Oconomowoc Electroplating Company, Inc. (OEI) located at W2573 Oak Street, Ashippun, Wisconsin.

The purpose of the RFA is to:

1. Identify the solid waste management units,
2. Define the existence and the extent of releases at these units, and
3. Determine the scope of work necessary for corrective action.

The RFA has been prepared in accordance with the corrective action requirements of the Hazardous and Solid Waste Amendments (HSWA) of 1984 to RCRA. HSWA requires that all RCRA treatment storage or disposal facilities be assessed to determine the need for corrective action.

The RFA shows that the site is a source of contamination to both surface and groundwaters and poses a hazard to human health and the environment. Contamination by electroplating sludges exists at the site and at the adjacent wetland and Davy Creek.

Mr. Edward Marshall - October 14, 1986

2.

The Department recommends that this facility be kept on the National Priority List for CERCLA (Superfund) action and that a complete CERCLA Remedial Investigation/Feasibility Study (RI/FS) be prepared for the OECI facility. If you have any questions or comments, please contact either Mark Giesfeldt of my staff at (608) 267-7562 or Joe Brusca of our Southern District staff at (608) 275-3296.

Sincerely,



Richard E. O'Hara, Chief
Hazardous Waste Management Section
Bureau of Solid Waste Management

REO:p1

cc: U.S. EPA - Region V
Joe Brusca - Southern District
Ron Curtis - Southern District
Nichol Mamolou - Southern District - Horicon
Mark Giesfeldt - SW/3

7680V

RCRA FACILITY ASSESSMENT (RFA)
Oconomowoc Electroplating Company, Inc. (OECI)

TABLE OF CONTENTS

	Page
FACILITY AND WDNR CONTACTS.....	1
OVERVIEW.....	1
UNIT DESCRIPTION.....	3
1. Wastewater Impoundments.....	3
2. Wastewater Treatment System.....	4
3. Wetland and Davy Creek.....	6
4. Container Storage (Drums, Containers, and Rolloffs).....	6
KNOWN AND/OR SUSPECTED RELEASES.....	7
TARGET POPULATIONS AND/OR ENVIRONMENTS POTENTIALLY EXPOSED.....	8
RECOMMENDATIONS.....	9
LIST OF ATTACHMENTS.....	10
1. Violation and Enforcement Record for OECI.	
2. EPA Letter - OECI Position Regarding Remedial Investigation at the Site.	
3. Department of Justice Summons and Complaint filed in Dodge County Courthouse on August 5, 1986.	
4. DNR Memo - OECI Hazardous Waste Activity Summary - June 10, 1986.	
5. Water Quality Verification Study - Davy Creek, October 30, 1979.	
6. Sediment Sampling Survey Report - Davy Creek, June 22, 1983.	
7. EPA Memo - TAT Sediment Sample Results at OECI - July 1, 1986.	
8. DNR Memos - OECI Potential for Groundwater Contamination.	
9. DNR Memos - Potential of Buried Drums at OECI.	
10. Aerial Photo of OECI - July 19, 1984.	
11. EPA Attachment 25 - Preliminary Assessment Report.	
12. EPA Attachment 26 - Site Investigation Report.	
13. EPA Exhibit 3-2 - Checklist for Groundwater Releases.	
14. EPA Exhibit 4-1 - Checklist for Surface Water/Surface Drainage Releases.	

RCRA FACILITY ASSESSMENT (RFA)
NARRATIVE SUMMARY

FACILITY: Oconomowoc Electroplating Company, Inc.

EPA ID #: WID 006 100 275

LOCATION: W2573 Oak Street
Ashippun, Wisconsin 53303
Dodge County

FACILITY CONTACTS: Edward Marshall - President
Craig Bartelt - Chemist, Technical Director
414/474-4421

WDNR CONTACTS: Dennis Kugle - Hydrogeologist, Hazardous Waste Management
Section
608/267-2465 Bureau of Solid Waste

Mark Tusler - Hydrogeologist, Hazardous Waste Management
Section
608/266-5798 Bureau of Solid Waste

Wendell Wojner - Hazardous Waste Specialist, Southern District
Headquarters
608/275-3297

Nichol Namolou - Environmental Specialist, Horicon Area
414/485-4434

Mike Hammers - Engineer, Industrial Wastewater Section
608/267-7690 Bureau of Wastewater Management

Ron Curtis - Enforcement Specialist, Southern District
Headquarters
608/275-3307

OVERVIEW:

Oconomowoc Electroplating Company, Inc. (OECI) is located in the Town of Ashippun, Dodge County, Wisconsin. It is adjacent to wetlands and Davy Creek which is a tributary to the Rock River. The facility occupies approximately five acres (see Figure 1). The facility is within the area of 100-year floodplain of Davy Creek.

Oconomowoc Electroplating Company, Inc. is a job-shop electroplater engaged in the plating and finishing of various types of metallic products. Electroplating processes performed at the facility have included nickel, chrome, zinc, copper, brass, cadmium, and tin, while finishing processes have included chromate conversion coating and anodizing. Basic materials of the metallic products included steel, zinc, aluminum, and copper.

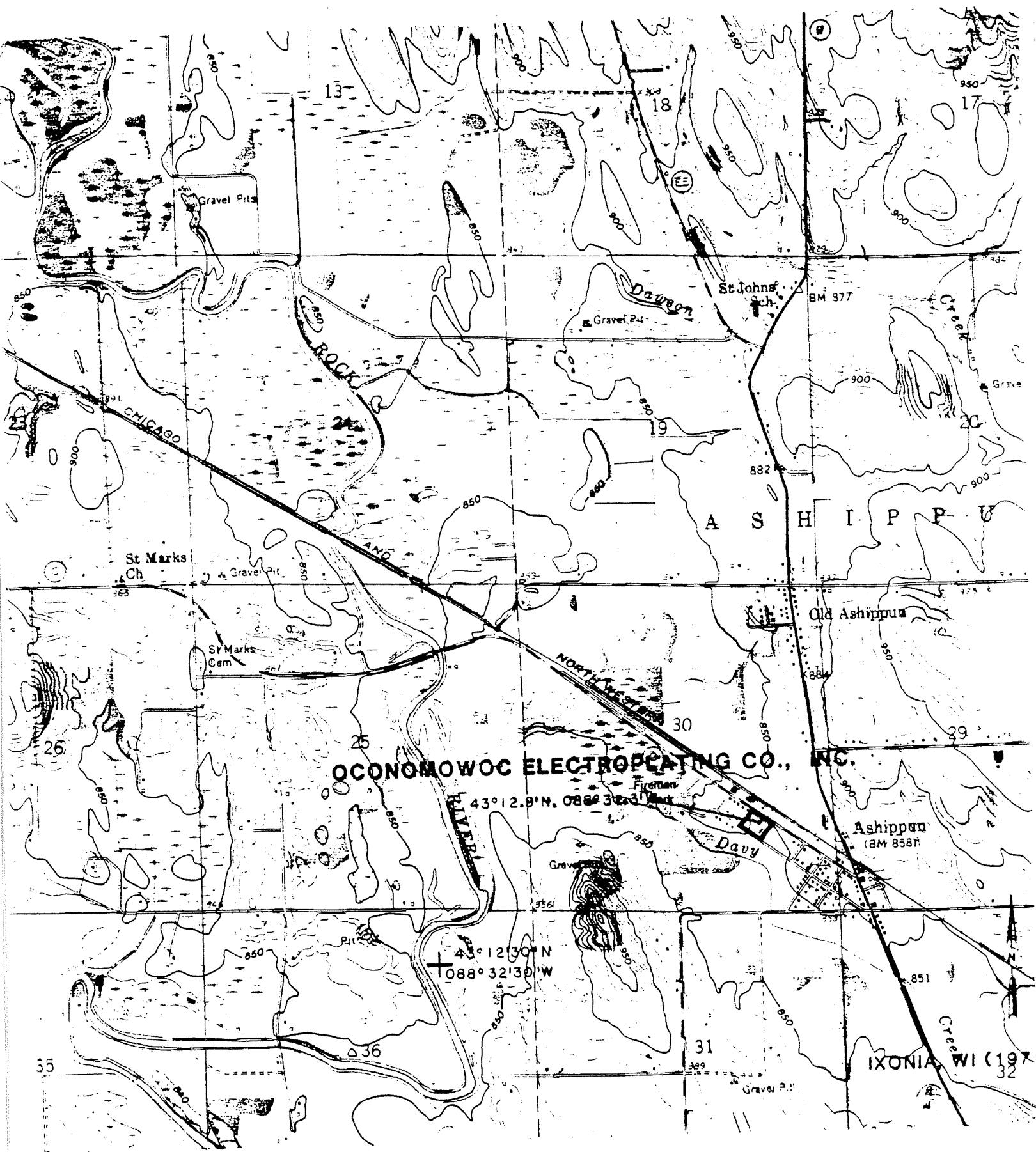


Figure 1. Site location, Oconomowoc Electroplating Co., Inc., Ashippun, WI

Generated wastewaters are divided into three categories: cyanide-bearing, chromium-bearing, and acid-alkaline. Cyanide-bearing wastewaters originate from rinses following nickel, zinc, copper, brass, and cadmium plating operations. However, as of February, 1985, OECI had suspended all cyanide plating processes. Chromium-bearing wastewaters originate from rinses following chrome plating and chromate conversion coating operations. Acid-alkaline wastewaters originate from rinses following alkaline cleaning, acid dip, electrocleaning, zinc plating (noncyanide) and anodizing operations and from periodic dumps of concentrated alkaline, acid, and anodizing solutions. Concentrated electroplating and chromate conversion coating process solutions are shipped off-site for recovery.

The facility operates a WPDES permitted wastewater treatment system which is discussed in the unit description section. Two lagoons were constructed as part of the wastewater treatment system in 1972. Small quantities of spent 1,1,1-trichloroethane and trichloroethylene were generated at the facility until 1984. Contained in 55-gallon drums, the spent solvents were shipped off-site. Hazardous wastes stored at the site include the electroplating sludge (F006) and the spent halogenated solvents (F002)(F002 hazardous waste was completely shipped off-site by June 13, 1986).

Oconomowoc Electroplating is subject to regulations under the federal Resource Conservation and Recovery Act (RCRA), Chapter 144.43, Wis. Statutes (Solid Waste, Hazardous Waste and Refuse), and Chapter NR 181 (Hazardous Waste Management) regarding the generation and storage of hazardous waste and the placement of hazardous waste in the settling lagoons which have not been closed. OECI did not notify as a hazardous waste generator on July 22, 1980. The facility did not submit a hazardous waste "Part A" permit application or a Hazardous and Solid Waste Amendments (HSWA) "Certification Regarding Potential Releases from Solid Waste Management Units." A RCRA Part B permit application was never called in for OECI. OECI never received an interim status determination from EPA or an interim license from Wisconsin DNR for storage or disposal.

The Department's first hazardous waste regulation inspection was conducted in April, 1981. During that inspection, the Department documented that OECI was violating the 90-day storage limit for hazardous wastes as well as numerous other violations. DNR has documented that OECI has exceeded the 90-day storage limit almost continually since that time. Consequently, OECI is a hazardous waste storage facility that is in violation of hazardous waste storage, licensing, construction, financial responsibilities, liability coverages, and management of hazardous waste requirements (see Attachment 1). The lagoons at the facility are hazardous waste surface impoundments.

A Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) preliminary assessment was performed in May of 1983. The site received a HRS score of 31.86 and is on the National Priority List. By letter dated September 18, 1985, the U.S. EPA notified OECI that they had been identified as a responsible party under CERCLA for the documented release or threatened release of hazardous substances at the OECI site. In this same letter EPA offered OECI the opportunity to voluntarily conduct a Remedial Investigation/Feasibility Study (RI/FS) of the site. In a meeting held on October 9, 1985 OECI informed the EPA that they did not have the financial

resources to conduct an RI/FS and formally declined to participate in the CERCLA process (See Attachment 2). A superfund financed RI/FS was scheduled to begin during the first quarter of federal fiscal year 1986, but has been delayed because of the lack of adequate funds. As soon as superfund is reauthorized, money will be allocated to begin the RI/FS process.

The HSWA Initial Screening and Facility Management Plan were conducted in December of 1985 and March of 1986, respectively, by Wisconsin DNR. These reports concluded that OECI is environmentally significant. EPA concurred with DNR's decision in August, 1986.

DNR files show that the company has frequently expressed their financial limitations to comply with wastewater and hazardous waste regulations. OECI has also indicated, as noted previously, that they do not have sufficient money to participate in the CERCLA investigation of their site.

OECI is also subject to Chapter 144, Subchapter II (Water and Sewage), and Chapter 147 (Pollution Discharge Elimination), Wisconsin State Statutes.

OECI's continuous violations of its Wisconsin Pollutant Discharge Elimination System (WPDES) Permit limitations have resulted in 1981 and 1985 judgments issued in Dane County Circuit Court that required OECI to upgrade its wastewater treatment system to meet water quality or treatment technology based effluent limitations (see Attachment 1). In the 1985 judgment, it was found that OECI had failed to comply with the 1981 judgment. As a result, OECI was assessed \$47,000 in forfeitures. This money was to be used to study the extent of contamination of the adjacent wetland and Davy Creek caused by violations of OECI WPDES permit limits. This money has been set aside to be used as the state's 10% contribution for any CERCLA related clean-up activities. In addition, the 1985 judgment included two provisions pertaining to continued hazardous waste violations. The 1985 judgment required OECI to:

- a. Dispose of all on-site hazardous waste treatment system sludge within 90 days (by May 23, 1985).
- b. Comply with Chapter NR 181, Wisconsin Administrative Code.

However, inspections of the facility confirm that OECI is not complying with the 1985 judgement. As a result, WDNR has referred OECI on June 2, 1986, to the Wisconsin Attorney General, and a lawsuit against the facility was filed on August 1, 1986 (see Attachment 3).

UNIT DESCRIPTION:

1. Wastewater Impoundments:

The wastewater treatment system at OECI has undergone a continuous change as a result of pollution abatement orders issued in 1963 (Order 1-64J-17 issued on February 13, 1963), and 1969 (Order 4B-70-IU-35 issued on May 6, 1969). A compliance schedule was contained in its NPDES/WPDES discharge permit issued November 30, 1973. With the exception of the two package treatment units, one for cyanide destruction and one for hexavalent

chromium reduction, no part of OECI's treatment system prior to 1981 has received an approval from the Department. Neither the cyanide nor hexavalent chromium package treatment unit is now being utilized.

The two unlined settling lagoons were constructed as part of the wastewater treatment system in 1972 (dimensions - 20 x 40 x 8 feet deep). In April, 1981, final plans were approved by the Industrial Wastewater Section of the DNR for modifications and additions to the facility's wastewater treatment system. Waste neutralization, clarification, sludge dewatering, and effluent wastewater filtration were approved. These modifications should have eliminated the settling lagoons from the wastewater treatment system and the lagoons should have been cleaned-up, lined, and used only as emergency holding lagoons. Discharge of the treated process wastewaters flows through a wetland area approximately 100 yards before reaching Davy Creek. In 1984, Phase II wastewater treatment modifications were approved by DNR. As a condition of that plan approval, the two lagoons should have been emptied and closed in a manner acceptable to the Bureau of Solid Waste Management. This has not happened, and as recently as February, 1986, site inspections have documented discharges from the company's wastewater treatment building flowing into the impoundment.

Due to the untreated discharges of electroplating wastewaters prior to 1972 and inefficient operation of the wastewater treatment system and lagoons since 1972, the wetland area located southwest of the facility and Davy Creek have been heavily contaminated with metal sludges.

2. Wastewater Treatment System:

A plan approval for the cyanide and hexavalent chromium package treatment units was issued to the OECI on June 13, 1966. In 1972, two unlined settling lagoons (discussed above) were installed to settle out the metal hydroxides. The lagoons were not approved by the Department. OECI also installed five unapproved clarifier units to replace the settling lagoons. In April, 1981, and December, 1983, Phase I plans, covering the installation of two solids contact clarifiers, a sludge holding tank, and hanging bag sludge dewatering filters, were approved. On April 10, 1981, final plans were approved for modifications and additions to OECI's treatment system. The plans called for the segregation of cyanide and hexavalent chromium wastewaters (cyanide destruction with chlorine gas and hexavalent chromium reduction with sulfur dioxide), waste neutralization, clarification, sludge dewatering, and effluent filtration with a diatomaceous earth filter and starch xanthate body feet (needed to meet water quality based effluent limitations). However, the treatment system failed to provide an effluent that meets the limitations set in the stipulated agreement of March 24, 1981, between OECI and the Department.

Phase II plans to upgrade the cyanide and hexavalent chromium treatment processes to complete the concentrated acid and alkaline bath dump collection systems, to install a sulfide polishing system, and to upgrade the final filtration system were approved on June 1, 1984. The plan approval was subject to the conditions that:

- Existing concrete floor channels not be used as open channels to direct wastewaters to the treatment system,

- A second pressure filter be installed to provide a wastewater filtration rate of less than 5 gpm/sq ft of filter media,
- The installation of air scour to the pressure filters be considered,
- The two lagoons, nearly filled with electroplating sludges (F006), be closed according to Ch. NR 181,
- The wastewater treatment electroplating sludges (F006) be disposed of according to Ch. NR 181, and
- Existing and proposed treatment systems be operated as effectively as possible.

The Phase II plans included a few changes to the cyanide treatment system and minor additions to the chromium treatment system. Changes of the cyanide treatment system included installations of a backup pump in the cyanide collection sump, a nonadjustable flow controller set at 15 gpm (the design flow), and in-line mixers in the recirculation piping of chlorine gas injection points. Cyanide treatment system effluent flows to the existing neutralization tank and then to the clarifiers.

The additions to chromium treatment system (consist of two stage acid sulfonation to reduce hexavalent chromium) included installations of a backup pump in the chromium collection sump, a sulfuric acid feeder in the first stage regulated by a pH probe, a nonadjustable flow controller set at 15 gpm (the design flow), and in-line mixers in the sulfur dioxide gas injection systems of both stages. The additions also included routing of concentrated acid dump holding tank bleed to the chromium collection sump. Effluent of chromium treatment system will flow to the existing neutralization tank.

Phase II plans also included that:

- a. A permanent piping system be completed between process line tanks and the appropriate acid or alkaline bath dump holding tank,
- b. Flow from neutralization sump (restricted to design flow rate of 80 gpm) be pumped to a flash mix coagulation tank, then to a flocculation tank, and finally to the two clarifiers, and
- c. The starch xanthate addition be replaced by a sulfide polishing system to form suitable metal sulfides.

However, OECI did not comply with Phase II plans approved. An inspection of OECI's wastewater treatment system on May 21, 1985, by Department staff showed that:

- OECI's final filtration flow rate was exceeding the limit of 5 gpm/sq. ft. of filter media,
- OECI did not provide a filter backwash storage tank,

- OECI did not provide the necessary sludge dewatering capacity, and
- OECI did not close the old unlined lagoons.

The Department staff informed OECI about previous violations. However, the facility did not respond and has not yet corrected any of these violations (violating its WPDES limitations and the 1985 court judgment that requires OECI to meet the WPDES limitations).

OECI has conducted recently mostly zinc plating and aluminum anodizing in addition to little nickel and cadmium plating operations.

OECI's discharge monitoring reports (DMR's) (as a result of the facility's inefficient and inadequate wastewater treatment system) show numerous violations of WPDES limitations. Consequently, the releases of the heavy metals and cyanide in the wastewater treatment system discharges have contaminated the wetland area adjacent to the facility and Davy Creek.

3. Wetland and Davy Creek:

The wetland referred to is the area located just south of and across Elm Street from OECI. The wetland area receives the discharges of OECI's wastewater treatment system. These discharges flow through the wetland approximately 100 yards before reaching Davy Creek, a tributary to the Rock River.

The wetland and Davy Creek may be considered a solid waste management unit because they have been continually used as a receptor for heavily contaminated effluent from the wastewater treatment system and contain heavy metal sludge deposits. Soil samples of the wetland and bottom samples of Davy Creek show a substantial evidence of electroplating sludges (F006) in both areas. In a study conducted in 1979, a sludge layer, ranging from 0.2 ft to 3.2 ft thick, was observed at the bottom of Davy Creek, and heavy metals in high concentrations were measured in the soil samples taken from the wetland. The above study and other studies indicate that the wetland and Davy Creek are a substantial source of contamination to ground and surface waters and should be included in any remedial investigation/feasibility study (RI/FS).

4. Container Storage (Drums, Containers, and Rolloffs):

The container storage areas identified in this section are subject to regulations under RCRA and Chapter NR 181. OECI did not submit the proper applications as a hazardous waste storage facility, and it never received an interim status from EPA nor an interim license from DNR for these areas.

OECI uses several areas to store drums, containers, and rolloffs. These areas can be identified as:

- The northern parking lot area,
- The area east of the site (east lot), and

- The area west of the site next to the wastewater treatment building (two old clarifier units at this location were used to store F006 electroplating sludges)

Inspections by DNR staff show numerous violations of NR 181 hazardous waste storage requirements. Continuous violations have been:

- Exceeding the 90 day storage limit and
- Storing hazardous wastes in open, improper, leaking, and unmarked containers

OECI hazardous waste management resulted in continuous releases of contaminants to the environment in these storage areas. A summary of DNR staff observations during the inspections conducted between April 2, 1981, and April 28, 1986, is included in Attachment 4.

