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AUTH. NAME AUTHOR AFFILIATION
ALEXICH, M. P. Indiana & Michigan Electric Co.
RECIP. NAME RECIPIENT AFFILIATION
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SUBJECT: Forwards application to State of MI Dept of Natural Resources for mod of NPDES Permit MI 0005827 to allow discharge of make up plant prefilter backwash water into Lake Michigan.

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INDIANA & MICHIGAN ELECTRIC COMPANY

P.O. BOX 16631
COLUMBUS, OHIO 43216

January 22, 1987

AEP:NRC:0170C
10 CFR 50.36 (b)

Donald C. Cook Nuclear Plant Unit Nos. 1 and 2
Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74
NATIONAL POLLUTANT DISCHARGE ELIMINATION
SYSTEM (NPDES) PERMIT

Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Dear Sirs:

In accordance with Section 3.2 of Appendix B (Environmental Protection Plan) of the Donald C. Cook Nuclear Plant Unit Nos. 1 and 2 Facility Operating License, attached is a copy of an application to the State of Michigan Department of Natural Resources for modification of the D. C. Cook NPDES Permit No. MI 0005827. This application is for your information only and has been submitted to the State of Michigan for approval of a facility change which would allow discharge of make-up plant prefilter backwash water to Lake Michigan.

This document has been prepared following Corporate procedures which incorporate a reasonable set of controls to insure its accuracy and completeness prior to signature by the undersigned.

Very truly yours,

M. P. Alexich
Vice President

RBK
1/22/87

cm

Attachment

cc: John E. Dolan
W. G. Smith, Jr. - Bridgman
R. C. Callen
G. Bruchmann
G. Charnoff
NRC Resident Inspector - Bridgman
J. G. Keppler - Region III

A001
1/1

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PDR ADOCK 05000315
P PDR

ADD. NRR/PRA/ADTS

ATTACHMENT TO AEP:NRC:0170C

NPDES PERMIT APPLICATION

LETTER FROM JACK A. DRUCKEMILLER (I&MECo)

TO PAUL D. ZUGGER (MICHIGAN DEPARTMENT OF NATURAL RESOURCES),

DATED DECEMBER 23, 1986

Attachment to AEP:NRC [redacted]70C

American Electric Power System
INDIANA & MICHIGAN ELECTRIC COMPANY
ONE SUMMIT SQUARE, P.O. BOX 60, FORT WAYNE, IN. 46801
Telephone (219) 425-2111

December 23, 1986

Paul D. Zugger, Executive Secretary
Water Resources Commission
Department of Natural Resources
P. O. Box 30028
Lansing, Michigan 48909

Dear Mr. Zugger:

RE: Donald C. Cook Nuclear Plant
NPDES Permit No. MI0005827

Enclosed is a revised Industrial and Commercial Wastewater Discharge Application for the Donald C. Cook Nuclear Plant. This application is submitted for approval of a facility change.

The facility change involves rerouting of Makeup Plant Prefilter backwash water to Lake Michigan via outfalls 001 or 002 (Unit 1 and Unit 2 discharges). The filter backwash water is currently discharged to the Plant's Turbine Room Sump, which subsequently discharges to an onsite Absorption Pond. The ability to discharge this effluent to Lake Michigan would aid us in performing repairs to the sump and would allow us to reduce the volume of groundwater discharges. Screening data for this waste stream is provided in the enclosed application.

Note that the line diagram flowsheet for Section 1, Item 6 is as proposed, reflecting the planned rerouting of the filter backwash water.

Your timely consideration of the request for facility modification is appreciated since repairs of the Turbine Room Sump are scheduled for early 1987. Please call me if you require information or have any questions regarding the information provided. We would be happy to meet with the people responsible for drafting the permit modification.

Very truly yours,

Jack A. Druckemiller
Manager of Environmental Affairs

JAD/df
Enclosure

c: W. G. Smith, Jr.

SECTION I

SEE INSTRUCTIONS ON REVERSE SIDE

EPA I.D. NUMBER: MID 098 647 621

PERMIT NUMBER: MI 0005827

APPLICATION FOR DISCHARGE PERMIT IS:

MODIFICATION [X] EXISTING [ ] NEW [ ] INCREASED USE [ ] REISSUANCE [ ]

ITEM 1 PHYSICAL LOCATION ADDRESS AND INFORMATION

A. PARENT COMPANY/DEPT./OWNER: INDIANA & MICHIGAN ELECTRIC

B. DIV./BUREAU: N/A

C. PLANT OR FACILITY: DC COOK PLANT

D. TYPE OF FACILITY: STEAM ELECTRIC GEN

E. STANDARD INDUSTRIAL CLASSIFICATION (REFER TO TABLE II): 4911

F. STREET NUMBER: N/A

G. STREET NAME: REED ARROWHIGH WAY

H. CITY NAME: BRIDGMAN

MI

I. ZIP CODE: 49106

J. TOWNSHIP: LAKE

K. COUNTY (REFER TO TABLE I): CO. NAME BERRIEN CO. NUMBER 11

L. NAME OF AUTHORIZED CONTACT PERSON: ICK A. DRUCK EMILLER

M. TITLE: MGR ENV AFFAIRS

N. TELEPHONE NUMBER: 219 425 2118

O. ADDRESS (IF DIFFERENT FROM ABOVE): PO BOX 610

P. CITY NAME: FORT WAYNE

Q. STATE: IN

R. ZIP CODE: 46801

S. TYPE OF TREATMENT FACILITY (REFER TO TABLE II): 1LL 5A 4G 5P

T. PROGRAM FOR EFFECTIVE RESIDUALS MANAGEMENT: [ ] YES [