KNOWN AND/OR SUSPECTED RELEASES:

In 1972, OECI constructed the two unlined settling lagoons as the facility's wastewater treatment system. These lagoons are now nearly filled with electroplating sludges (F006) containing heavy metals. OECI has not yet made any attempt to clean the two lagoons which are a probable hazardous source of groundwater contamination. Further, the facility's numerous violations of its WPDES discharge permit limits and discharges of untreated electroplating wastewater have led to the contamination of the wetland area and Davy Creek with heavy metals. OECI did not operate nor upgrade its wastewater treatment system as it was approved in June, 1984, of Phase II plans and specifications. Spills from the wastewater treatment unit are well documented in DNR files. On October 14, 1985, a site inspection revealed that the final filters were bypassed, and wastewater was directly discharged out of the effluent pipe. On April 28, 1986, another site inspection documented untreated wastewaters discharging to the wetland.

On April 8, 1986, the facility was inspected. At the time of inspection, it was documented that OECI was using the wastewater treatment sludge (F006) to seal the space (few inches) between the floor and the walls of the wastewater treatment system building. Due to spring thawing and rain, the hazardous sludges were carried out of the building and into the area adjacent to the building. Dead and impacted vegetations were observed around the building. Furthermore, spring thaw caused the snow, accumulated on the top of the uncovered full BFI container, to melt dissolving the sludge and spilling it on the ground. OECI did not report or properly clean-up the hazardous waste spillage.

On June 10, 1986, there was an electroplating sludge spill (as was reported by OECI) which resulted in about 10 cubic yards of sludge being spilled onto the ground at the north lot. On July 14, 1986, BFI containers (holding electroplating sludges) were observed leaking by DNR staff violating hazardous waste storage and transportation regulations. Leaking liquid was observed on the ground around the containers.

In 1979, a water quality verification study was conducted at Davy Creek (see Attachment 5). In that study, four stream sediment samples and three representative soil samples of the top five inches of the wetland were tested for aluminum, cadmium, chromium, and nickel. The results show that there was a thick sludge layer at all three sampling sites downstream of the facility's outfall, and there is no sludge present above OECI discharge point. The sludge layer ranged from 0.2 feet to 3.2 feet thick. Sludge was also observed outside the stream bed, in the wooded area below Fireman's Park, where it had apparently settled out during periods of high water. The soil samples taken from the wetland show very high concentrations of the tested heavy metals.

Soil samples of the wetland and sediment samples of Davy Creek (see Attachment 5) were collected on June 22, 1983. Two soil samples (#1 and #2) were collected from the wetland, and another two sediment samples (#3 and #4) were collected from Davy Creek. Samples #1, #3, and #4 were tested for total cadmium, chromium, zinc, and nickel. The results (included in Attachment 6) show high concentrations of the tested metals. Sample #2 was tested for total phosphorus, total Kjeldahl nitrogen, total potassium, and pH. The results are shown in Attachment 6.

EP toxicity test was performed on samples #1, #3, and #4 to test for cadmium, hexavalent chromium, and trivalent chromium. However, test results were obtained for samples #1 and #3 and for cadmium and trivalent chromium only. Results show that both samples #1 and #3 (contained cadmium concentrations of 9,400 ppb and 2,600 ppb, respectively) exceeded the cadmium maximum concentration set for cadmium (1,000 ppb) and were hazardous.

Another sediment sampling study of the wetland and Davy Creek was conducted on June 13, 1986 (see Attachment 7). Seven samples were collected and tested for thirteen heavy metals and cyanide. Three samples were collected from the wetland and the other four were collected from Davy Creek, one upstream and three downstream from the facility's outfall. The results show that the sediments of the wetland are highly contaminated with cadmium, chromium, copper, lead, nickel, zinc, and cyanide, while the sediments at Davy Creek are contaminated with cadmium, chromium, copper, lead, nickel, and zinc.

Groundwater samples (see Attachment 8) taken from private wells adjacent to the site and monitoring wells installed at the facility show that pollutants have entered the groundwater (from the unlined lagoons, from spilled materials, or from the wastewater discharge area). DNR has received reports (see Attachment 9) about drums being buried on-site. On October 23, 1984, two test pits (see Attachment 9 for locations) were dug following an investigation with a metal detector (reliable depth 12 to 18 inches). Badly deteriorated sheet metal, metal scrap, and a 1/4 inch metal wire were found in test pit #1 and a sheet metal was found in test pit #2. More extensive investigation excavations are necessary to determine if buried drums are located on-site.

TARGET POPULATIONS AND/OR ENVIRONMENTS POTENTIALLY EXPOSED:

Inefficient wastewater treatment and untreated discharge of electroplating sludge waste have resulted in accumulations of heavy metal sludges in the two unlined abandoned lagoons, the wetland area adjacent to the facility's discharge outfall, and Davy Creek. Groundwater elevation in the area is shallow (about 10 feet) and supplies drinking water to approximately

1,300 people within a three mile radius. There is no public water supply in the Town of Ashippun and drinking water is provided through private wells. Several residences are located immediately adjacent to and potentially downgradient of the facility. Davy Creek runs through Fireman's Park and is considered for recreational uses. Consequently, a potential human direct contact with heavy metals and cyanide contaminating Davy Creek and the adjacent wetland area exists. A CERCLA Preliminary Assessment performed in May, 1983 (see Attachment 10), indicated:

- Potential hazards from seepage and overflowing of the two lagoons
- Lack of continuous barrier around the site
- Stained soils and leaking drums
- Stressed and dead vegetation
- Stressed invertebrate populations below the wastewater outfall

RECOMMENDATIONS:

The Wisconsin DNR file review indicates that the unlined lagoons are nearly filled with heavy metal sludges, and that the wetland area adjacent to the wastewater treatment system is highly contaminated with heavy metals. These areas are likely sources of contamination to both surface water and groundwaters and pose a great hazard to human health and the environment.

In addition, OECI has indicated that they have insufficient funds or resources to conduct either a remedial investigation/feasibility study (RI/FS) or a final remedial action. The facility has indicated it will not be a responsible party in any CERCLA action due to limited resources and as a result federal funds were set aside to conduct a CERCLA lead RI/FS. Due to federal funding problems, this investigation was never initiated. OECI has demonstrated it is unwilling to comply with RCRA or NR 181 regulations and will not be a responsible party. Therefore, the DNR recommends:

- The facility be kept on the National Priority List for CERCLA action and that action be initiated at the earliest possible moment. This should be done due to the fact that the facility does not have sufficient resources to complete a remedial investigation/feasibility study (RI/FS) or carry out the proposed remedial action.
- The Wisconsin Department of Natural Resources continue to work on the referral action with the Wisconsin Department of Justice and on any further enforcement actions necessary to protect human health or the environment.
- The entire facility site be investigated and further evaluated under the CERCLA RI/FS to determine the possibility of hazardous wastes being disposed of on-site in barrels or otherwise and improper disposal of electroplating sludges (F006) on-site.
- Preparation of a 3008(h) corrective action order would not be warranted because the facility would not likely follow through on it.

Attachments

1. Violation and Enforcement Record for OECI
2. EPA Letter - OECI Position Regarding Remedial Investigation at the Site
3. Department of Justice Summons and Complaint filed in Dodge County Courthouse on August 5, 1986
4. DNR Memo - OECI Hazardous Waste Activity Summary - June 10, 1986
5. Water Quality Verification Study - Davy Creek, October 30, 1979
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14. EPA Exhibit 4-1 - Checklist for Surface Water/Surface Drainage Releases

Attachment 1

VIOLATIONS AND ENFORCEMENT RECORD FOR
OCOMOWOC ELETROPLATING COMPANY, INC.

1. OECI VIOLATIONS OF WASTEWATER REGULATIONS:

The inspection dates and documented violations by Wisconsin DNR staff are:

- August 3, 1978: Application of OECI for WPDES Permit was denied for the following:
 - a. The facility was referred to the Attorney General's office on April 15, 1976, for violations of WPDES permit WI-0002441-1, and the Attorney General had filed a civil suit against the Company for the violations:
 - 1) Failure to meet the compliance schedule deadlines for improvements to the wastewater treatment system.
 - 2) Failure to meet the effluent limitations.
 - 3) Failure to monitor the effluent and analyze samples as specified in the permit.
 - b. The existing wastewater treatment system was inadequate to ensure effluent limitations, and existing facilities for effluent sampling and analysis were inadequate.
 - c. The facility had been and continued to be in a substantial noncompliance with terms and conditions set forth in the permit existing at that time.

The case was settled by stipulation, and on March 24, 1981, judgment against OECI was entered in Dane County Circuit Court.

OECI failed to comply with the stipulations of the 1981 judgment. On April 12, 1982, the State of Wisconsin moved for remedial sanctions against OECI for contempt of court. On February 20, 1985, OECI lost the "contempt action" and was required to pay \$47,000 for failure to meet the discharge limitations included in the court order in March, 1981. The \$47,000 was to conduct a study of Davy Creek and the wetland area to determine the extent of contamination caused by discharge of electroplating wastes.

- September 24, 1982: Noncompliance areas at the time of inspection were:
 - a. The wastewater treatment system at OECI had not yet been completed.
 - b. A layer of sludge up to an inch in depth was observed on the clarifier building floor between the clarifiers and the building entrance.

- c. The holding lagoons had not yet been drained, emptied of sludge, lined, and placed back into operation.
 - d. The east lagoon was receiving a small stream of water from neutralization building, and the lagoon was overflowing at its southeast corner into Davy Creek.
 - e. OECI was not in compliance with proposed BPT effluent guidelines.
 - f. Effluent quality had shown no improvement.
- March 15, 1985 through May 31, 1985: OECI's discharge monitoring reports (DMR's) for this period show 32 violations of daily limitations out of 203 samples on 6 pollutants (suspended solids, zinc, total chromium, copper, nickel, and pH) and 10 monthly averages out of 10 averages available on 5 pollutants (same as above, except pH that has no average limitation).
 - May 21, 1985: An inspection of the facility's wastewater treatment system demonstrated that the system does not comply with the plan approval (phase II) issued June 1, 1984. The areas of noncompliance included:
 - a. The system exceeds that final filtration of 5 gallon/minute/sq.ft. of media surface area.
 - b. The system does not provide the filter backwash water storage.
 - c. The sludge dewatering capacity was not increased as required in the plan approval.
 - d. The abandoned lagoons have not been closed in a manner acceptable to the Bureau of Solid Waste.
 - June 1, 1985 through December 31, 1985: OECI's DMR's for that period shows 9 violations of daily limitations out of 204 samples on 3 pollutants (suspended solids, zinc, and copper) and 15 monthly averages out of 35 averages available on five pollutants (zinc, cadmium, copper, hexavalent chromium, and oil and grease).
 - July 1, 1985: The facility was issued a notification of noncompliance with a discharge limits of WPDES Permit.
 - September 9, 1985: It was noticed during the inspection that runoff from the lagoon is flowing off the property into the Elm Street ditch. OECI claimed that rainwater had filled lagoons and that rainwater from waste lagoon was pumped to the east lagoon allowing it to overflow (assuming that the water is not polluted).
 - October 14, 1985: Oconomowoc Electroplating was inspected. During the inspection, it was noted that the final pressure filters were bypassed, and the wastewater was directly discharged out of the effluent pipe. The facility claims that their operator had forgotten to change the valves after he backwashed the filter earlier on that day. The facility reported the spill on October 25, 1985.

- November 21, 1985: A site visit revealed that a small discharge coming from the currently used wastewater treatment building to the old lagoons.
- January and February 1986: OECI's DMR's for that period show 18 violations of daily limitations out of 110 samples on 5 pollutants (zinc, cadmium, copper, nickel, and pH) and 10 monthly averages of 14 averages available on six pollutants (zinc, cadmium, copper, nickel, cyanide, and hexavalent chromium).

2. OEI VIOLATIONS OF HAZARDOUS WASTE REGULATIONS:

The facility was first inspected for hazardous waste activities in April, 1981. Inspection dates and documented violations by Wisconsin DNR staff are:

- April 2, 1981: Noncompliance areas at the time of inspection were:
 - a. Lack of detailed waste analysis plan.
 - b. Lack of security measures around the stored waste.
 - c. General facility standards were not met.
 - d. Lack of formal training of personnel for hazardous waste management.
 - e. Some barrels were leaking, broken open, and/or corroding. Containers were not in good condition, not closed, and not compatible with waste.
 - f. Lack of adequate aisle space through one of the storage areas.
 - g. No contingency plan.
 - h. No operating record.
 - i. Containers were not marked with start of accumulation date, and wastes were not removed from site before the 90-day storage limit.
 - j. "Part A" of Hazardous Waste Permit Application for storage had not been submitted.
- April 24, 1981: Drums on-site are leaking. No soil samples taken. Photographs in Wisconsin DNR file show many areas with stained soils and stressed or dead vegetation.
- February 21, 1984: Noncompliance areas at the time of inspection were:
 - a. NR 181.21(5)(a)3. Containers and tanks were not marked with the date on which hazardous waste was first placed in the container or tank.

- b. NR 181.21(5)(a)1.a. The hazardous waste was not removed from the site before the end of the 90 day accumulation period.
- c. NR 181.26(1) Waste did not appear to be packaged in accordance with DOT requirements. NR 181.26(2)(3) waste was not marked and labeled in accordance with DOT requirements.
- d. NR 181.42(4)(a)(c) The site did not have a written contingency plan addressing hazardous waste.
- e. NR 181.42(5) The site did not have adequate personnel training records.
- f. NR 181.43(8)(a)(b) Containers used to store hazardous waste were not in good condition. Containers are not stored closed; containers are not stored in a way as to prevent leaks or ruptures.

On May 16, 1984, OECI had sent a letter to Wisconsin DNR acknowledging that they were still in violation with respect to the storage of hazardous waste for greater than 90 days.

- July 17, 1984: It was verified in the inspection that the 90-day storage limit was still being exceeded. Also, it was noted that the lagoons were receiving a discharge and contained a greenish colored water. At that time, the clarifiers had not been operating for approximately two weeks. The water being discharged to the lagoons was overflowing down across Elm Street and into the wetland.
- September 17, 1984: The site inspection showed that hazardous wastes were still being stored on-site, violating the 90-day storage limit.
- February 7, 1985: OECI shipped some hazardous waste sludge in January, 1985; however, it was found at the time of inspection that:
 - a. OECI still have the majority of its old (older than 90 days) hazardous waste sludge on that site
 - b. OECI, again, is storing waste unmarked and unsafely (rusted and perforated containers)
 - c. The 1,1,1-trichloroethane OECI shipped in December, 1984, was rejected by the recycler and is now back at the facility

In order to resolve OECI's continuous violations of storage requirements, a provision pertaining to hazardous waste regulation violations was included in the wastewater contempt lawsuit against the company. The resultant February 20, 1985, stipulation and April 8, 1985, judgment required OECI to:

- a. Dispose of all on-site hazardous waste treatment system sludge within 90 days of the stipulation date (by May 23, 1985).
- b. Comply with NR 181, Wisconsin Administrative Code.

- June 10, 1985: Noncompliance areas at the time of inspection were:
 - a. Although much of the old hazardous waste treatment system sludge was disposed of, the old clarifiers (lagoons) and several old plating tanks still contain sludges that exceed the 90-day storage limit (violating NR 181 and the April 8, 1985, court judgment).
 - b. Some containers storing hazardous waste were leaking.
 - c. OECI was still storing the 1,1,1-trichloroethane.
 - d. OECI was storing hazardous waste in unmarked, improper, and unsafe containers.

- September 10, 1985: Noncompliance areas at the time of inspection were:
 - a. NR 181.21(5)(a)2.a. - Waste containers were not dated and labeled properly.
 - b. NR 181.42(5) - Adequate personnel training records were not kept.
 - c. NR 181.21(5)(a)1.a. - The waste 1,1,1-trichloroethane (F002) and the wastewater treatment system sludge (F006) exceeded the 90-day storage limit (violating NR 181 and the April 8, 1985, court judgment).

- October 22, 1985: Noncompliance areas at the time of inspection were:
 - a. NR 181.21(5)(a)1.a. - The waste 1,1,1-trichloroethane (F002) and the wastewater system sludge (F006) exceeded the 90-day storage limit (violating NR 181 and the April 8, 1985, court judgment).
 - b. NR 181.21(5)(a)2.a. - The old clarifier units that contain wastewater treatment system sludge were not acceptable containers and they were not properly marked with content and date.
 - c. NR 181.21(5)(a)1 - Waste in the old clarifier units exceeded the maximum 90-day storage limit.
 - d. NR 181.44(1) - This section prohibits maintaining a hazardous waste surface impoundment unless an interim license, operating license, variance or waiver was obtained from the Department. OECI's old wastewater treatment system sludge lagoons are hazardous waste surface impoundments that are in violation of this requirement.

- November, 1985 and February and April, 1986: Noncompliance areas at the time of inspection were:
 - a. OECI was holding hazardous wastes longer than 90-days (some treatment system sludge dates back to March, 1985, and the 1,1,1-trichloroethane dates back to October, 1984 (violating NR 181 and the April 8, 1985, court judgment)).

- b. OECI was still storing hazardous waste in open, improper, and unmarked containers.

The inspection conducted on April 8, 1986, showed also that:

- a. OECI hazardous waste handling procedures resulted in hazardous waste sludge spillage (spring thaw caused the snow, accumulated on the top of the uncovered full BFI container, to melt dissolving the sludge and spilling it onto the ground) that OECI had not reported or properly cleaned up.
- b. OECI had used waste sludge to close an air space between the floor and the walls of the wastewater treatment system building.
- c. OECI had not sent the Department the required manifest on the March 17, 1986, hazardous waste sludge shipment.

The facility was referred, as a result of the previous continuous violations, to Wisconsin Attorney General on June 2, 1986, for violating state hazardous waste and wastewater treatment system plan laws. On August 1, 1986, the State of Wisconsin filed a lawsuit against OECI (see Attachment 2) in Dodge County Circuit Court.

- June 13, 1983: A TSD general facility standards inspection was conducted (OECI is considered a TSD facility since it stores hazardous wastes more than the 90-day limit). At the time of the inspection, the areas of noncompliance were:
 - a. NR 181.42(1)(d)(e) - No waste analysis plan.
 - b. NR 181.42(3) - Security to prevent contact or disturbance of waste was inadequate.
 - c. NR 181.42(7) - No written inspection schedule.
 - d. NR 181.42(4)(a)(c) - Contingency plan needed to be updated to include personnel changes.
 - e. NR 181.42(5) - Personnel training records were inadequate.
 - f. NR 181.42(8) and (10) - No written closure plan.
 - g. NR 181.42(6)(b) - No operating record.
 - h. NR 181.42(2) - Surface impoundments are located in the 100-year floodplain of Davy Creek.
 - i. NR 181.44 - Surface impoundments needed a written inspection schedule.
 - j. NR 181.49 - No groundwater monitoring currently being conducted around the surface impoundments.

AUG 29 1986

5C-10

Edward L. Marshall, President
Oconomowoc Electroplating Company, Incorporated
11 2573 Oak Street
Ashippun, Wisconsin 53003

Dear Mr. Marshall:

On October 9, 1985, Messrs. Durnford, Zorbet and yourself met with Ms. Guerriero and ourselves at the U.S. Environmental Protection Agency's (U.S. EPA) offices in Chicago. At that meeting we discussed the possibility of Oconomowoc Electroplating Company, Incorporated (OECI) performing a Remedial Investigation and Feasibility Study (RI/FS) for the Oconomowoc Electroplating Site. ~~U.S. EPA concluded, and you concurred, that OECI did not have the financial resources at this time to perform an RI/FS. This letter will serve as notification that U.S. EPA considers negotiations with OECI to perform an RI/FS concluded, and will proceed to perform one itself.~~

At such time that the RI/FS is completed, OECI will again be provided the opportunity to perform work specified by U.S. EPA. If you have further questions, you may contact Mr. William D. Mains at (312) 826-4750.

Sincerely,

David H. Gustafson
Assistant Regional Counsel

William D. Mains
Remedial Project Manager

bcc: D. Gustafson, 5C-16
H. Guerriero, 5HR-11 ✓
G. Lucero, (WH-527)
File



The State of Wisconsin
Department of Justice

→ Zeffner 8/11
→ Kump 8/13
→ ~~Smith~~
→ K.T. Thompson 8/15/86
→ File

Steven B. Wickland
Assistant Attorney General
(608) 266-3056

Bronson C. La Follette
Attorney General

Gerald S. Wilcox
Deputy Attorney General

123 West Washington Avenue
Mailing Address: P.O. Box 7857
Madison, Wisconsin 53707-7857

August 5, 1986

Mr. James L. Hammer
Clerk of Court
Dodge County Courthouse
127 East Oak Street
Juneau, Wisconsin 53039

Re: State of Wisconsin v.
Oconomowoc Electroplating Co., Inc.

APR 8 1986

Dear Mr. Hammer:

Please find enclosed an original and three copies of a summons and complaint in this action. I wish to initiate the case by having the original summons and complaint authenticated and filed with your office. Please authenticate and file the original, authenticate the three copies and return them to me along with your bill. Thank you for your attention to this matter.

Very truly yours,

Steven Wickland

Steven B. Wickland
Assistant Attorney General

SBW:nk

Enclosures

To: *rc - 8/6/86*
Stats
W/2 - Mike Hammer
Horcon Area - D. Brody
+ Richard
Mandel
Margo Dillard - USEPA
SD - wastewater

STATE OF WISCONSIN

CIRCUIT COURT

DODGE COUNTY

STATE OF WISCONSIN,

Plaintiff,

v.

Case No.

OCONOMOWOC ELECTROPLATING COMPANY, INC.,
a Wisconsin corporation,

Defendant.

SUMMONS

THE STATE OF WISCONSIN

To each person named above as a defendant:

You are hereby notified that the plaintiff named above has filed a lawsuit or other legal action against you. The complaint, which is attached, states the nature and basis of the legal action.

Within twenty (20) days of receiving this summons, you must respond with a written answer, as that term is used in ch. 802, Stats., to the complaint. The court may reject or disregard an answer that does not follow the requirements of the statutes. The answer must be sent or delivered to the court, whose address is 210 Monona Avenue, Madison, Wisconsin, and to Steven B. Wickland, Assistant Attorney General, plaintiff's attorney, whose address is Post Office Box 7857, Madison, Wisconsin 53707-7857. You may have an attorney help or represent you.

If you do not provide a proper answer within twenty days, the court may grant judgment against you for the award of money

RC - 8/6/86
XC: SW/3
WWS - Mike Hammer
Horcom - D. Bredgenick
Mergo
Dilday - W
Wastew

or other legal action requested in the complaint, and you may lose your right to object to anything that is or may be incorrect in the complaint. A judgment may be enforced as provided by law. A judgment awarding money may become a lien against any real estate you own now or in the future, and may also be enforced by garnishment or seizure of property.

Dated this 15th day of August, 1986.

BRONSON C. LA FOLLETTE
Attorney General

Steven B. Wickland

STEVEN B. WICKLAND
Assistant Attorney General

Attorneys for Plaintiff

Department of Justice
Post Office Box 7857
Madison, Wisconsin 53707-7857
(608) 266-3056

STATE OF WISCONSIN

CIRCUIT COURT

DODGE COUNTY

STATE OF WISCONSIN,

Plaintiff,

v.

Case No. _____

OCOMOWOC ELECTROPLATING COMPANY, INC.,
a Wisconsin corporation,

Defendant.

COMPLAINT

NOW COMES the plaintiff, State of Wisconsin, by its attorneys, Bronson C. La Follette, Attorney General, and Steven B. Wickland, Assistant Attorney General, at the request of the Wisconsin Department of Natural Resources ("DNR" or "the Department"), and for a claim for relief against the defendant, Oconomowoc Electroplating Company, Inc., alleges and shows to the court as follows:

1. The plaintiff, the State of Wisconsin, is a sovereign state having its principal offices at the State Capitol, Madison, Dane County, Wisconsin.

2. The defendant, Oconomowoc Electroplating Company, Inc. ("OECI" or, "the Company"), is, and at all times material hereto was, a domestic corporation duly organized and existing under the laws of the

State of Wisconsin, with its place of business at Ashippun, Dodge County, Wisconsin.

FAILURE TO COMPLY WITH HAZARDOUS WASTE
STORAGE FACILITY REQUIREMENTS

3. Chapter NR 181, Wis. Adm. Code, contains Department of Natural Resources rules that apply to persons who generate, transport, store, treat or dispose of solid waste defined as hazardous waste. S. NR 181.02, Wis. Adm. Code. Chapter NR 181, Wis. Adm. Code, establishes minimum standards defining acceptable hazardous waste management practices applicable to owners or operators of facilities which recycle, treat, store, or dispose of hazardous waste. S. NR 181.01, Wis. Adm. Code.

4. The defendant, since January, 1981, has generated, and presently generates, wastewater treatment sludges from its electroplating operations. Such sludges, pursuant to s. NR 181.16(2)(a), Table II, are categorized as hazardous waste.

5. Since April 1, 1981 through the present, the defendant has stored the wastewater treatment sludges from its electroplating operation, by accumulating the sludges in containers or above ground tanks. This storage, continuing for more than ninety days, caused,

and continues to cause, Oconomowoc Electroplating Company, Inc., to be a storage facility of hazardous waste, pursuant to ch. NR 181, Wis. Adm. Code, from April 1, 1981 through the present date.

6. From April 1, 1981 through the present date, OECI has established and operated a hazardous waste storage facility without submitting a feasibility report for that facility to DNR, and without obtaining DNR's written approval of a feasibility report, in violation of s. NR 181.43(3), Wis. Adm. Code. Upon information and belief, the defendant will not submit the required feasibility report to DNR and will continue storage without an approved feasibility report, unless and until injunctive relief is granted.

7. From April 1, 1981 through the present date, OECI has established and operated a hazardous waste storage facility at its Ashippun, Wisconsin, plant without submitting a plan of operation to the Department and without obtaining from the Department written approval of a plan of operation, in continuing violation of s. NR 181.43(4), Wis. Adm. Code. Upon information and belief, OECI will continue to operate a hazardous waste storage facility without having obtained a DNR-approved plan of operation for that

facility, unless and until injunctional relief is granted.

8. Since April 1, 1981 through the present date, the defendant has established and operated a hazardous waste storage facility at its Ashippun, Wisconsin plant without having obtained from DNR an interim license, operating license, variance or waiver, in continuing violation of s. NR 181.43, Wis. Adm. Code. Upon information and belief, such violations will continue absent injunctional relief.

9. Every owner of a hazardous waste storage facility must provide proof of financial responsibility to ensure compliance with the closure requirements for the facility. S. NR 181.43(10)(b), Wis. Adm. Code. Defendant, since April 1, 1981, has failed to provide to the DNR proof of financial responsibility for closure, in violation of s. NR 181.43(10)(b), Wis. Adm. Code.

10. In violation of s. NR 181.43(10)(b)2, Wis. Adm. Code, defendant has, since April 1, 1981, failed to provide to the DNR proof of financial responsibility to ensure compliance with the long-term care requirements associated with OECI's facility. Upon information and belief, an injunction is needed to secure compliance.

11. In violation of s. NR 181.42(11)(b)-(h), Wis. Adm. Code, defendant, during the period April 1, 1981 through the present date, has failed to have and maintain liability coverages in the required amount for sudden and nonsudden accidental occurrences at its hazardous waste storage facility. Absent injunctive relief, defendant, upon information and belief, will continue to fail to have and maintain the required liability coverage.

12. Defendant, since April 1, 1981, in violation of s. NR 181.43(1), Wis. Adm. Code, has operated a hazardous waste storage facility without having first obtained from DNR an interim license, operating license, variance or waiver. Upon information and belief, absent injunctive relief, defendant will continue to operate said facility without a DNR-issued license, variance or waiver.

13. While operating a hazardous waste storage facility at its Ashippun, Wisconsin plant, OECI, from April 1, 1981 through the present, in violation of s. NR 181.43(6)(d), Wis. Adm. Code, has failed to design and construct for each hazardous waste storage area a continuous base which is free of cracks or gaps and is impervious to the material to be stored, and will contain any hazardous waste discharges, leaks or

spills and precipitation until the collected material is removed. Upon information and belief, an injunction is needed in order to secure compliance by OECl.

14. Defendant has failed, since April 1, 1981, to use containers that are in good condition to store hazardous waste, in violation of s. NR 181.43(8)(a), Wis. Adm. Code, and has, since April 1, 1981, used what containers it has to hold hazardous waste and has not stored the containers closed, in violation of s. NR 181.43(8)(b), Wis. Adm. Code. Upon information and belief, these practices will continue unless and until injunctive relief is granted.

OECl'S FAILURE TO MEET SURFACE IMPOUNDMENT
REQUIREMENTS IN STORING HAZARDOUS WASTES IN LAGOONS

15. The defendant has at its Ashippun, Wisconsin, plant two lagoons which, since June 1, 1984, have contained hazardous waste in the form of wastewater treatment sludge from the defendant's electroplating operation. Defendant has established these two hazardous waste surface impoundments (hereinafter "the Lagoons") without first obtaining approval from DNR of a feasibility report describing the physical conditions of the proposed facility, in violation of s. NR 181.44(6), Wis. Adm. Code.

16. Defendant established the Lagoons, containing hazardous waste in the form of wastewater treatment sludge from its electroplating operation, thus creating a hazardous waste surface impoundment, without submitting to DNR and having approved in writing by DNR a plan of operation, in violation of s. NR 181.44(7), Wis. Adm. Code. This violation began June 1, 1984 and continues through the date of this complaint.

17. Defendant, in violation since June 1, 1984, of s. NR 181.42(10)(b), Wis. Adm. Code, has established the Lagoons, as described in paragraph 15 herein, without providing proof of financial responsibility to DNR.

18. Defendant, in violation since June 1, 1984, of s. NR 181.42(10)(b)2, Wis. Adm. Code, has failed to provide to the DNR proof of financial responsibility to ensure compliance with the long-term care requirements associated with defendant's Lagoons.

19. In violation of s. NR 181.42(11)(b)-(h), Wis. Adm. Code, beginning June 1, 1984 through the present date, the defendant has failed to have and maintain liability coverages in the required amount for sudden and nonsudden accidental occurrences at its Lagoons described in paragraph 15 herein.

20. Since June 1, 1984 through the present date, defendant has operated the Lagoons, as described in paragraph 15, without having a double liner system that is designed, constructed, and installed in the Lagoons, which are hazardous waste surface impoundments, in violation of s. NR 181.44(10)(h)1, Wis. Adm. Code. Such a double liner serves to prevent any migration of wastes out of the Lagoons into adjacent soil or groundwater or surface water.

21. Defendant, since June 1, 1984 through the present, in violation of s. NR 181.44(10)(h)5, Wis. Adm. Code, has failed to install in the Lagoons a primary liner designed and constructed entirely above the seasonal high water table.

22. Defendant, since June 1, 1984 through the present, in violation of s. NR 181.44(10)(j), Wis. Adm. Code, has failed to construct diversion structures at or around the Lagoons such that surface water run-on will be prevented from entering the Lagoons.

23. Defendant has, since June 1, 1984 through the present date, failed to perform facility monitoring at the Lagoons in accordance with s. NR 181.49, Wis. Adm. Code and an approved plan of

operation, all in violation of s. NR 181.44(10)(u), Wis. Adm. Code.

24. Since June 1, 1984 through the present date, the defendant has failed, at the Lagoons, to design, maintain, operate and construct those hazardous waste surface impoundments so as to prevent overtopping, overflowing, wind and wave action, and rainfall, in continuing violation of s. NR 181.44(10)(zg), Wis. Adm. Code.

25. Section NR 181.44(12), Wis. Adm. Code, provides that anyone who maintains or operates a hazardous waste surface impoundment (as in this case OECI operates the Lagoons) without an operating license under s. NR 181.55, Wis. Adm. Code, shall, when the department determines that closure is required, complete that closure. By DNR's June 1, 1984 plan approval of plans and specifications to modify OECI's wastewater treatment system, DNR notified defendant that DNR was requiring OECI to empty and abandon the Lagoons. In violation of s. NR 181.44(12), Wis. Adm. Code, defendant, since June 1, 1984, has failed to empty and close and abandon the Lagoons, with such violation being continuous through the present date.

26. In violation of s. NR 181.52, Wis. Adm. Code, from June 1, 1984 through the present date, defendant has failed to submit to the DNR a closure plan to close the Lagoons, and to implement such closure plan.

26a. Upon information and belief, absent injunctive relief, the violations alleged in paragraphs 15-26 herein will continue.

GENERATION AND STORAGE OF 1,1,1 TRICHLOROETHANE

27. 1,1,1-trichloroethane is a hazardous waste pursuant to s. NR 181.16(2), Table II. During the period August 1, 1984 through May 30, 1985, OECI generated at its plant the hazardous waste 1,1,1-trichloroethane, and stored seven barrels of 1,1,1-trichloroethane in excess of the ninety-day period allowed by s. NR 181.21(5), Wis. Adm. Code, the violations beginning on or about November 1, 1984 and continuing through April 30, 1986.

CHAPTER 144, STATS., WASTEWATER TREATMENT SYSTEM PLAN APPROVAL VIOLATIONS

28. On June 1, 1984, DNR issued defendant a plan approval for defendant's wastewater treatment system (the Plan Approval) which plan approval contained various conditions.

29. Condition 2 of the Plan Approval provides that a second pressure filter be installed by defendant to provide a wastewater filtration rate of less than five gallons per minute per square foot of filter media with both filters in operation. In violation of Condition 2, OECI has, since June 1, 1984, provided a filtration rate in excess of the five gallons per minute per square feet maximum. Additional filtration is needed to correct this violation.

30. In violation of the Plan Approval since June 1, 1984, OECI has failed to provide for adequate backwash storage.

31. Since June 1, 1984, OECI has failed to install more, and adequate, sludge dewatering capacity, in violation of the Plan Approval.

32. In violation of Condition 4 of the Plan Approval, defendant, since June 1, 1984, and continuing through the present date, has failed to properly abandon the Lagoons at its facility.

33. The violations alleged in paragraphs 29 through 32 have continued through the present date; upon information and belief, unless and until injunctive relief is granted, these violations will continue.

34. Section 144.74, Stats., provides that any person who violates secs. 144.60 to 144.74, Stats., or any rule promulgated under secs. 144.60 to 144.74, Stats., shall forfeit not more than Twenty-Five Thousand Dollars (\$25,000) for each day of violation.

WHEREFORE, the State of Wisconsin demands judgment:

A. For a mandatory injunction requiring defendant to immediately comply with all terms and conditions of the 1984 DNR plan approval of defendant's wastewater treatment system, and all requirements of ch. NR 181, Wis. Adm. Code, including those sections cited in this complaint, such compliance including, but not limited to:

1. Properly abandoning the hazardous waste surface impoundments at defendant's facility, by complying with the steps of submitting an abandonment plan to DNR, obtaining DNR approval of that plan, completing the abandon work as approved, and obtaining long term care and post-closure license.

2. Modifying defendant's wastewater treatment system to comply with the plan approval conditions and requirements referenced in paragraphs 29-32 of this complaint.

3. Complying with all hazardous waste generator and storage facility requirements of ch. NR 181, Wis. Adm. Code. Compliance includes any remedial measures necessary to clean up the OECI facility in order to eliminate harm to the environment. Such measures include, but are not limited to: closure done in such a manner that controls, minimizes or eliminates, to the extent necessary to protect human health and the environment, post closure escape of wastes, hazardous leachate, contaminated rainfall, or waste decomposition products to ground or surface water, or to the atmosphere; also, maintenance and monitoring of waste containment systems and maintenance of drainage control features, slopes, vegetative cover, monitoring equipment, and implementation of security requirements necessary to prevent hazards to human health, in accord with ch. NR 181, Wis. Adm. Code.

B. For a forfeiture of not more than Twenty-Five Thousand Dollars (\$25,000) for each day of violation by defendant of each section of ch. NR 181, Wis. Adm. Code cited in this complaint, and for a forfeiture of not less than Ten Dollars (\$10.00) nor more than Five Thousand Dollars (\$5,000) for each day of violation by defendant of the 1984 Plan Approval.

C. For the penalty assessment provided pursuant to sec. 165.87, Stats.

D. For such other relief as the court deems proper, together with costs and disbursements.

Dated this 1st day of August, 1986.

BRONSON C. LA FOLLETTE
Attorney General

Steven B. Wickland
STEVEN B. WICKLAND
Assistant Attorney General

Attorneys for Plaintiff

Wisconsin Department of Justice
Post Office Box 7857
Madison, Wisconsin 53707-7857
(608) 266-3056

Wendell Rogers

CORRESPONDENCE/MEMORANDUM

Date: June 10, 1986

File Ref: 4190

To: SD Hazardous Waste File, Oconomowoc Electroplating, Inc. WID 006100275

From: Ronald Curtis

Ronald Curtis

Subject: Oconomowoc Electroplating Company, Inc., (OECI) Hazardous Waste Activity Summary

I. Identification

OECI identified itself as an electroplating hazardous waste generator (large quantity) on July 18, 1980. OECI received hazardous waste I.D. #WID006100275. OECI hasn't identified itself as storage or surface impoundment facilities.

II. Hazardous Wastes GeneratedA. Historically

- heavy metal sludge (F006) from wastewater treatment
- solvents from degreasing operation

B. Presently

- OECI generates heavy metal sludge (F006) from its wastewater treatment plant.

III. Hazardous Waste DisposalA. Historically

Department staff were told in early 1981 by OECI that it had sent its waste to Germantown, WI for the previous 4-5 years. OECI continued sending wastes to Germantown until they contracted with Browning Ferris Industries (BFI), in late 1984, early-1985, for disposal at Zion, Illinois. OECI also used recyclers (for solvents) to some extent and discharged untreated or minimally treated wastewater for periods of time.

B. Manifest Records

NOTE: The first record of a manifest shipment is from October 5, 1981.

A list of OECI's submitted manifest from October 1981 through the end of 1985 is attached. In summary, it shows the following:

Hazardous Waste Shipments

<u>Year</u>	<u>Waste Code (type)</u>	<u>Amount Shipped</u>
1981	F006	1,016,000 #'s
	F002	4,200 #'s
1982	F006	518,000 #'s
	F002	---
1983	F006	---
	F002	---
1984	F006	---
	F002	1,754 #'s
1985	F006	115,680 #'s
	F002	---

C. Annual Reports (Note: the first annual report submitted is for 1982).

Report Period	Date Signed	Signature	Waste	Beginning Volume	Volume Generated	Volume Shipped	Ending Volume	Transporter
1982	3-1-83	Steve Mertins	Not distinguished	Not stated	524,468 lbs.	524,468 lbs.	50,000 lbs.	Waste Management Envirite Mr. Frank, Inc.
1983	5-1-84	Steve Mertins	Not distinguished	Not stated	12,600 lbs.	*	Not stated	---
1984	1-30-85	Dean Zerbst	F002 F006	3,205 lbs. 60,000 lbs.	0 20,000 lbs.	641 lbs. 0	2,564 lbs. 80,000 lbs.	Comm. Ind. ---
1985 **	3-10-86	Edward Marshall	F002 F006	2,564 lbs. 80,000 lbs.	0 220,000 lbs.	*** 138,400 lbs.	2,100 lbs. 161,600 lbs.	--- BFI

* Report says "wastewater was discharged to stream untreated."

** Report says "greater sludge removing capacity has increased" generation rate.

*** Report says OECI reduced the amount by 464 pounds by "separated water."

IV. Wastes Observed by Department Staff

Date	Staff	Waste(s)	Remarks
4-2-81	Neuman-Horn	Treatment plant wastes, lagoon spoils, miscellaneous	27 barrels on west side of plant. Lagoons to be dredge and lined. Barrels on east side of plant (some caustic), some open and some leaking.
2-21-84	Wojner	Treatment plant sludges	Tanks and 90 barrels; not marked with generation date, not closed, not in good condition and not stored to prevent leaks.
		1,1,1-trichloroethylene still bottoms - degreaser operation	Recycled every 6 months.
7-17-84	Wojner	Treatment plant sludges Chloroethylene Oil Miscellaneous Caustic Lagoons wastes	Tanks; covered and dated. Recycler analyzing. Not easily recyclable. From Waukesha plant. 1 barrel nearly corroded through. Discharge into and out of one.
9-17-84	Wojner	Trichloroethylene Contaminated rain water Lagoons waste	Some drums; unlabeled. Many drums and tanks; how will OECI dispose of it? Supernatant and 2-4 feet of sludge.
2-7-85	Wojner	Treatment plant sludge	Bulk of waste is on-site frozen in holding tanks (OECI has shipped one BFI roll-off cont.)
6-10-85	Wojner	Treatment plant sludge 1,1,1-trichlorethane	BFI roll-off (undated). 7 barrels dated October-November, 1984; returned by recycler; looking for disposal.

Date	Staff	Waste(s)	Remarks
		Cadmium cyanide sludge Miscellaneous	3 drums dated December, 1984. 1 unknown barrel and 1 unknown carboy 2 drums of white sludge; 2 drums of brown sludge; 1 leaking drum of white sludge or caustic; 2 tanks unknown; other dry (empty tanks) - (many of these came from inside plant).
		Lagoons wastes	Dried and cracked.
9-10-85	Wojner	Treatment plant sludge	BFI roll-off (undated); 4 tanks (undated).
		1,1,1-trichloroethane Cadmium wastes	Five 55 gallon drums - east lot; 2 drums in parking lot.
10-22-85	Wojner	Treatment plant sludge	9 dated containers (dating from 7-24-85) and two undated, old clarifiers (dating from 2-84); some are improper containers.
		Trichloroethane Lagoon wastes Cyanide baths	Disposal being explored. --- OECI cooking it down and adding the salts to treatment plant sludges.
		Cadmium cyanide sludge	Containers were emptied.
11-21-85	Wojner	Treatment plant sludge	7 dated containers (dating from 8-9-85) and the two undated clarifiers; all frozen.
		Lagoon wastes	Frozen, small discharges to it from treatment system.
2-4-86	Wojner	Treatment plant sludge	6 dated containers. (from 8/9/85) and 3 undated containers (two clarifiers and BFI roll-off).

Date	Staff	Waste(s)	Remarks
		Lagoon wastes	Frozen, discharge to it and from it.
		Trichloroethane	4 barrels.
4-8-86	Wojner	Treatment plant sludge	3 dated containers and 6 undated containers, some not covered.
		Trichloroethane	4 barrels.
		Lagoon wastes	Lagoons filled with water, coloration noted.
4-28-86	Wojner	Treatment plant sludge	4 dated containers and 4 undated containers, some not covered.
		Trichloroethane	2 barrels.

RC:ps
Attachment
cc: SW/3
Horicon Area Office

WATER QUALITY VERIFICATION STUDY - DAVY CREEK

Davy Creek is a small stream of 4.3 miles in length that flows through Ashippun in SE Dodge County and on into the Rock River. The United States Geological Survey has determined the $Q_{7,2}$ to be zero at Lincoln Road. Minnows are the extent of the fishery in Davy Creek. While flowing through Ashippun the creek receives discharges from Oconomowoc Electroplating (OEP) and the sewage treatment plant (STP). The discharge from OEP is of grave concern as it contains a sludge with a high heavy metals content. The primary purpose of this survey is to determine the extent of contamination from the heavy metals sludge. Additional sampling was conducted to help determine effects from the STP on Davy Creek.

The discharge from OEP flows overland approximately one hundred yards and creates a wetland area before it reaches Davy Creek. This overland flow has formed a sludge layer about an inch thick in this wetland area. No vegetation grew this year in an area of 1/4 to 1/2 acre where the sludge flows through.

Nine samples were taken to be tested for the following heavy metals - aluminum, cadmium, chromium, copper and nickel. Two of these were water column samples taken of the STP effluent, right at the plant, and of Davy Creek at Lincoln Rd., above the OEP discharge. Four stream sediment samples were taken. One sample was taken above OEP at Lincoln Rd. The other three were taken below the OEP discharge at the foot bridge in Fireman's Park, just as the stream leaves the park and approximately 200 yards downstream from the park. There was a thick sludge layer at all three downstream sites. Samples were taken by immersing a bottle into the sludge layer, removing the cap, allowing the bottle to fill and replacing the cap before withdrawing the bottle. The sludge was of the proper consistency (high water content) to make this operation easy. The sample at Lincoln Rd. was obtained by using a Petersen dredge.

The three remaining heavy metal samples were taken in the wetland formed by the OEP discharge. A hand spade was used to procure the samples. Care was taken to obtain a representative sample of the top five inches, including sludge and soil.

Five grab samples were collected for BOD, suspended solids, nutrients and fecal coliform. They were taken at Lincoln Rd., the STP, the footbridge; where the stream leaves the park (mix), and 200 yards downstream from the park. A fence crosses Davy Creek at the point where it leaves Fireman's Park. It is interesting to note that the fecal coliform count dropped off considerably below the OEP discharge. An attempt was made to find a D.O. sag below the STP, but none could be found.

Cross sections were taken to obtain a rough idea of the amount of sludge present in the stream. There was no sludge present at Lincoln Rd. Below the OEP discharge the thickness of the sludge layer ranged from .2 ft. to 3.2 ft. Cross sections were taken at the footbridge, as the stream leaves the park and 200 yards downstream from the park. A cross section could not be obtained immediately below the OEP discharge because the streambed was not sufficiently defined and was clogged with canary grass. Sludge was observed outside of the streambed, in the wooded area below the park, where it had apparently settled out during periods of high water. Thought has been given to the removal of the sludge from Davy Creek. This study indicates a significant amount of sludge in the stream. Many additional cross sections would be needed to estimate the volume of sludge to be removed.

A flow measurement was taken at the footbridge with the resultant flow of 1.2 cfs. No measurable flow could be detected at Lincoln Rd. No flows were taken below the footbridge as there was no discharge from the STP when the cross-sections were taken. The discharge from the STP is periodic instead of continuous. The Senore form for the day of the survey showed a discharge of .032 MGD which equals .05 cfs.

Benthic organisms were collected at Lincoln Rd., mainly from the filamentous algae growing in the stream. A few of the organisms were collected from the canary grass growing in the water. A D-frame net was used to collect the organisms. No organisms could be found at the footbridge or where the stream leaves the park. All that could be found 200 yards below the park were 3 Corixidae.

DAVY CREEK AT LINCOLN ROAD - BENTHIC SAMPLING
10/30/79

<u>Order</u>	<u>Family</u>	<u>Genus</u>	<u>Number</u>	<u>Index Value</u>
Ephemeroptera	Baetidae	Callibaetis	10	3
Amphipoda	Talitridae	Hyallela azteca	46	4
Isopoda	Assellidae	Asellus	7	5
Odanata	Coenagrionidae	Ischnura	4	4
Diptera	Chironomidae	Chironomus	10	5
"	"	Conchapelopia	1	4
"	"	Bezzia	2	3
"	"	Eukiefferiella (?)	1	2
"	"	Pheocricotopus	4 total	1
"	"	Psectrocladius		2
Coleoptera	Haliplidae	Halipus (larva)	1	-

The biotic index = 3.9

The biotic index is high but this can be expected considering the sampling site. The water was ponded at Lincoln Rd. and no flow could be measured. In addition the substrate was silt and muck with no rubble or boulders. The significance of the benthic sampling is that organisms were found above the OEP discharge and not below.

The heavy metals results show a relatively high concentration of aluminum at Lincoln Rd. It should be noted that some natural soils contain a significant amount of aluminum silicates (Al₂O₃). Aluminum concentrations in clays can be higher than those found in the sediment sample at Lincoln Road.

KH:co

LABORATORY ANALYSIS

Location	Time	Temp	D.O.	pH	BOD	SS	Tot-P	Sol-P	OrgN	Ammonia-N	NO ₂ -N+ Flow	
											NO ₃ -N	cfs MFFCC
Lincoln Rd.	12:10	7.0	5.7	7.4	1.2	0	.05	.038	1.1	.02	.29	0 330
Footbridge	13:50	7.8	6.1	8.3	4.1	8	.36	.135	1.4	.12	2.9	1.2 <10
STP	12:35	8.7	9.6	8.1	9.8	4	3.65	3.5	1.1	1.4	2.93*	.05* 210
Mix Park edge	14:15	8.0	6.8	8.3	4.5	15	.77	.181	1.6	.12	2.5	-- 10
Swamp	15:00	7.8	6.9	8.1	3.3	3	.40	.23	1.4	.13	1.9	-- 10

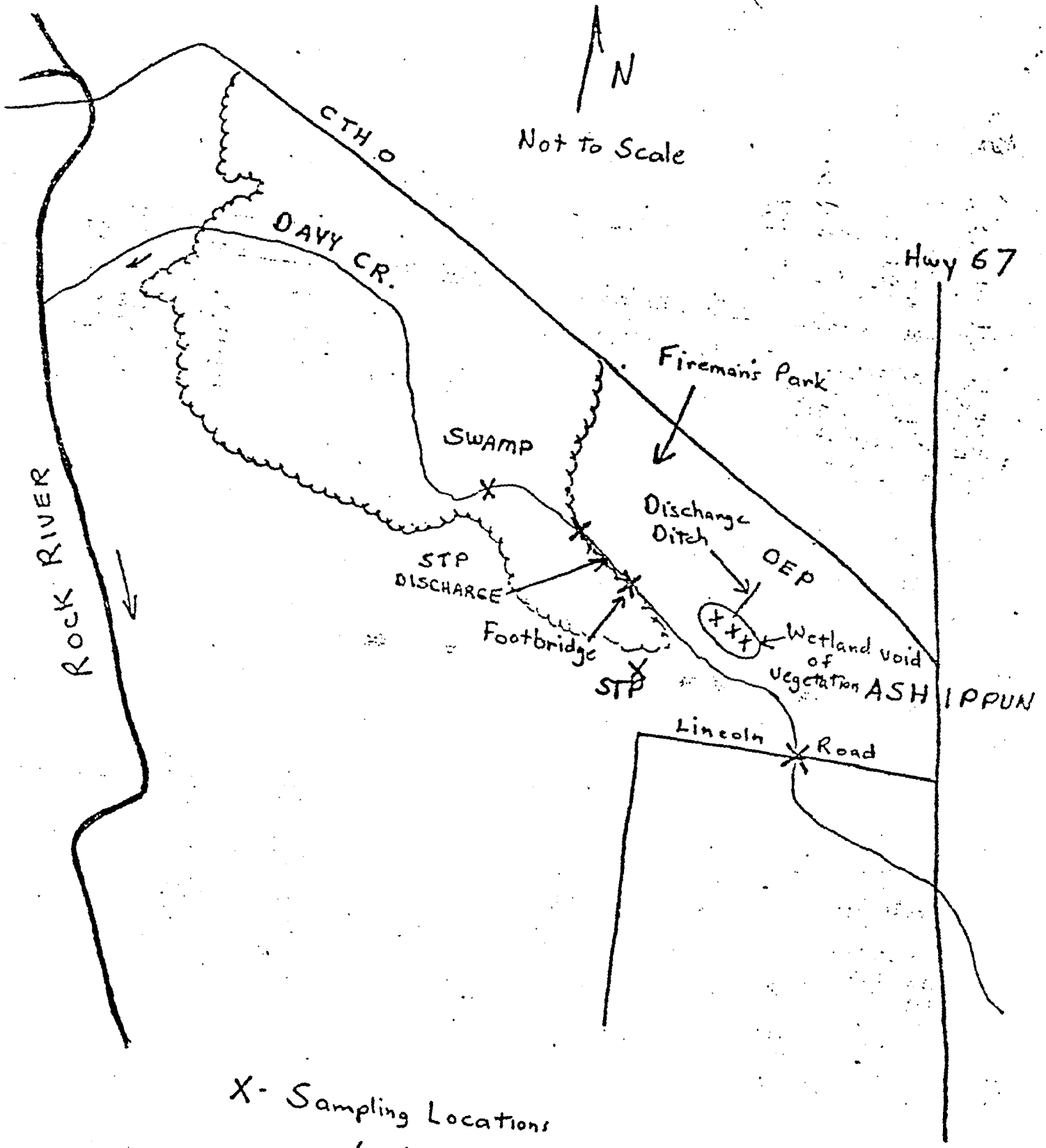
* NO₂-N .23, NO₃-N 2.7

** From Semore form for 10/30/79 - .032 MGD = .05 cfs

HEAVY METAL RESULTS

Location	Type	Al	Cd	Cr	Cu	Ni	Units*	Moisture	
								Content	Tot. Vol. Solids
Lincoln Rd.	Water	<50	<.2	<3	<3	<20	UG/L	--	--
STP	Water	80	<.2	<3	<3	<20	UG/L	--	--
Lincoln Rd.	Sediment	16000	160	170	230	200	MG/KG	--	--
Park Bridge	Sediment	36000	4400	19000	14000	15000	MG/KG	95.8%	26.7%
Edge of Park	Sediment	20000	2700	16000	8500	9800	MG/KG	94.8%	18.0%
200 yds. down	Sediment	20000	3500	16000	8400	8800	MG/KG	98.4%	30.0%
Wetland soil West	Soil	23000	2400	6400	5500	10000	MG/KG	--	--
Wetland soil Mid.	Soil	31000	6400	25500	13000	20000	MG/KG	--	--
Wetland soil East	Soil	20000	3600	16000	7300	20000	MG/KG	--	--

*All sediment and soil samples are on a dry weight basis.



X- Sampling Locations
 10/30/79

STREAM: Davy Creek	COUNTY: Dodge	LOCATION OF STREAM		
		Township 9S.	Range 17E.	Section 30
				Footy

ESTIMATED WATER STAGE IN FEET:	<input type="checkbox"/> Above <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Below	REFERENCE POINT FOR LEVELS
--------------------------------	--	----------------------------

CONDITIONS AFFECTING MEASUREMENTS -- Wind, bottom, ice, etc.	TEMPERATURE WATER 7.8° C
--	-----------------------------

INSTRUMENT -- Name and number WFB-201 652	EXACT LOCATION OF MEASUREMENT ON STREAM At footbridge in Firemen's Park
--	--

OBSERVER Bob Peckowsky Dave Marshall	DATE 10/30/79	TIME OF DAY 13:30
--	------------------	----------------------

Distance from Bank	Depth	Depth of Observation	Sludge Thickness ft.	Time in Seconds	Velocity			Area of Section			Discharge
					At Point	Mean in Vertical	Mean in Section	Area of Section	Mean Depth	Width	
.25	.5		2.0		0			.25		.5 ft	0
.75	.5		2.0		0			.25		"	0
1.25	1.0		2.0		.25			.5		"	.125
1.75	1.1		1.5		.1			.55		"	.055
2.25	1.2		1.3		.25			.6		"	.150
2.75	1.3		1.3		.3			.65		"	.195
3.25	1.3		1.9		.2			.65		"	.130
3.75	1.1		2.2		.2			.55		"	.110
4.25	1.2		3.2		.2			.6		"	.120
4.75	.9		2.3		.15			.45		"	.068
5.25	.9		2.4		.15			.45		"	.068
5.75	.9		2.4		.15			.45		"	.068
6.25	.9		2.4		.15			.45		"	.068
6.75	.9		2.4		.1			.45		"	.045
7.25	.9		2.4		0			.45		"	0

SUMMARY						7.5ft	1.2 cfs
(over)	Mean Velocity	Area of	Mean Depth	Total Width	Discharge		

STREAM DISCHARGE DATA

FORM 3503-2.

STREAM Davy Creek	COUNTY Dodge	LOCATION OF STREAM Township 9N. Range 17E. Section 30
----------------------	-----------------	--

ESTIMATED WATER STAGE IN FEET: <input type="checkbox"/> Above <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Below	REFERENCE POINT FOR LEVELS
--	----------------------------

CONDITIONS AFFECTING MEASUREMENTS -- Wind, bottom, ice, etc. 	TEMPERATURE WATER
--	---------------------------

INSTRUMENT -- Name and number	EXACT LOCATION OF MEASUREMENT ON STREAM Downstream edge of Fireman's Park just before stream enters woods.
-------------------------------	---

OBSERVER Bob Peckowsky Dave Marshall	DATE 10/30/79	TIME OF DAY 14:15
--	------------------	----------------------

Distance from Bank	Depth	Depth of Observation	Sludge Thickness	Time in Seconds	Velocity			Area of Section			Discharge
					At Point	Mean in Vertical	Mean in Section	Area of Section	Mean Depth	Width	
.5	.35		.6								
1.5	.4		.4								
2.5	.6		.7								
3.5	.9		1.1								
4.5	1.3		.7								
5.5	1.3		.4								
6.5	1.4		.2								
7.5	1.4		.4								
8.5	.8		.3								

SUMMARY 9 ft.

STREAM Davy Creek	COUNTY Dodge	LOCATION OF STREAM Township 9N.	Range 17E.	Section 30	Forty
-----------------------------	------------------------	--	----------------------	----------------------	------------------

ESTIMATED WATER STAGE IN FEET: <input type="checkbox"/> Above <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Below	REFERENCE POINT FOR LEVELS
--	------------------------------------

CONDITIONS AFFECTING MEASUREMENTS -- Wind, bottom, ice, etc. Canary grass in stream. Sludge was "trapped" in canary grass.	TEMPERATURE WATER
--	---------------------------

INSTRUMENT -- Name and number 	EXACT LOCATION OF MEASUREMENT ON STREAM 200 stream yds downstream from Firenan's Park
---------------------------------------	---

OBSERVER Keith Hutchison Dave Marshall	DATE, 10/30/79	TIME OF DAY 15:00
--	--------------------------	-----------------------------

Distance from Bank	Depth	Depth of Observation	Sludge Thickness ft.	Time in Seconds	Velocity			Area of Section			Discharge
					At Point	Mean in Vertical	Mean in Section	Area of Section	Mean Depth	Width	
.5	3.0		.3								
1.5	3.0		.4								
2.5	3.2		.5								
3.5	3.3		.5								
4.5	2.0		1.7								
5.5	.7		3.0								
6.5	.7		3.0								
7.5	.4		3.2								

SUMMARY								8 ft.		
(over)		Mean Velocity		Area of Section		Mean Depth		Total Width		Discharge

STREAM Davy Creek	COUNTY Dodge	LOCATION OF STREAM		
		Township 9 N.	Range 17 E.	Section 30
				Forty

ESTIMATED WATER STAGE IN FEET:

Above
 Normal
 Below

REFERENCE POINT FOR LEVELS

CONDITIONS AFFECTING MEASUREMENTS — Wind, bottom, ice, etc.

TEMPERATURE WATER

INSTRUMENT — Name and number
YMB-201 652

EXACT LOCATION OF MEASUREMENT ON STREAM
At footbridge in Fireman's Park

OBSERVER
Keith Hutchison

DATE
7/13/79

TIME OF DAY
11:00

Distance from Bank	Depth	Depth of Observation	Sludge Thickness Ft.	Time in Seconds	Velocity			Area of Section			Discharge
					At Point	Mean in Vertical	Mean in Section	Area of Section	Mean Depth	Width	
.5	.1		1.6		0						
1.5	.1		2.3		0						
2.5	.2		2.6		0						
3.5	.3		2.5		0						
4.5	.5		2.3		.1			.5	.5	1.0	.025
5.5	.6		2.2		.1			.6	.6	1.0	.036
6.5	.6		2.1		.1			.6	.6	1.0	.036
7.5	.4		1.7		.05			.4	.4	1.0	.008
8.5	.1		1.9		0						
9.5	.1		1.2		0						

SUMMARY

Velocity	Area of	Mean Depth	Total Width	Discharge
			10 ft.	.11 cfs

Report of Sediment Sampling
Survey of Davey Creek at the
Oconomowoc Electroplating Company Discharge

Date: June 22, 1983

Participants:

AUG 22 1986

Ron Curtis, Southern District Enforcement Specialist
Marci Friedman, Hydrologist, Southern District
Robert Weber, Wastewater Unit Leader

Sample Collection Procedures

Wetland Site - Samples 1 & 2

The soils samples were collected using a plastic spoon to place a soils sample in a "metals" bottle and a "miscellaneous" bottle. I was unable to enter the area devoid of vegetation due to the unstable conditions of the wet soil. A sample was collected from a point 2 feet into the area devoid of vegetation between the effluent channel and the stable wetland.

Davey Creek Sites - Samples 3 & 4

The sediment samples were collected using a pint glass jar to remove the sediment sample from the stream bed. The contents of the pint jar was then transferred to a quart jar and concentrated by decanting off the clarified water from the jar. Due to the liquid nature of the sediment, it was necessary to attempt to perform the concentration procedure several times in an attempt to provide a sufficient quantity of solids for laboratory analysis. Separate pint jars and quart jars were used at each sediment sampling site. All of the jars used were quality checked for oil and grease.

Sample Analytical Results

Total Extraction Procedure

	<u>Cadmium</u>	<u>Chromium Hexavalent</u>	<u>Chromium Trivalent</u>
Sample #1	9400 ppb	interference	400 ppb
Sample #3	2600 ppb	interference	100 ppb
Sample #4	Insufficient	Sample	

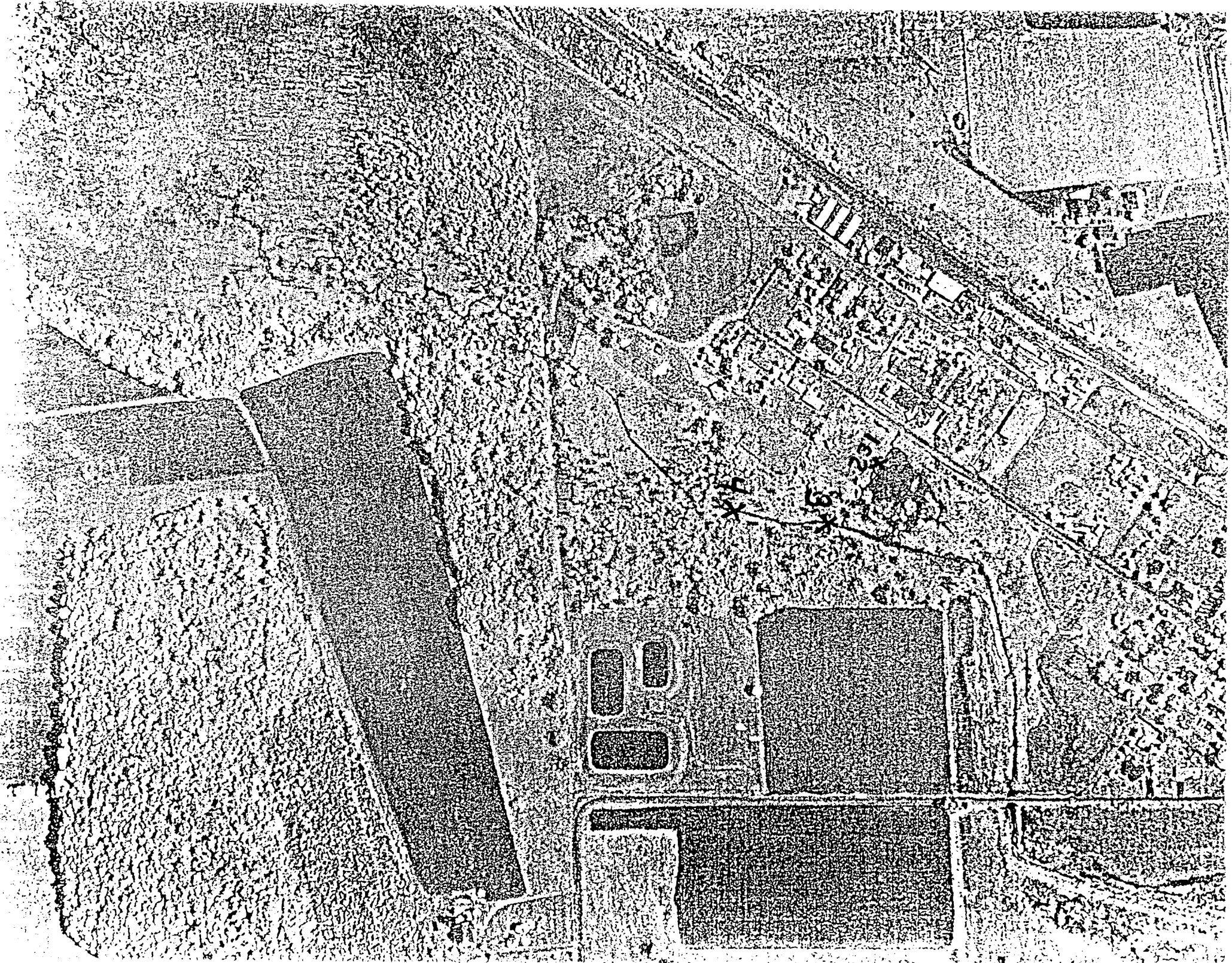
Total Metals (Mg/Kg)

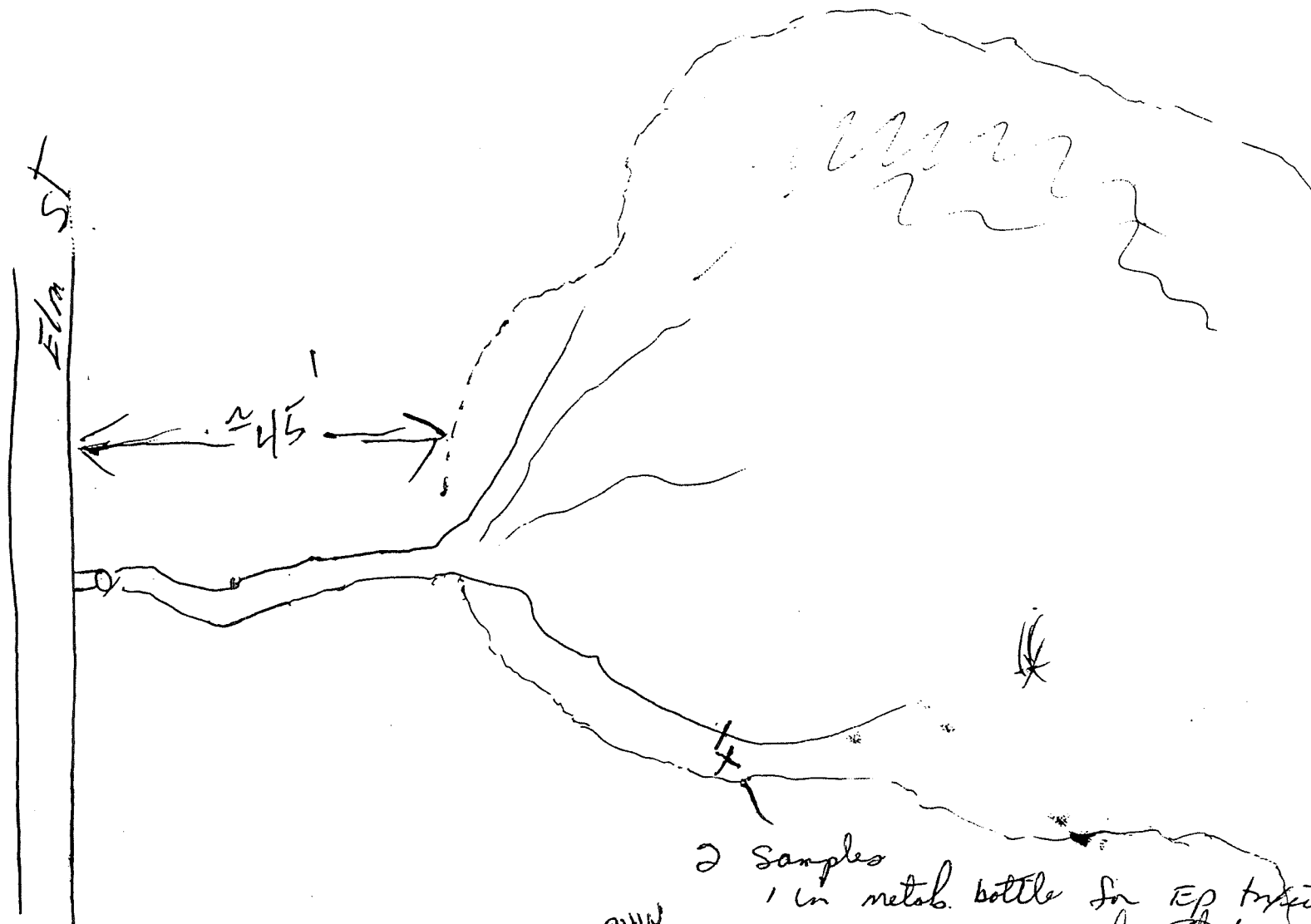
	<u>Cadmium</u>	<u>Chromium</u>	<u>Zinc</u>	<u>Nickel</u>
Sample #1	970	6,200	24,000	4,000
Sample #3	14,000	2,300	13,000	27,000
Sample #4	3,200	16,000	20,000	37,000

Nutrients

	<u>Total Phosphorous</u>	<u>Total Kjeldahl Nitrogen</u>	<u>Total Potassium</u>	<u>pH</u>
Sample #2	4400 mg/kg	1300 mg/kg	640 mg/kg	7.9

Robert H. Weber





Some sampling procedure
 do for RHW-3
 oily substance on water also.

- RHW
 1-2
- 2 Samples
 - 1 in metal. bottle for Ep toxicity test
 - 1 in mic. bottle for ~~total~~ nutrients & pH

Davy Creek, mostly overgrown - small channel
 lot of dead vegetation on bottom of stream
 collected sample in pint glass jar, poured it into
 glass quart jar, ^{both} QA for oil + grease etc.
 TEP

RHW-3
 Small globules of oily

* RHW-4
 Firemans Park
 Davy Creek

TOWN OF ASHIPGUN, WI.

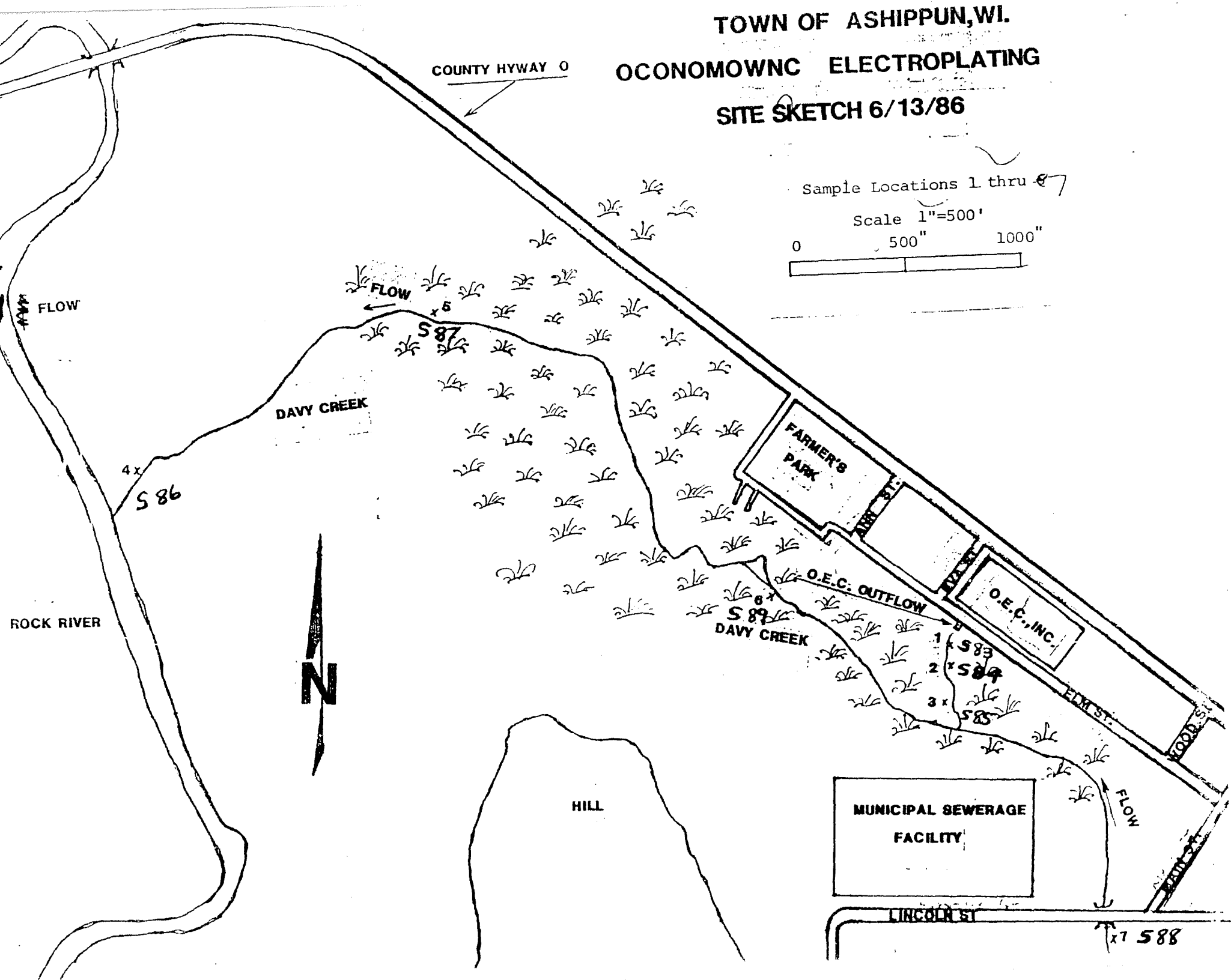
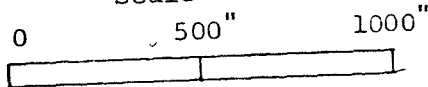
OCONOMOWNC ELECTROPLATING

SITE SKETCH 6/13/86

COUNTY HYWAY 0

Sample Locations 1 thru 7

Scale 1"=500'



7.07 27

OCONOMOWOC VERBAL SAMPLE DATA
6/30/86

ALL VALUES REPORTED IN UG/G (DRY WEIGHT)

ANTIMONY		ARSENIC		BERYLLIUM	
S83	38.8	S83	.2	S83	<1
S84	43.4	S84	.5	S84	<1
S85	75.8	S85	2.6	S85	<5
S86	26.3	S86	.5	S86	<1
S87	<1	S87	1.1	S87	<1
S88	8.38	S88	7.1	S88	<1
S89	23.3	S89	8.1	S89	<5
CADMIUM		CHROMIUM		COPPER	
S83	149	S83	1560	S83	946
S84	593	S84	38700	S84	1510
S85	1690	S85	15300	S85	6560
S86	35.8	S86	64.3	S86	51.9
S87	102	S87	306	S87	82.4
S88	1.1	S88	13.2	S88	14.1
S89	45.2	S89	16.3	S89	41.1
LEAD		MERCURY		NICKEL	
S83	92.7	S83	<.02	S83	993
S84	301	S84	<.02	S84	33100
S85	372	S85	<.1	S85	16600
S86	29.5	S86	<.02	S86	189
S87	<1	S87	<.02	S87	256
S88	20.3	S88	<.02	S88	17.9
S89	382	S89	<.02	S89	465
SELENIUM		SILVER		THALLIUM	
S83	.5	S83	7.57	S83	<1
S84	<.1	S84	7.55	S84	<1
S85	<.5	S85	25.8	S85	<5
S86	<.1	S86	1.05	S86	<1
S87	.3	S87	.86	S87	<1
S88	.6	S88	.43	S88	<1
S89	<.5	S89	<.5	S89	<5
ZINC		CYANIDE			
S83	12400	S83	90		
S84	16300	S84	800		
S85	8400 73,600	S85	8000 1820		
S86	179	S86	<1		
S87	236	S87	<1		
S88	34.9	S88	<1		
S89	174	S89	<1 < 3		

CORRESPONDENCE/MEMORANDUM

DNR-Southern District

File Ref: 4400

Date: July 28, 1983

To: Floyd Stautz

From: Marci A. Friedman *Marci A. Friedman*

Subject: Oconomowoc Electroplating Company, Inc., Ashippun, Wisconsin

The purpose of this memo is to assess the potential for groundwater contamination from past electroplating waste disposal practices at the Oconomowoc Electroplating plant in Ashippun, Wisconsin. The following sources of information were used:

1. Case file, containing background information and a study of the contamination of Davy Creek.
2. Site visit on June 22, 1983, with Bob Weber and Ron Curtis in which soil and sludge samples were taken and a house survey was done.
3. Phone call to Mrs. Nordin Jaeckel (414) 474-4371 wife of the sewage treatment plant operator on June 27, 1983, to identify owners of neighboring property.
4. Search of the Water Supply Files for nearby well logs.
5. Regional groundwater information obtained from USGS Hydrogeologic Atlas HA-360.
6. Local soils information from Dodge County Soil Survey, Section 134.
7. Alden, Quaternary Geology of Southeastern Wisconsin

Location, Topography, Surface Water: The site is located at the extreme southeastern corner of Dodge County, north of Oconomowoc and east of Watertown. The topography is relatively flat at the plant and surrounding residences. Elevations are slightly lower in the wetlands to the west and north. Davy Creek is located within these wetlands areas. It is a small channel that flows north and then west to the Rock River. The Rock River is the major surface water feature. In this area it flows south until it crosses, Route 16 where it flows west-northwest to Watertown.

Bedrock: The site appears to be located near the western extent of the Maquoketa Shale. The Niagra Aquifer does not appear in this area. The Platteville-Galena Dolomite is the major bedrock aquifer used for water supply. According to regional information where shale is present, the Dolomite aquifer is less productive than areas further west where recharge occurs through glacial deposits.

Unconsolidated Deposits: Glacial deposits consist of end moraine and outwash deposits of the Green Bay lobe according to Alden's map. The map shows outwash deposits along the present Davy Creek-wetland complex with end moraine deposits between the wetland and the eastern shore of the Rock River.

According to the Dodge County soil survey, Kibbie loam, (KIA) Keowns silt loam (Ke), and Sission fine sandy loam (Sub) are the major soil units under the plant and in the housing development and park to the northwest. These are soils which are developed over stream terraces and characteristically have sandy material at a 5 foot depth.

Wetlands soils consist of Palms Muck (Pa) in the discharge area followed by Houghton Muck (Hu) in the area behind Fireman's park. Other wetlands soils exist beyond this point. Palms Muck is characterized by a silty clay layer at 2-5 feet according to the soil survey. This silty clay layer is absent in the Houghton Muck.

Hydrogeology: According to the Hydrologic Atlas, regional flow in the unconfined aquifer is west toward the Rock River. The water table elevation is about 850 feet MSL according to the regional map. In areas where the Maquoketa confines the sandstone aquifer, regional flow in the deep artesian system is toward the east. Local flow from the site is likely to be toward the wetland-complex and Davy Creek. On the western side of Davy Creek, shallow flow may be toward the wetlands. If this was the case, a local groundwater divide would be expected west of the creek separating flow to the wetland from flow to the Rock River. Depth to groundwater should be less than 10 feet and the horizontal gradient would be expected to be relatively flat.

Residences and Water Supplies: The closest major residential area surrounding the plant is located northwest along Elm, Oak, (CTH 0), Eva and Ann Streets. A sketch address map is attached along with a list of property owners. Wells at Fireman's Park and the Town of Ashippun were observed in the field. Well logs located for the area from Dodge County, T9N, R17E, Section 29-31 and from the "unlocatable" file are attached. There is no public water supply system in the Town of Ashippun.

There are few residences between the creek and the Rock River. They are shown on the Soil Survey map. Other residences may have been constructed since the report was published. The closest one is almost 1/2 mile (2,200 feet) from the plant. Logs for 2 wells owned by Oconomowoc Electroplating were located. The wells had a capacity of 50 gpm and 60 gpm. They were 124-130 feet deep cased to 124 and 120 feet, and finished in the limestone bedrock. There was no high capacity permit for the wells, although this would be required because 2 wells with a combined capacity of greater than 70 gpm were present on the property. Drawdown from these wells was only 2 to 5 feet when pumping according to the logs.

Other area private wells located are attached. Where identifications were questionable this was indicated on the log.

Several wells indicated a surficial clay unit underlain by a sand unit which lies over limestone bedrock. Wells W-4, W-6, W-3 which are all close to the site have this type of geology. These wells are cased through the sand to the

top of the limestone in some cases. Shale units which were present in other area wells were absent in these wells. Wells supplying water for homes west of Elm Street may have similar construction.

Disposal Practices: A major impact of wastewater disposal practices has been the metal concentrations found in the wetlands. However, other past waste handling practices on the property may be of concern. The process waste from a portion of the complex was allowed to flow onto the ground surface according to District Wastewater staff. The sludge settling ponds constructed on the property may be of concern if they allowed infiltration to the groundwater as the present information indicates may have occurred.

A reported sludge spill on the northwest corner of the property and other wastewater and sludge handling practices within the plant may also be of concern.

Discussion:

Factors which reduce the potential of widespread groundwater impacts due to sludge disposal in the wetland include:

1. Local groundwater discharge to Davy Creek.
2. Potential presence of a silty clay layer in the Palms Muck, which may limit vertical groundwater movement under the area which received the greatest sludge concentrations.
3. The likelihood of a low horizontal gradient, (though the muck materials are very permeable) which would slow groundwater flow.
4. Any attenuation of metal contaminants that the muck soils might provide.
5. Any dilution that flow through the muck soils and/or underlying deposits might provide.
6. A surface unit of 10-40 feet described as 'clay' in drilling logs and the presence of 'hardpan' or shale in some wells would limit the movement of contaminants in those areas.
7. Lack of residences within 1/2 mile west of Davy Creek in this area

However, the potential exists for localized impacts to the groundwater from the wetland wastewater disposal practices and from previous disposal in unlined sludge lagoons and other waste handling practices due to the following factors:

1. Several residences are present immediately adjacent to or potentially downgradient of the plant. Those along Elm Street and Eva Street would be of particular concern.
2. Pumping of water supply wells could have an effect on the groundwater flow direction within a small radius of the plant

3. Several wells are only cased through the shallow outwash to the top of the bedrock aquifer.
4. Surface soils under the plant are likely to be moderately permeable. Soils under any on-site excavation, such as the sludge lagoons may be even more sandy and permeable.
5. It is possible that a groundwater mound may have formed while the basins were full. This could have forced water outwards in all directions.
6. A sludge spill existed in the NW corner of the site for some time before it was cleaned up.

Recommendation: Based on the information obtained, further evaluation of the impact of the plant on the groundwater around the site is warranted primarily because of the close proximity of neighboring wells. Additional work to establish the extent of any groundwater impact should include a well survey and sampling for all primary and secondary drinking water parameters plus cyanide for wells north of the site along Elm, Eva, Ann and CTH "O" as well as the Fireman's park well. The plant wells and Town of Ashippun well (south of the site) should be sampled as well. If a groundwater monitoring program is performed it should include the installation of a watertable well and piezometer near the corner of Eva and Elm Streets. A scope of work should be submitted to and reviewed by the Department prior to initiating monitoring investigations.

Attach. Soil Survey Map
Soil Survey Notes
Well & House Survey & Identification
Well Log Summary
Well Logs

MAF:smm

cc: Residuals Mgt. - SW/3
Mark Giesfeldt - SD
Ron Curtis - SD
Delbert Maag - SD

Rich O'Hara - SW/3
Dave Edwards - Horicon Area
Marci Friedman - SD

DNR Southern District
4400

Date: December 22, 1983

File Ref:

To: Files - Oconomowoc Electroplating, Town of Ashippun, Dodge County

From: Marci A. Friedman - SD *Marci A. Friedman*

Subject: Groundwater Monitoring Results From Private Well Sampling

On 8/19/83 and 10/5/83, water samples from private wells at and near Oconomowoc Electroplating in Ashippun, WI were taken by Pat McCutcheon SD - Water Supply. The purpose of the sampling was to determine if groundwater quality had been affected by plant operations. These included sludge storage in lagoons on Oconomowoc Electroplating's property which discharge to the wetland and various instances of spills inside the plant or on the plant grounds.

The potential for groundwater contamination was evaluated in a memo written by myself on 7/28/83. District private water supply staff subsequently sampled wells and analyzed for Cd, Cr, Zn and Ni on 8/19/83. These wells included the Oconomowoc Electroplating Inc., Don Kehl, Louis Maasch and Emma Schoenike wells. Pat McCutcheon has records of the sampling procedures and sample locations for these wells.

On 10/5/83 an expanded sampling program was undertaken. An effort was made to sample wells for which logs were obtained, particularly those indicating shallow casings and wells in close proximity to the site. An expanded parameter list was chosen based on indicator parameters, the analysis of Oconomowoc's discharge and information on chemicals used in plating processes supplied by Mike Hammers, Bureau of Industrial Wastewater. Field pH, field conductivity, total hardness, total alkalinity and COD were chosen to characterize the general groundwater quality. Sulfate, chloride, boron and fluoride were used as tracers for sulfuric acid, chloride salts, HCl, boric acid and fluoride catalyst used or potentially used in the process. Cd, Cr, Ni, Zn and Cu were used as tracers for metals used in the plating process. The analysis of Oconomowoc Electroplating's waste water indicated the following concentrations of these parameters on the application dated 11/15/82.

Sulfate	220 mg/l
Boron	2.0 mg/l
Fluoride	.7.6 mg/l
Cadmium	.009 mg/l
Chromium (hexavalent)	5.7 mg/l
Nickel	1.6 mg/l
Zinc	6.1 mg/l
Copper	.78 mg/l

Higher concentrations of these parameters could have been present in concentrated sludges or previous discharges. At the time of sampling COD and B analyses were not performed.

In order to interpret the results, well logs were plotted and geologic cross-sections showing approximate bedrock elevation were prepared. Since the topography varies by less than 10 feet in the area and no site specific topographic map was available, all wells were plotted at the same surface elevation. A location map was prepared from the air photos, however none of the maps prepared are to scale. They show only approximate horizontal distance.

The chart below summarizes the well construction.

<u>Name</u>	<u>Number</u>	<u>Well (feet) Depth</u>	<u>Casing (feet) Depth</u>	<u>Information Source</u>
Schoenike	-	130	103	construction from owner
Town of Ashippun	W-10	130	40	log
Fiberesin	W-7	63	44	log
Maasch		129	104	construction from owner
Burow	-			no information
Otto	W-3	57	47	log
Cross	W-6 or W-5	60	40-45	log
Kehl				no information
Oconomowoc Inc	W-9	130	124	
	W-8	124	124	log
Drigas Co.	W-11	107	40	log
Frankie	W-2	54	46	log
Sportsman's Club	W-1	130	80	log
Hilgar	W-4	50	42	log

Summary of Water Quality Results:

1. Water quality in the Cross, Otto and Kehl wells has significantly higher concentrations of total hardness, sulfates, chlorides and nickel than surrounding wells sampled. The Cross and Kehl wells are adjacent to or potentially downgradient of the sludge lagoons. There is no log for the Kehl well, however the Otto well is cased through a thick sand deposit to the dolomite.
2. Water samples from the Cross and Kehl wells were among those with highest zinc concentrations, though the Otto well was lower in this case. The Town of Ashippun well has one of the highest zinc concentrations although it is a deep well.

3. With the exception of 1.0 ug/l cd detected at the Schoenike well on 8/19/83, concentrations of Cd, Cr, and Cu were below the detection limit for all wells sampled on 8/19/83 and 10/5/83. The detection limit is below the primary drinking water standard for these parameters. Fluoride concentrations were between .1 and .3 mg/l. For comparison, fluoride concentrations of between 1.0 to .5 mg/l are required by NR 109 in public water supplies where fluoride is added for dental benefits. Sulfate and chloride was at, or exceeded the secondary drinking water standard of 250 mg/l in the Otto and Cross well.
4. Though pH measurements vary almost a unit between lab and field measurements, there is no indication that extreme pH conditions exist in the aquifer.
5. Based on the low sulfate, chloride, total hardness, total alkalinity and nickel concentrations in both the Schoenike well, which is cased through about 20 feet of shale, and the Town of Ashippun well which is open to a shale layer, the shale does not appear to be causing the higher parameter concentrations. In fact, it is the deeper wells (all of which penetrate the shale layer) which have the least mineralized groundwater. The Schoenike and Town wells may be representative of deeper background groundwater quality.
6. The Fiberesin well was chosen because of its distance from OEP and the fact that it is relatively shallow. This well shows water quality in between the deeply cased and shallow cased wells. Because it could be a cross or downgradient from the OEP property if flow was northwest, it cannot be used as a definitive indicator of shallow background water quality. Other sources of contamination from industries along Oak Street are also possible sources.
7. The Cross, Otto, Kehl, Hilgar and Frankie wells all are shallow wells with shallow casings. Based on construction alone, the Hilgar and Frankie wells could also have water quality similar to the Cross, Otto and Kehl wells. The Hilgar and Frankie wells have not been sampled to date.
8. The Cross and Kehl wells are closest to the sludge lagoons. Based on location alone the Hilgar well could be affected if contamination was coming from this source.
9. Because of the position of the wetlands, the groundwater flow direction could range from southwest to northwest. (See topographic map).
10. Water quality in the Maash and Burrow wells could be influenced by either well construction or position in the flow system.
11. On the basis of these water quality differences, the Schoenike and Town of Ashippun wells have the least mineralized groundwater, the Otto Kahl and Cross wells have the most mineralized groundwater and the Fiberesin Maasch and Burrow wells have water quality in between the two groups.
12. Water quality in other private wells in the area has not been tested.

Conclusions and Recommendations:

DEC 27 1983

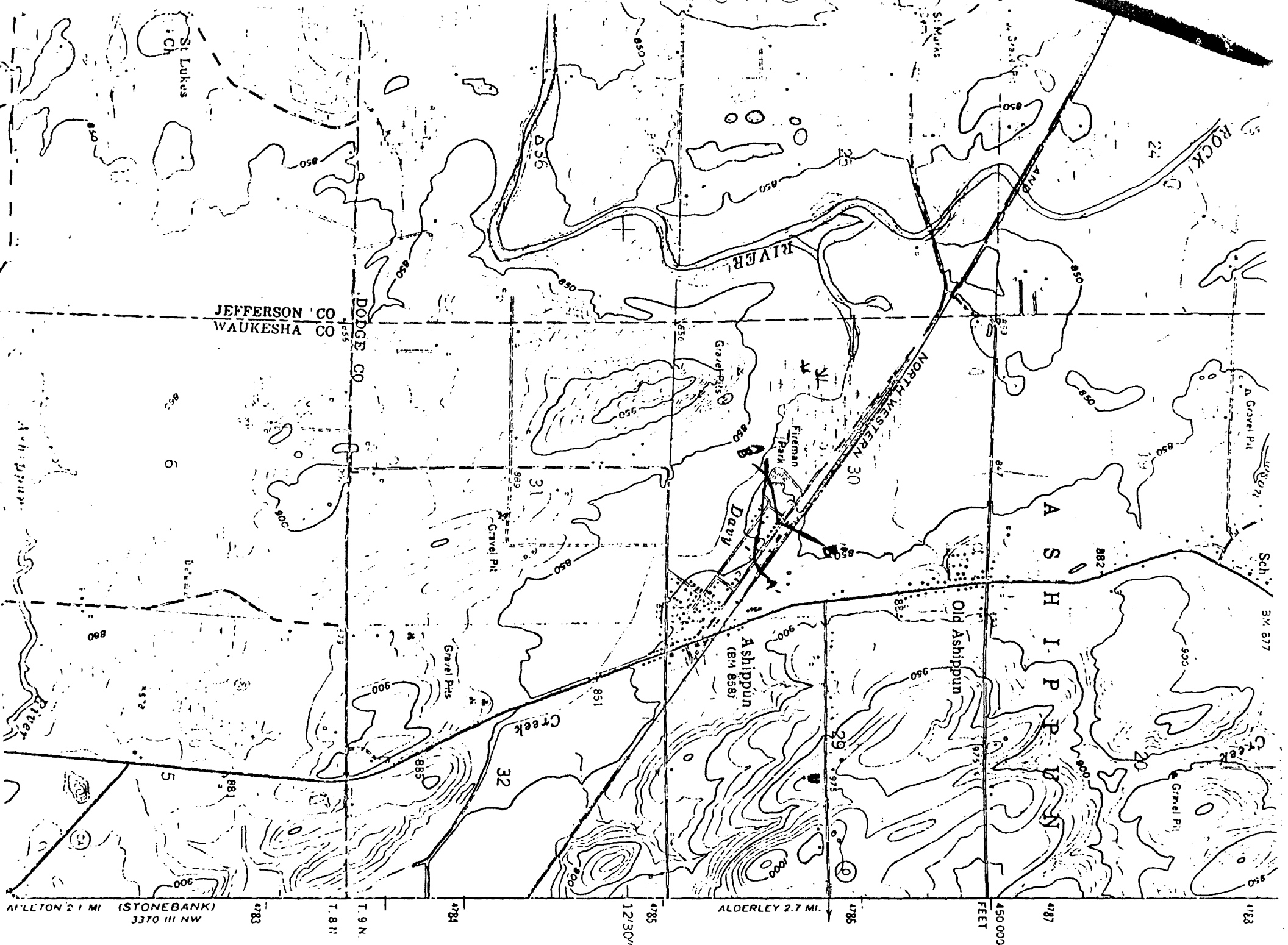
1. The Hilgar well should be sampled for the parameter list previously used. COD, Boron and sodium should be added.
2. The Frankie well should also be sampled since it is a shallow well and appears to be open to the shale layer.
3. If the Kehl, Cross and Otto wells are re-sampled, analyses for Na, B, COD, and Ni should be performed in addition to indicators since these parameters were not analyzed previously.
4. Other sampling points for which well log information exists include Ashippun Sportsman Clubhouse, Thermogas, and Oconomowoc Electroplating. It is likely that all of these may have water quality similar to the Schoenike and Town wells because of their depth, so sampling these wells may be of limited value.
5. At least 3 monitoring wells should be installed at Oconomowoc Electroplating, on the northwest, north, and southeast corners of the property. These wells should be constructed in the uppermost permeable unit either sand or limestone. In some instances a deeper well may be necessary to measure vertical gradients or to determine if contaminants are moving at depth. The well on the southeast corner may measure background water quality. Proposed locations and construction methods should be reviewed by the Department prior to installation. After wells are developed and have stabilized they should be sampled at least 3 times field for pH, field conductivity, total hardness, total alkalinity, COD, SO₄, Cl, B, F, Cd, Cr, Ni, Zn, Cu, and Na. The sampling schedule should also be approved by the Department at that time. Samples should be filtered and preserved in the field. The Department should split samples during one of the testing periods. Sampling of the OEP outfall and plant wells should be conducted as well.

Attachments:

Topographic Map 7.5'
Cross-section locations
Cross-sections
Well locations
Regional Water Quality
Sampling Results
Comparison of Water Quality in Private Wells Sampled.

MAF:ps

~~cc: Residuals Mgt - SW/3~~
Dave Edwards - Horicon Area
Roger Gerhardt - WS/2
M. Friedman - SD



JEFFERSON CO
WAUKESHA CO

DODGE CO

A
S
H
I
P
P
U
N

ALLTON 2.1 MI (STONEBANK)
3370 III NW

ALDERLEY 2.7 MI

450 000
FEET

4783

T. 8 N

T. 9 N

4784

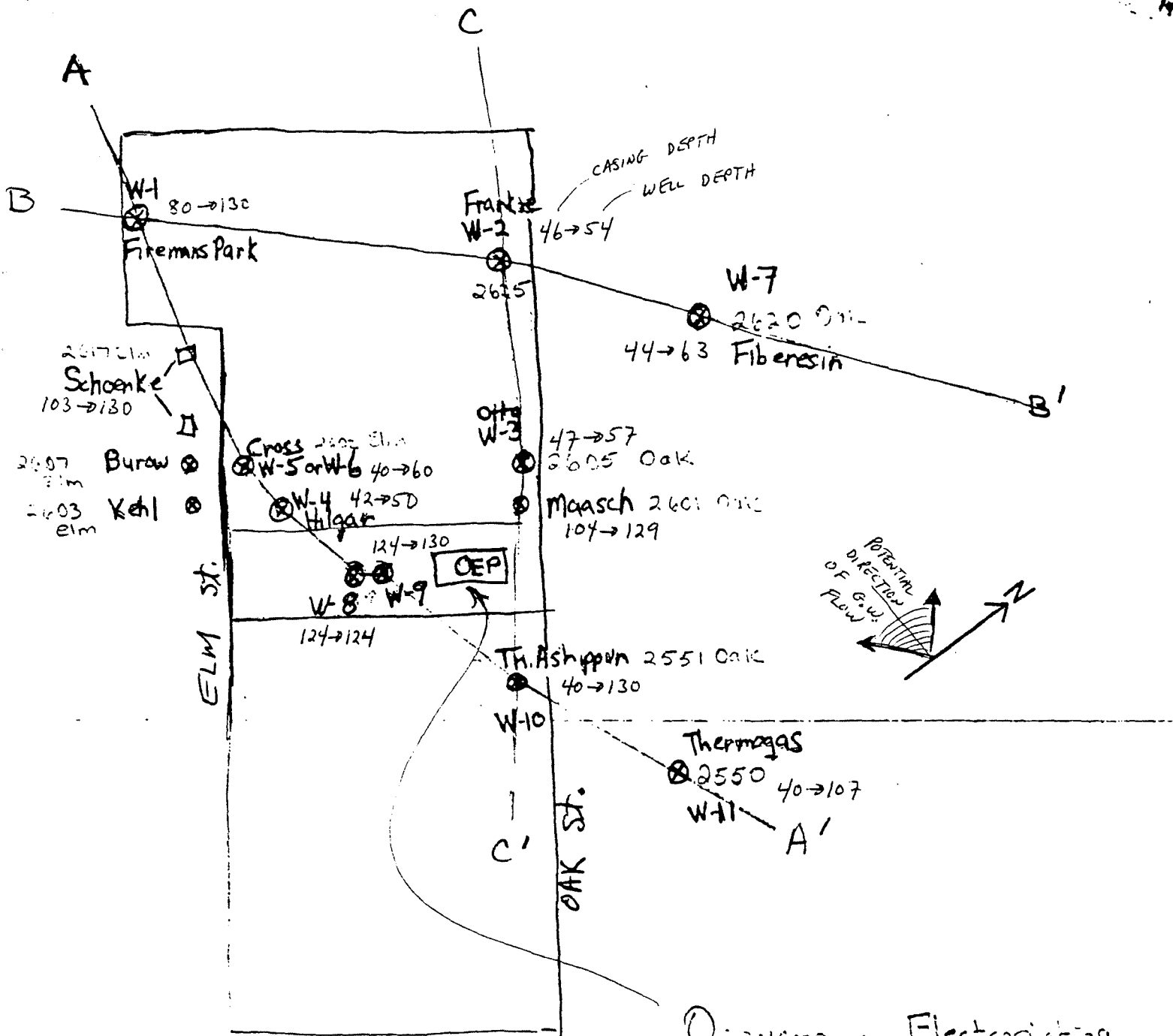
1230'

4785

4786

4787

4788



Oscarmonoc Electroplating
 Private Wells with Logs or
 Private Wells Sampled
 1/1 to 1/2

GROUNDWATER FLOW DIRECTION
 MAY RANGE BETWEEN NORTHWEST
 AND SOUTHWEST.

CORRESPONDENCE/MEMORANDUM

Date: May 9, 1986

File Ref:

3310

To: File

From: Bryan Grigsby, SDH Water Supply *BJ*

Subject: VOC & Inorganic Groundwater Sampling Near Oconomowoc Electroplating, Town of Ashippun, Dodge County

1. On 4/22/86 water samples were collected from 5 wells at or adjacent to Oconomowoc Electroplating Company, Inc. (OECI). Previous sampling of private wells in the same area (carried out on 8/19/83 & 10/5/83 by Pat McCutcheon, SD-Water Supply) found elevated concentrations of sulfates, chlorides, Cd, Zn, & Ni in some of the wells. At OECI, sampling from two monitoring wells at the plant site (on 3/5/85 & 10/7/85) found measurable concentrations of 4 different VOC's in the groundwater.
2. Following are the wells that were sampled. (Unless otherwise noted the wells were screened for VOC's & sampled for sulfates, Cd, Cr, hexavalent Cr, Cu, Ni, Pb, & Zn).
 - a. Town of Ashippun Garage - W2551 Oak Street; located east of OECI and southwest across Oak Street from CROPMATE Fertilizer and Pesticide Coop. According to microfiche copy of well constructor's report at SD the well is 125 ft. deep and cased to 125 feet; not 130 feet deep and cased to 40 feet, as previously stated.
 - b. OECI, well #1. Additional parameters sampled were specific conductance and chlorides. Well #2 is not presently in usable condition, but is not abandoned.
 - c. Donald Kehl residence - W2603 Elm Street; located due west of OECI sludge storage lagoons (located on southwest side of the plant site).
 - d. James Hilger residence - N547 Eva Street; located just across Eva Street from OECI; northwest of OECI sludge storage lagoons. Water was very rusty, even after being run for 15 minutes.
 - e. Mike Trivich residence - W2602 Elm Street; located next to Hilger residence. The well is 40-50 feet northwest of the Hilger well. Did not sample for VOC's.
3. While sampling at Trivich residence, Mrs. Trivich informed me of the following:
 - a. "Oldtimers" who used to work at OECI told her that many years ago

*Did
not
sample*

barrels of "acids" & "cyanide" were disposed of by being buried on site. (Presently the OECI site is littered with a large amount of metal salvage. I observed numerous metal drums. I could not discern if they were empty or not).

- b. Water is discharged from the sludge storage lagoons into Davey Creek during the 3rd shift at regular intervals. She also said these discharges used to occur during the day, but that OECI had been ordered to stop them. She didn't say who issued that order.
- c. Trees in the marsh adjacent to Davey Creek near the OECI discharge point which used to be alive and screen the Donald Kehl residence (her parents) from the creek, are now all dead. (I could not conclude if this was the case or not - it was still too early in the spring).

In response to my questions Mrs. Trivich stated that:

- a. Complaints about the discharge of water had been filed, but proof of such was hard to obtain because the responses to the complaints and sampling of surface water always occurred hours to days after the incidents were reported; and
- b. Of the approximately 50 or so employees at OECI, only 4 or 5 actually lived in Ashippun.

BG:ct

→ cc> Ron Curtis - SD
Joe Brusca - SD
Horicon Area Office
Del Maag - SD

CORRESPONDENCE/MEMORANDUM

STATE OF WISCONSIN
5.14/3
www file

Date: July 28, 1986

File Ref:

3310

To: File

From: Groundwater Sampling near Oconomowoc Electroplating Co., Inc., Town of Ashippun, Dodge County

Subject: Bryan Grigsby

On July 16, 1986 well water samples were collected for volatile organic compound (VOC) and inorganic compound analyses from water systems near the Oconomowoc Electroplating Company, Inc. (OECI) plant site in Ashippun. Samples were also collected for nitrate and pesticide analyses for water systems adjacent to the Cropmate Fertilizer Coop (across the street from OECI). This memo concerns sampling associated with OECI operations only. Carol McCurry, District Hydrogeologist, accompanied me on this trip.

The following samples were collected (see the attached map for well locations):

1. VOC screens: Otto, Trivich.
2. Metals (Cd, Cu, Cr, Hex-Cr, Ni, Pb, Zn): Burow, Maasch, Moldenhauer, Otto, Schoenike.
3. Cyanide (samples taken in response to elevated values found in soils near Davy Creek): Burow, Kehl, Maasch, OECI #1, Otto, Schoenike, Town of Ashippun Garage, Trivich.
4. Samples for chloride and sulfate analysis were to have been taken at sites where metal samples were taken, but I forgot to fill the correct bottles.

The Grulke well, which has never been sampled, was scheduled for metals and cyanide analysis, but the sucker rod in the well had been pulled and was being replaced. A large hole and several badly corroded spots were observed on sections of sucker rod already removed from the well.

At OECI, Ed Marshall, the Plant Manager, was out of the office and permission to collect the cyanide sample was granted by plant chemist Craig Bartell. Two 20 cubic yard haul-away containers were observed at the plant site. Both were nearly full. Discarded materials appeared to be in, or were covered by, large light colored plastic(?) bags. A small amount of reddish colored liquid was leaking from the bottom of the container nearer to Oak Street. I did not observe if there was significant leakage from the other container.

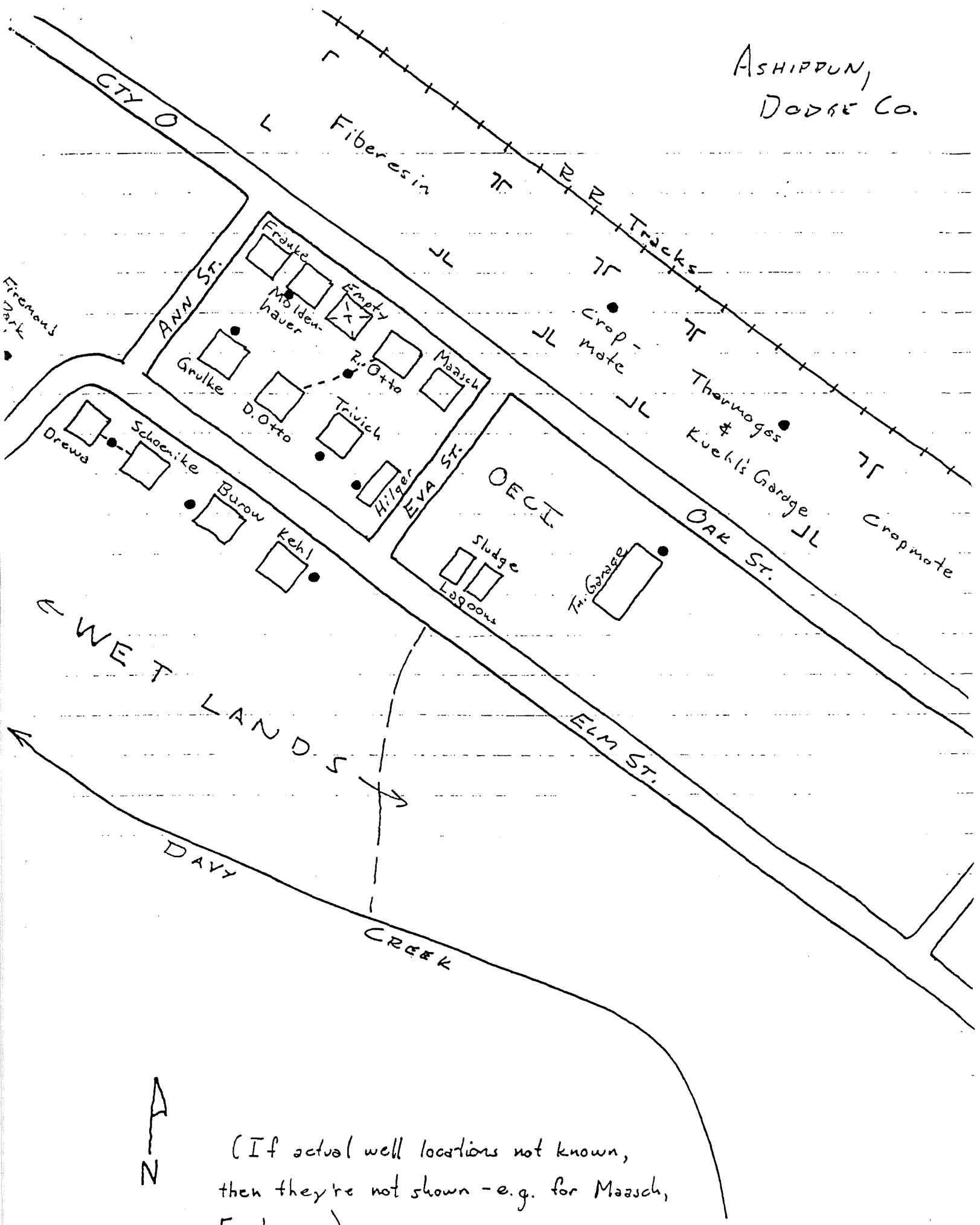
A number of the people I spoke with in Ashippun were concerned with the deteriorating conditions in Davy Creek. Apparently the creek is silting up (and has been doing so for the last nine or ten years) causing the marshy area

southwest of Elm Street to become increasingly inundated with standing water. Water levels in wells in the area are becoming increasingly high. At Thermogas, the water level in the well was observed to be less than three feet below ground level.

BG:ct

cc: Joe Brusca
Ron Curtis
Del Maag
Nicole Mamolou - Horicon Area Office

ASHIPPUN,
DODGE CO.



(If actual well locations not known,
then they're not shown - e.g. for Maasch,
Frunke)

CORRESPONDENCE/MEMORANDUM

STATE OF WISCONSIN

Horicon DNR

Date: October 24, 1984 File Ref: 4430

To: Files

From: Dave Edwards *DE*

Subject: Oconomowoc Electroplating Company, Inc., Dodge County

10/15/84 - Horicon Area Headquarters received a written complaint that OECI buried 50-55 gallon drums containing cyanide on their property 11-12 years ago. The anonymous complaint alleges the burial was conducted under the direction of Ed Marshall, president of the company. A map depicting the disposal location was included.

10/22/84 - Joe Brusca and I met with Ed Marshall to discuss the situation. Marshall denied the accusation. Marshall allowed us to use a metal detector and 2" bucket auger to investigate the site. Three areas were detected as having metal buried beneath the surface. The areas were approximately 3' in diameter. The bucket auger was then used to try to determine if the metal detector had located barrels. Metal was located 12" below the surface in 2 areas. It could not be determined if the metal was simply scrap metal dumped there or if, in fact, it was a barrel. We informed Marshall of the findings. He agreed to allow us to return the following day to do some followup excavating with a posthole digger and shovel.

10/23/84 - I returned to OECI and checked in with Marshall. Two of the three "hot" spots were carefully excavated to determine the source of the metal.

Test Pit 1 - 15 yards south. 9 yards east of second telephone pole east of the parking lot entrance. A hole was dug 1' x 2' x 1' (deep). Badly deteriorated sheet metal, metal straps and a $\frac{1}{4}$ " metal wire were found. The edge of the sheet metal was located and pried up only to find soil beneath the sheet metal.

Test Pit 2 - Nine yards south, 1 yard west of same telephone pole. A hole 1' x 2' x 10" deep was excavated. Sheet metal was again encountered. The edge was found and pried up. Soil was again found beneath the sheet.

Both holes were filled in and the sod was replaced. Marshall was appraised of the results. Marshall agreed to allow us to use a backhoe to excavate the site if we decide to do so. He understood that we could get a court order if he denied the

Department entry. I did agree to restore the area if the excavation work did not reveal any drums. Marshall discussed the problem of past employees and believed the complainant was probably a former employee.

Leonard Damrow, Town Supervisor, was visited and appraised of the complaint. He did not remember the burial of drums, but agreed to contact local contractors who had done excavation work on and near the area in question.

10/24/84 - Tom Harelson was advised by the State Crime Lab that the metal detector used is only reliable to a depth of 12-18". He also said the UW has more elaborate equipment that is capable of detecting metal at a depth of 5-7'. The site in question has been filled with miscellaneous building material. This may interfere with our attempt to locate barrels with a metal sensing device.

DSE:lr

cc: Joe Brusca - Southern District
Tom Harelson - Horicon

Attachment 10

Aerial Photo of OECI - July 19, 1984

Copied from "Aerial Photographic Analysis of Nine Priority CERCLA Hazardous Waste Sites. (TS-AMD-84025/84025/84700-8 June 1985)"

- Annotation A : scrap stockpile containing drums and miscellaneous scrap metal.
- Annotation B : open dump containing solid waste and extensive liquid staining.
- Annotation C : open storage area of unidentified material.
- Annotation D : open storage area containing support equipment.
- Annotation E : an area of discoloration and sludge deposits that appear to have come from the site.
- Annotation F : an area of possible vegetation damage west of Davy Creek.

All surface drainage is shown by flow arrows and lead to the wetlands just south of the site.



INTERPRETATION CODE

BOUNDARIES AND LIMITS

- x-x-x-x FENCED SITE BOUNDARY
- UNFENCED SITE BOUNDARY
- x x x x x FENCE
- - - - PROPERTY LINE
- GATE/ACCESS POINT
- + SECTION CORNER

DRAINAGE

- ← - - - DRAINAGE
- ← FLOW DIRECTION
- ↔ - - - - INDETERMINATE DRAINAGE

TRANSPORTATION/UTILITY

- ==== VEHICLE ACCESS
- + + + + RAILWAY
- PIPELINE
- - - - POWERLINE

SITE FEATURES

- |||||| DIKE
- ~~~~ STANDING LIQUID
- SL STANDING LIQUID (SMALL)
- ⬮ EXCAVATION, PIT (EXTENSIVE)
- ⬮ MOUNDED MATERIAL (EXTENSIVE)
- MM MOUNDED MATERIAL (SMALL)
- CR CRATES/BOXES
- DR DRUMS
- HT HORIZONTAL TANK
- PT PRESSURE TANK
- VT VERTICAL TANK
- CA CLEARED AREA
- DG DISTURBED GROUND
- FL FILL
- IM IMPOUNDMENT
- LG LAGOON
- OD OPEN DUMP
- OF OUTFALL
- SD SLUDGE
- ST STAIN
- SW SOLID WASTE
- TR TRENCH
- WD WASTE DISPOSAL AREA

Oconomowoc Electroplating Co., Inc., July 19, 1984. Approximate scale 1:1,500.

Facility name: Oconomowoc Electroplating Company, Inc. (OECI)
EPA ID # WID 006 100 275
Name of Preparer: Jamal Awad
Date: September 10, 1986

Preliminary Assessment Report

The questions constituting this Preliminary Assessment (P.A.) Report must be filled out prior to completion of recommendation elements of the Plan. The purpose of this P.A. is to provide a summary documentation of the State and/or U.S. EPA review of available information on the subject facility. The intent is that a comprehensive file review will be conducted as the basis for selection of the recommended approach to a given facility. If the P.A. is completed by State personnel, questions referring to available data reference information in State files; for Federal personnel the reference is to Federal files. Where questions refer to "all" available data or information and such material is voluminous, the response should indicate that files are voluminous, and then reference most telling information, for example, groundwater contaminants found frequently or at extremely high concentrations should be specifically listed, and information most directly supporting recommended approach to facility should be described. If no information is available in facility files, the response should so indicate. It is also anticipated that this P.A. may be updated periodically as more information becomes available.

1. Interim Status and/or Permitted Hazardous Waste Units and Capacities of Each Unit:

<u>Type of Units</u>	<u>Size or Capacity</u>	<u>Active or Closed</u>
<input type="checkbox"/> Storage in Tanks or Containers	The facility did not obtain an Interim Status from EPA or an Interim License from the Department for any of its Solid waste management units.	
<input type="checkbox"/> Incinerator		
<input type="checkbox"/> Landfill		
<input type="checkbox"/> Surface Impoundment		
<input type="checkbox"/> Waste Pile		
<input type="checkbox"/> Land Treatment		
<input type="checkbox"/> Injection Wells		
<input type="checkbox"/> Others (Specify)		

2. Permit Application Status: OECI did not submit Part A permit application or HSWA "Certification Regarding Potential Releases from Solid Waste Management Units." A RCRA Part B permit application was never called in and OECI did not obtain an Interim Status from EPA or an Interim License from the Department for any of its solid waste management units.
- completeness review underway
 - technical review underway
 - complete and technically adequate
 - draft permit public noticed
 - final permit issued
3. Sources of data used in developing this document:
- RCRA Part A & B permit application
 - Certification Regarding Potential Releases Solid Waste Management Units
 - Interim Status Inspection Reports/Information from Letters of Warning and Compliance Orders
 - Exposure Information Report
 - Other RCRA submittals: ACL submissions, closure plans, post-closure permit applications, etc
 - CERCLA PA/SI Reports
 - CERCLA Hazard Ranking System (HRS) Information
 - CERCLA RI/FS Studies
 - CERCLA 103(c) Notifications (check this even if the absence of a notification was verified)
 - Aerial Photography
 - USGS data: maps, geological atlas, monitoring well data
 - USDA Soil Conservation Service maps/data
 - Graphic Exposure Modelling System
 - State Hazardous Waste Management Permit files/inspection reports
 - State Wastewater Treatment Discharge Permit files/inspection reports

- State Air Permit files/inspection reports
- TSCA Inspection Reports
- OSHA Inspection Reports
- Municipal/Country/City Public Health Agencies
- Local Well Drillers
- State/Country Road Commissions
- Utilities
- Local Airports/Weather Bureaus
- Naturalist/Environmental Organizations
- Employees
- Colleges/Universities
- Interviews with local residents
- Public Notice

4. The facility is on the National Priorities List or proposed update of the List or proposed update of the List or ERRIS list

- Yes - indicate List or update
- No
- Yes - ERRIS list

OECI was notified as a CERCLA site on May, 1983. OECI received an HRS score of 31.86 and is still on the updated CERCLA list of July 1, 1986.

Description of Enforcement Status:

<u>5. Type of Action</u>	<u>Date</u>	<u>Local, State or Federal</u>	<u>Result or Status</u>
- Referral to the Attorney General for continuous violation of WPDES permit limitations.	April 15, 1976	State of Wisconsin	- Settled by stipulation on March 24, 1981. OECI failed to comply with the stipulation and on Feb 20, 1985 was fined \$ 47,000.
- Referral to the Attorney General for violations of Hazardous wastes and wastewater regulations.	June 2, 1986	State of Wisconsin	- The AG filed a lawsuit against OECI on August 1, 1986.

6. Review of Response to Solid Waste Management Questionnaire indicates: (check one)

- Solid Waste Management Units exist (other than previously identified RCRA units)
- No Solid Waste Management Units exist (other than previously identified RCRA units)
- It is unclear from review of questionnaire whether or not any Solid Waste Management Units exist
- Respondent indicates that does not know if any Solid Waste Management Units exist

7. If the response to question 6 is that Solid Waste Management Units exist, then check one of following:

- Releases of hazardous waste or constituents have occurred or are thought to have occurred
- Releases of hazardous waste or constituents have not occurred
- Releases of hazardous waste or constituents have occurred or are thought to have occurred but have been adequately remedied
- It is not known whether a release or hazardous waste or constituents has occurred

8. Description of Any Complaints from Public:

<u>Source of Complaint</u>	<u>Date</u>	<u>Recipient</u>	<u>Subject and Response</u>
- Anonymous Complaint	10/15/84	Horicon Area Headquarters	- OECI buried 50 55-gallon drums. On 10/23/84, two test pits were dug following an investigation with a metal detector (reliable up to 12"). Deteriorated sheet metal, metal scrap, and a 1/4 inch metal wire were found. More extensive excavation is needed.
- personal conversation with Mrs. Trivich	4/22/86	Brian Grigsby SDH Water Supply	- Mrs. Trivich told about buried drums she heard about from old timers, illegal wastewater discharges and dead trees next to the wetland area.

9. Description of All Inspection Reports for Facility:

<u>Date of Inspection</u>	<u>Inspector (Local, State, Federal)</u>
---------------------------	--

See Attachment # A

10. During inspection of this facility did the inspector note any evidence of past disposal practices not currently regulated under RCRA such as piles of waste or rubbish, injection wells, ponds or surface impoundments that might contain waste or active or inactive landfills?

Yes- give date if inspection and describe observation

OECI currently maintains two surface unlined impoundments, three container storage areas, an open dump site, and a heavily contaminated wetland adjacent to the facility

No

Don't know

11. Do inspection reports indicate observations of discolored soils or dead vegetation that might be caused by a spill, discharge or disposal of hazardous wastes or constituent?

Yes - indicate date of report and describe observations

See Attachment # A for details

No

Don't know

12. Do inspection reports indicate the presence of any tanks at the facility which are located below grade and could possible leak without being noticed by visual observation?

Yes - date of inspection and describe information in report

No

Don't know

13. Does a groundwater monitoring system exist at the facility? Yes

14. If an answer to question 12 is yes, is the groundwater system capable of monitoring both regulated RCRA units and other Solid Waste Management Units? No

Explain - Three monitoring wells on OECI site + Private wells around the site (not enough to do extensive hydrogeological study at the site).

15. Is the groundwater monitoring system in compliance with applicable RCRA groundwater monitoring standards? NO - not in-compliance with NR 181

If no, explain deficiency (1) need two or more upgradient wells (2) need Four or more downgradient wells (3) sampling and construction of the wells should comply with NR 181 requirements.

16. Describe all information on facility subsurface geology or hydrogeology available.

<u>Type of Information</u>	<u>Author</u>	<u>Date</u>	<u>Summary of Conclusions</u>
Memos in DNR file	Marci Friedman	July 28, 1983 and Dec 22, 1983	Major soil types under the facility are Kibbie loam, Keowns silt loam, and Sission fine Sand loam. Wetland soil is Palms Muck. Regional Flow is west toward Rock River in the unconfined aquifer. Local flow is likely toward the wetland and Bay Creek. Depth to groundwater is less than 10'.

17. Did the facility submit a 103(c) notification pursuant to CERCLA?

Yes
 No

Date of Notification _____

18. If answer to 17 is yes, briefly summarize content of that notification. (waste management units identified, type of waste concerned)

N/A

19. Has a CERCLA Preliminary Assessment/Site Investigation (PA/SI) been completed for this facility?

Yes
 No

20. If answer to question 19 is yes, briefly describe conclusions of the PA/SI focusing on types of environmental contamination found, wastes and sources of contamination.

Priority for inspection is medium. Two unlined surface impoundments on site contain metal electroplating sludges. Drums on site leaking. Groundwater contamination potential exists. No continuous barriers around the site. Population potentially affected (within 3 mile radius) is about 1314. Photographs in DNR file show stressed or dead vegetation. Information was taken from site inspection of October 7, 1981.

21. If available, having reviewed the CERCLA notification, RCRA Part A and RCRA Part B, it appears that: (CERCLA Unit refers to units or area of concern in CERCLA response activity)

N/A

RCRA and CERCLA units are same at this facility

RCRA and CERCLA units are clearly different units

There is an overlap between the RCRA and CERCLA units (some are the same, some are different)

22. Description of Any Past Releases or Environmental Contamination:

<u>Type/Source of Release</u>	<u>Date</u>	<u>Material Released</u>	<u>Quantity</u>	<u>Response</u>
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See Attachment # B

23. Identification of Reports or Documentation Concerning Each Release
Described in Item 22.

<u>Title/Type of Report</u>	<u>Date</u>	<u>Author</u>	<u>Recipients</u>	<u>Contents</u>
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See Attachment # B

24. Highlight any information gaps relating to the existence of solid waste management units additional needed information.

Basically, extensive groundwater monitoring and hydrogeological survey is needed to assess the extent of contamination in the groundwater.

25. SUMMARY

List the solid waste management units at this facility (other than tanks and container storage areas for holding wastes with no hazardous constituents):

<u>Unit</u>	<u>Are hazardous constituents present in the waste (yes/no)?</u>	<u>Is it reasonable to suspect a release (yes/no)?</u>	<u>Next Step</u>
			(a) site investigation workplan (b) plan of study for remedial investigation (c) corrective action plan (d) <u>no further action required</u>
1. Two unlined Surface Impoundments	Yes	Yes	} Site investigation workplan followed by Remedial Investigation/Feasibility Study is needed.
2. Three container storage areas	Yes	Yes	
3. Wastewater treatment System	Yes	Yes	
4. Wetland in Davy Creek	Yes	Yes	
5.			
6.			
7.			
8.			
9.			
10.			

Complete and attach the "Assesment of Unit" form for each unit with "yes" answers in both of the first two columns.

26. Summary of exposure potential

- | <u>Yes</u> | <u>No</u> | |
|-------------------------------------|-------------------------------------|--|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Public is now drinking water contamination with wastes from the facility; |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Public is at risk of exposure through direct contact to wastes contained at or releasing from the facility; and |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Public is at risk from exposure from breathing hazardous wastes releasing from the RCRA facility. |
| <input type="checkbox"/> | <input type="checkbox"/> | The following information is needed to determine whether the public is at risk:

<u>A site assessment for OECI was completed by</u>
<u>Westen-Sper (TAT) on August, 1986 concluded</u>
<u>that potential of direct human contact with contaminant exist.</u> |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | The solid waste management units at this facility do not appear to present a threat to public health at this time. |

27. Based on my review of this Preliminary Assesment, it is hereby

- approved
- not approved

Signature: _____
(EPA Staff)

Date: _____

Assessment of Unit

Description of Unit: Two unlined surface impoundments constructed in 1972 as the wastewater treatment system. The impoundments are full of electroplating sludges (F006). Each impoundment is about 20' x 40' x 8' deep.

Identification of Hazardous Waste Generated, Treated, Stored or Disposed at the Unit: (may attach Part A or permit list or reference those documents if listing of wastes is exceptionally long - in that case, to complete this question list wastes of greatest interest and/or quantity and note that additional wastes are managed)

<u>Type of Waste</u>	<u>Quantity</u>	<u>Generated, a treated, Stored or Disposed</u> <u>(note appropriate categories)</u>
F006 Electroplating Sludges	≈ 475 cy of sludge	Stored

Assessment of Unit

Description of Unit: The wastewater treatment system initially constructed in 1981 is inefficient and inadequate to treat the wastewater.

Numerous violations of the WPDES limitations caused continuous release of electroplating untreated wastewater.

Identification of Hazardous Waste Generated, Treated, Stored or Disposed at the Unit: (may attach Part A or permit list or reference those documents if listing of wastes is exceptionally long - in that case, to complete this question list wastes of greatest interest and/or quantity and note that additional wastes are managed)

<u>Type of Waste</u>	<u>Quantity</u>	<u>Generated, a treated, Stored or Disposed</u> <u>(note appropriate categories)</u>
F006 Electroplating Sludge wastewater	variable	generated & Stored

Assessment of Unit

Description of Unit: Three container storage areas exist on the site (north parking lot area, east lot area, and west end near wastewater treatment building area). Containers include drums, open tanks, open rolloffs, and old clarifier units. Stressed or dead vegetation areas were observed around these areas.

Identification of Hazardous Waste Generated, Treated, Stored or Disposed at the Unit: (may attach Part A or permit list or reference those documents if listing of wastes is exceptionally long - in that case, to complete this question list wastes of greatest interest and/or quantity and note that additional wastes are managed)

<u>Type of Waste</u>	<u>Quantity</u>	<u>Generated, a treated, Stored or Disposed (note appropriate categories)</u>
F006 Electroplating Sludge	Variable	Stored
F002 Spent halogenated Solvents	Variable	Stored

Assessment of Unit

Description of Unit: Wetland & Davy Creek may be considered as a solid waste management unit due to the accumulated electroplating sludges in both areas. The accumulation of F006 sludges (resulted from discharges of untreated and/or inefficiently treated wastewater) is well documented.

Identification of Hazardous Waste Generated, Treated, Stored or

Disposed at the Unit: (may attach Part A or permit list or reference those documents if listing of wastes is exceptionally long - in that case, to complete this question list wastes of greatest interest and/or quantity and note that additional wastes are managed)

<u>Type of Waste</u>	<u>Quantity</u>	<u>Generated, a treated, Stored or Disposed</u> (note appropriate categories)
F006 Electroplating Sludges	not quantified	disposed

Attachments

A. Memo - DNR file : Oconomowoc Electroplating Company, Inc. - Hazardous Waste Activity Summary
June 10, 1986

B. Known and/or Suspected Releases at OECI

Ronald Curtis

CORRESPONDENCE/MEMORANDUM

Date: June 10, 1986 File Ref: 4190

To: SD Hazardous Waste File, Oconomowoc Electroplating, Inc. WID 006100275

From: Ronald Curtis *Ronald Curtis*

Subject: Oconomowoc Electroplating Company, Inc., (OECI) Hazardous Waste Activity Summary

I. Identification

OECI identified itself as an electroplating hazardous waste generator (large quantity) on July 18, 1980. OECI received hazardous waste I.D. #WID006100275. OECI hasn't identified itself as storage or surface impoundment facilities.

II. Hazardous Wastes GeneratedA. Historically

- heavy metal sludge (F006) from wastewater treatment
- solvents from degreasing operation

B. Presently

- OECI generates heavy metal sludge (F006) from its wastewater treatment plant.

III. Hazardous Waste DisposalA. Historically

Department staff were told in early 1981 by OECI that it had sent its waste to Germantown, WI for the previous 4-5 years. OECI continued sending wastes to Germantown until they contracted with Browning Ferris Industries (BFI), in late 1984, early-1985, for disposal at Zion, Illinois. OECI also used recyclers (for solvents) to some extent and discharged untreated or minimally treated wastewater for periods of time.

B. Manifest Records

NOTE: The first record of a manifest shipment is from October 5, 1981.

A list of OECI's submitted manifest from October 1981 through the end of 1985 is attached. In summary, it shows the following:

Hazardous Waste Shipments

<u>Year</u>	<u>Waste Code (type)</u>	<u>Amount Shipped</u>
1981	F006	1,016,000 #'s
	F002	4,200 #'s
1982	F006	518,000 #'s
	F002	---
1983	F006	---
	F002	---
1984	F006	---
	F002	1,754 #'s
1985	F006	115,680 #'s
	F002	---

C. Annual Reports (Note: the first annual report submitted is for 1982).

Report Period	Date Signed	Signature	Waste	Beginning Volume	Volume Generated	Volume Shipped	Ending Volume	Transporter
1982	3-1-83	Steve Mertins	Not distinguished	Not stated	524,468 lbs.	524,468 lbs.	50,000 lbs.	Waste Management Enviroite Mr. Frank, Inc.
1983	5-1-84	Steve Mertins	Not distinguished	Not stated	12,600 lbs.	*	Not stated	---
1984	1-30-85	Dean Zerbst	F002 F006	3,205 lbs. 60,000 lbs.	0 20,000 lbs.	641 lbs. 0	2,564 lbs. 80,000 lbs.	Comm. Ind. ---
1985 **	3-10-86	Edward Marshall	F002 F006	2,564 lbs. 80,000 lbs.	0 220,000 lbs.	*** 138,400 lbs.	2,100 lbs. 161,600 lbs.	--- BFI

* Report says "wastewater was discharged to stream untreated."
 ** Report says "greater sludge removing capacity has increased" generation rate.
 *** Report says OECI reduced the amount by 464 pounds by "separated water."

IV. Wastes Observed by Department Staff

Date	Staff	Waste(s)	Remarks
4-2-81	Neuman-Horn	Treatment plant wastes, lagoon spoils, miscellaneous	27 barrels on west side of plant. Lagoons to be dredge and lined. Barrels on east side of plant (some caustic), some open and some leaking.
2-21-84	Wojner	Treatment plant sludges	Tanks and 90 barrels; not marked with generation date, not closed, not in good condition and not stored to prevent leaks.
7-17-84	Wojner	1,1,1-trichloroethylene still bottoms - degreaser operation	Recycled every 6 months.
7-17-84	Wojner	Treatment plant sludges Chloroethylene Oil Miscellaneous Caustic Lagoons wastes	Tanks; covered and dated. Recycler analyzing. Not easily recyclable. From Waukesha plant. 1 barrel nearly corroded through. Discharge into and out of one.
9-17-84	Wojner	Trichloroethylene Contaminated rain water Lagoons waste	Some drums; unlabeled. Many drums and tanks; how will OECI dispose of it? Supernatant and 2-4 feet of sludge.
2-7-85	Wojner	Treatment plant sludge	Bulk of waste is on-site frozen in holding tanks (OECI has shipped one BFI roll-off cont.)
6-10-85	Wojner	Treatment plant sludge 1,1,1-trichlorethane	BFI roll-off (undated). 7 barrels dated October-November, 1984; returned by recycler; looking for disposal.

Date	Staff	Waste(s)	Remarks
		Cadmium cyanide sludge Miscellaneous	3 drums dated December, 1984. 1 unknown barrel and 1 unknown carboy 2 drums of white sludge; 2 drums of brown sludge; 1 leaking drum of white sludge or caustic; 2 tanks unknown; other dry (empty tanks) - (many of these came from inside plant).
		Lagoons wastes	Dried and cracked.
9-10-85	Wojner	Treatment plant sludge 1,1,1-trichloroethane Cadmium wastes	BFI roll-off (undated); 4 tanks (undated). Five 55 gallon drums - east lot; 2 drums in parking lot.
10-22-85	Wojner	Treatment plant sludge Trichloroethane Lagoon wastes Cyanide baths	9 dated containers (dating from 7-24-85) and two undated, old clarifiers (dating from 2-84); some are improper containers. Disposal being explored. --- OECI cooking it down and adding the salts to treatment plant sludges.
		Cadmium cyanide sludge	Containers were emptied.
11-21-85	Wojner	Treatment plant sludge Lagoon wastes	7 dated containers (dating from 8-9-85) and the two undated clarifiers; all frozen. Frozen, small discharges to it from treatment system.
2-4-86	Wojner	Treatment plant sludge	6 dated containers. (from 8/9/85) and 3 undated containers (two clarifiers and BFI roll-off).

Date	Staff	Waste(s)	Remarks
		Lagoon wastes	Frozen, discharge to it and from it.
		Trichloroethane	4 barrels.
4-8-86	Wojner	Treatment plant sludge	3 dated containers and 6 undated containers, some not covered.
		Trichloroethane	4 barrels.
		Lagoon wastes	Lagoons filled with water, coloration noted.
4-28-86	Wojner	Treatment plant sludge	4 dated containers and 4 undated containers, some not covered.
		Trichloroethane	2 barrels.

RC:ps
Attachment
cc: SW/3
Horicon Area Office

KNOWN AND/OR SUSPECTED RELEASES:

In 1972, OECI constructed the two unlined settling lagoons as the facility's wastewater treatment system. These lagoons are now nearly filled with electroplating sludges (F006) containing heavy metals. OECI has not yet made any attempt to clean the two lagoons which are a probable hazardous source of groundwater contamination. Further, the facility's numerous violations of its WPDES discharge permit limits and discharges of untreated electroplating wastewater have led to the contamination of the wetland area and Davy Creek with heavy metals. OECI did not operate nor upgrade its wastewater treatment system as it was approved in June, 1984, of Phase II plans and specifications. Spills from the wastewater treatment unit are well documented in DNR files. On October 14, 1985, a site inspection revealed that the final filters were bypassed, and wastewater was directly discharged out of the effluent pipe. On April 28, 1986, another site inspection documented untreated wastewaters discharging to the wetland.

On April 8, 1986, the facility was inspected. At the time of inspection, it was documented that OECI was using the wastewater treatment sludge (F006) to seal the space (few inches) between the floor and the walls of the wastewater treatment system building. Due to spring thawing and rain, the hazardous sludges were carried out of the building and into the area adjacent to the building. Dead and impacted vegetations were observed around the building. Furthermore, spring thaw caused the snow, accumulated on the top of the uncovered full BFI container, to melt dissolving the sludge and spilling it on the ground. OECI did not report or properly clean-up the hazardous waste spillage.

On June 10, 1986, there was an electroplating sludge spill (as was reported by OECI) which resulted in about 10 cubic yards of sludge being spilled onto the ground at the north lot. On July 14, 1986, BFI containers (holding electroplating sludges) were observed leaking by DNR staff violating hazardous waste storage and transportation regulations. Leaking liquid was observed on the ground around the containers.

In 1979, a water quality verification study was conducted at Davy Creek (see Attachment 5). In that study, four stream sediment samples and three representative soil samples of the top five inches of the wetland were tested for aluminum, cadmium, chromium, and nickel. The results show that there was a thick sludge layer at all three sampling sites downstream of the facility's outfall, and there is no sludge present above OECI discharge point. The sludge layer ranged from 0.2 feet to 3.2 feet thick. Sludge was also observed outside the stream bed, in the wooded area below Fireman's Park, where it had apparently settled out during periods of high water. The soil samples taken from the wetland show very high concentrations of the tested heavy metals.

Soil samples of the wetland and sediment samples of Davy Creek (see Attachment 5) were collected on June 22, 1983. Two soil samples (#1 and #2) were collected from the wetland, and another two sediment samples (#3 and #4) were collected from Davy Creek. Samples #1, #3, and #4 were tested for total cadmium, chromium, zinc, and nickel. The results (included in Attachment 6) show high concentrations of the tested metals. Sample #2 was tested for total phosphorus, total Kjeldahl nitrogen, total potassium, and pH. The results are shown in Attachment 6.

EP toxicity test was performed on samples #1, #3, and #4 to test for cadmium, hexavalent chromium, and trivalent chromium. However, test results were obtained for samples #1 and #3 and for cadmium and trivalent chromium only. Results show that both samples #1 and #3 (contained cadmium concentrations of 9,400 ppb and 2,600 ppb, respectively) exceeded the cadmium maximum concentration set for cadmium (1,000 ppb) and were hazardous.

Another sediment sampling study of the wetland and Davy Creek was conducted on June 13, 1986 (see Attachment 7). Seven samples were collected and tested for thirteen heavy metals and cyanide. Three samples were collected from the wetland and the other four were collected from Davy Creek, one upstream and three downstream from the facility's outfall. The results show that the sediments of the wetland are highly contaminated with cadmium, chromium, copper, lead, nickel, zinc, and cyanide, while the sediments at Davy Creek are contaminated with cadmium, chromium, copper, lead, nickel, and zinc.

Groundwater samples (see Attachment 8) taken from private wells adjacent to the site and monitoring wells installed at the facility show that pollutants have entered the groundwater (from the unlined lagoons, from spilled materials, or from the wastewater discharge area). DNR has received reports (see Attachment 9) about drums being buried on-site. On October 23, 1984, two test pits (see Attachment 9 for locations) were dug following an investigation with a metal detector (reliable depth 12 to 18 inches). Badly deteriorated sheet metal, metal scrap, and a 1/4 inch metal wire were found in test pit #1 and a sheet metal was found in test pit #2. More extensive investigation excavations are necessary to determine if buried drums are located on-site.

Facility name: Oconomowoc Electroplating Co. Inc.
 EPA ID # W10006100275
 Name of Preparer: Wendell Wagner
 Date: 8/22/86

Site Investigation Report

1) During the inspection of this facility did the inspector note any evidence of past waste disposal practices not currently regulated under RCRA such as piles of waste or rubbish, ponds or surface impoundments that might contain waste, active or inactive landfills?

- a) Yes, Explain Davy Creek Wetlands, an adjacent wetlands to OECT has been determined to have elevated levels of metals and cyanides in the sludges according to an EPA report. Surface impoundments received electroplating wastewater sludges and have had a mixed regulatory history. To the east of the site, materials have been open burned.
- b) No In the east parking lot and north parking lot, electroplating operational equipment has been stockpiled.
- c) Cannot Respond to this Question There has been documented seepage of plating wastes from the concrete drainage troughs in the facility.

2) Was there any evidence of discolored soils or dead vegetation that might be caused by a spill, discharge or disposal of hazardous wastes or constituents?

- a) Yes, Explain see attached
- b) No
- c) Cannot Respond to this Question

3) Are there any tanks at the facility which are used for waste storage (solid or hazardous) which are located below grade and could possibly leak without being noticed by visual observation?

- a) Yes
- b) No, I'm not aware of underground tanks at this site.
- c) Cannot Respond to this Question

4) Based on an inspection or inspections that have been done at this facility there is no reason to question or doubt the information which the applicant has submitted on the questionnaire regarding Solid Waste Management Units and the possibility of prior or continuing releases of hazardous wastes or constituents.

- a) I concur with this statement
- b) I do not concur with this statement for the following reasons:

To my knowledge the applicant has not submitted information on Solid Waste Management Units

- 5) If 4(b) was checked,
Describe what additional information or testing is needed to determine if prior or continuing releases of hazardous wastes or constituent have occurred. Specify which units are of concern and what types of releases are suspected (i.e., releases to groundwater, surface water, air, soils, etc).

There has been evidence to show that releases have occurred at the site.

A report by Weston-Spencer for EPA documents sediment contamination.

In May 1983, the Field Investigative Team of USEPA performed a

preliminary assessment, the site received a Hazard Ranking Score of 31.86 and was placed on the National Priority List.

- 6) An on site inspection to discuss and evaluate the possibility of prior or continuing releases from Solid Waste Management Units is recommended
- a) Yes Remedial action or a remedial investigation is recommended.
- b) No

- 7) Was site sampling for confirmation of suspected releases conducted?

a) Yes

b) No

- 8) If yes to 7, detail the following:

1) Sampling plan - include locating parameters to be tested, rationale for each parameter, logistics, dates, personnel etc.

2) Analytical results - OA, OC. Result summary conclusion.

- 9) A Remedial Investigation (R.I.) is needed to evaluate the nature and extent of prior releases of hazardous wastes or constituents from Solid Waste Management Units.

a) Yes

b) No.

10. If the answer to No. 7 above is "Yes", the priority and manner for requiring the applicant to conduct the Remedial Investigation (R.I.) is as follows: *A Complaint Action by Wisconsin Dept. of Justice is filed. The site has been investigated for CERCLA action.*
_____ a) Require R.I. in compliance schedule that is part of RCRA permit.

_____ b) Issue Compliance Order requiring R.I. to be done.

11. Did the SI address all items that the PA "Assessment of Unit" forms indicated the SI should address?

12. Based on my review of this S.I. report, it is hereby:

- approved
- not approved

Signature _____ Date: _____
(EPA Staff)

2.

North Parking Lot

Spills of electroplating sludge have been observed in past inspections. Containers that store electroplating sludge have been observed to leak. Many electroplating tanks and other equipment associated with electroplating have been stored in the parking lot. It is not known if these units have been cleaned and decontaminated.

East Parking Lot

Many electroplating tanks and other equipment associated with electroplating have been stored in the parking lot. "Empty" barrels that formerly contained oils, cyanides and other compounds have been observed in the area. Multicolored liquids have been observed pooling in low spots.

To the East of the East Parking Lot

Wood and brush and other debris have been burned in this area.

On the South Side of Building Near Clarifier Building

Electroplating sludge had been stored in leaking or damaged containers. Leaks or spills have occurred in this location. Impacted soil has been observed.

South of Clarifier Building

Stressed and dead vegetation have been observed. Spills or escapes of sludge from the clarifier building have happened.

Surface Impoundments

No liners were installed.
No leak detection system is present.
Groundwater is very close to the ground surface in this area.
The impoundments are in the 100 year floodplain.
Soils in the lagoons are multicolored.
~~No~~ run-on or run-off management is present, but doesn't meet the requirements
It is possible for the impoundments to overflow.

Davy Creek

Stressed vegetation is present.
Discolored soils have been observed.
Sludge have been observed being discharged to the marshland.

WW:ps

8. OECI Site Assessment performed by Technical Assistance Team for Emergency Response Removal and Prevention EPA Contract 68-01-6669. The Technical Assistance Team was responsible for the Site Sampling Plan. Strategies were discussed in a 6/12/86 meeting with TAT members and Dennis Kugle and Bob Weber of the DNR.

Parameters to be tested were determined from known electroplating activities and the results of previous analyses conducted in 1979. Sampling was performed on 6/12 and 6/13/86. Analytical results were obtained from Aqualab in Bartlett, Illinois. The August 1986 Report documents the summary and conclusions.

Three wells were installed by Wisconsin Geological Survey in agreement with Wisconsin DNR near the site in the fall of 1984. Samples were taken on 2/13/85, 3/5/85, 5/22/85, 10/7/85. The samples were analyzed by the Wisconsin State Laboratory of Hygiene, an EPA approved lab.

Samples of private wells in the area have also been taken and analyzed at the State Lab of Hygiene. They were taken on 8/19/83, 10/5/83, 4/22/86, 7/16/86.

WW:ps

Oconomowoc Electroplating Area Well Sampling*

Well	pH	Alk	Cd	Cl	Cr	Cu	F	Hardness	SO ₄	Zn	Cond	Ni
OECI			.2		3					20		20
Don Kehl	7.3	424	.2 .2	220	3 3	50	.1	808	210	190 280	1800	24 44
Louis Maasch	7.7	358	.2 0.4	110	3 3	50	.2	510	84	380 460	1100	20 20
Emma Schoenike	7.4	312	1.0 .2	11	3 3	50	.3	332	22	880 320	650	20 20
Fiberresin	7.3	384	.2	150	3	50	.2	540	110	20	1400	20
Reinhard Otto	7.2	422	.2	260	3	50	.1	820	250	50	2000	38
Robert Cross	7.2	414	.2	250	3	50	.1	868	260	480	1800	37
Town Garage	7.3	316	.2	13	3	50	.4	344	21	430	760	20
Ray Burow	7.8	448	.2	86	3	50	.2	2	72	40	1200	20

*OECI, Kehl, Maasch
Schoenike were sampled
on 8/19/83. All wells
except OECI were sampled
on 10/5/83

Louis Maasch (5/29/84) No VOC Detected

Dennis Otto (5/29/84) No VOC Detected

Alk - Alkalinity CaCO₃ mg/l
~~Cl - Chloride mg/l~~ Chromium ug/l
 Cl - Chloride mg/l
 Cr - Chromium mg/l
 Cu - Copper mg/l
 F - Fluoride mg/l

Hardness - Hardness CaCO₃ mg/ml
 SO₄ - Sulfate mg/l
 Zn - Zinc mg/l
 Cond - Conductivity Microm
 Ni - Nickel ug/l

Oconomowoc Electroplating Co Monitoring Well Data

Well-Date	Cd	Cl	Cr	Hex Cr	Cu	No ₂ /NO ₃	Pb	Fe	Ni	Zn	Cyanide	Chloroform	PCE	TCE
1 2/13/85	.3	120	3	20	7	1.0	7	100	20					
1 3/5/85	.7	120	15			6.2			20		.01	1.0	1.0	4.0
2 2/13/85	3.2	340	5	20	230	1.7	3	300	2400					
2 3/5/85	5.7	220	5			1.2			1000		.52	2.2	1.0	16*
2 5/22/85	2.6								780	20				
2 10/7/85	2.6		3						940					1.1**
3 2/13/85	.9	21	8	20	25	15.0	3	200	20					
3 3/5/85	.2	13	3			1.4			20		.08			

Cd - Cadmium ug/l

Cu - Copper ug/l

Cyanide - mg/l

Cl - Chloride mg/l

NO₂/NO₃ - Dissolved Nitrogen mg/l

Cr - Chromium ug/l

Pb - Lead ug/l

Hex Cr - Hexavalent Chromium ug/l

Fe - Iron ug/l

* Well 2 on 3/5/85 1,1 Dichloroethane 2.2 ug/l

**Well 2 on 10/7/85 1,1 Dichloroethane 3.9 ug/l

1,1 Dichloroethylene 1.7 ug/l

1,1,1 Trichloroethane 32 ug/l

PCE - perchloroethylene ug/l

TCE - Trichloroethylene ug/l

Exhibit 3-2

Checklist for Ground Water Releases

<u>Identifying Releases</u>	<u>Yes</u>	<u>No</u>
1. <u>Potential for Ground Water Releases from the Unit</u>		
o Unit type and design.		
- Does the unit type (e.g., land-based) indicate the potential for release?	✓	—
- Does the unit have engineered structures (e.g., liners, leachate collection systems, proper construction materials) designed to prevent releases to ground water?	—	✓
o Unit operation		
- Does the unit's age (e.g., old unit) or operating status (e.g., inactive, active) indicate the potential for release?	✓	—
- Does the unit have poor operating procedures that increase the potential for release?	✓	—
- Does the unit have compliance problems that indicate the potential for a release to ground water?	✓	—
o Physical condition		
- Does the unit's physical condition indicate the potential for release (e.g., lack of structural integrity, deteriorating liners, etc.)?	✓	—
o Locational characteristics		
- Is the unit located on permeable soil so the release could migrate through the unsaturated soil zone?	✓	—
- Is the unit located in an arid area where the soil is less saturated and therefore a release has less potential for downward migration?	—	✓
- Does the depth from the unit to the uppermost aquifer indicate the potential for release?	✓	—
- Does the rate of ground water flow greatly inhibit the migration of a release from the facility?	—	✓
- Is the facility located in an area that recharges surface water?	✓	—

Exhibit 3-2 (continued)

Checklist for Ground Water Releases

	<u>Yes</u>	<u>No</u>
o Waste characteristics		
- Does the waste in the unit exhibit high or moderate characteristics of mobility (e.g., tendency not to sorb to soil particles or organic matter in the unsaturated zone)?	✓	—
- Does the waste exhibit high or moderate levels of toxicity?	✓	—
2. <u>Evidence of Ground Water Releases</u>		
o Existing ground-water monitoring systems		
- Is there an existing system?	✓	—
- Is the system adequate?	—	✓
- Are there recent analytical data that indicate a release?	✓	—
o Other evidence of ground water releases		
- Is there evidence of contamination around the unit (e.g., discolored soils, lack of or stressed vegetation) that indicates the potential for a release to ground water?	✓	—
- Does local well water or spring water sampling data indicate a release from the unit?	✓	—

Determining the Relative Effect of the Release on Human Health and the Environment

1. Exposure Potential

o Conditions that indicate potential exposure		
- Are there drinking water well(s) located near the unit?	✓	—
- Does the direction of ground water flow indicate the potential for hazardous constituents to migrate to drinking water wells?	✓	—

Exhibit 4-1

Checklist for Surface Water/Surface Drainage Releases

Yes No

Identifying Releases

1. Potential for Surface Water/Surface Drainage Releases from the Facility

o Proximity to Surface Water and/or to Off-site Receptors

- Could surface run-off from the unit reach the nearest downgradient surface water body? ✓ —
- Could surface run-off from the unit reach off-site receptors (e.g., if facility is located adjacent to populated areas and no barrier exists to prevent overland surface run-off migration)? ✓ —

o Release Migration Potential

- Does the slope of the facility and intervening terrain indicate potential for release? ✓ —
- Is the intervening terrain characterized by soils and vegetation that allow overland migration (e.g., clayey soils, and sparse vegetation)? ✓ —
- Does data on one-year 24-hour rainfall indicate the potential for area storms to cause surface water or surface drainage contamination as a result of run-off? ✓ —

o Unit Design and Physical Condition

- Are engineered features (e.g., run-off control systems) designed to prevent releases from the unit)? — ✓
- Does the operational history of the unit indicate that a release has taken place (e.g., old, closed or inactive unit, not inspected regularly, improperly maintained)? ✓ —
- Does the physical condition of the unit indicate that releases may have occurred (e.g., cracks or stress fractures in tanks or erosion of earthen dikes of surface impoundments)? ✓ —

Exhibit 4-1 (cont.)

Checklist for Surface Water/Surface Drainage Releases

	<u>Yes</u>	<u>No</u>
o Waste Characteristics		
- Is the volume of discharge high relative to the size and flow rate of the surface water body?	✓	—
- Do constituents in the discharge tend to sorb to sediments (e.g., metals)?	✓	—
- Do constituents in the discharge tend to be transported downstream?	✓	—
- Do waste constituents exhibit moderate or high characteristics of persistence (e.g., PCBs, dioxins, etc.)?	✓	—
- Do waste constituents exhibit moderate or high characteristics of toxicity (e.g., metals, chlorinated pesticides, etc.)?	✓	—
2. Evidence of Surface Water/Surface Drainage Releases		
o Are there unpermitted discharges from the facility to surface water that require an NPDES or a Section 404 permit?	—	✓
o Is there visible evidence of uncontrolled run-off from units at the facility?	✓	—

Determining the Relative Effect of the Release on Human Health and the Environment

1. Exposure Potential

o Are there drinking water intakes nearby?	✓	—
o Could human and/or environmental receptors come into contact with surface drainage from the facility?	✓	—
o Are there irrigation water intakes nearby?	—	✓
o Could a sensitive environment (e.g., critical habitat, wetlands) be affected by the discharge (if it is nearby)?	✓	—

*Not
surf
H₂O
intakes!*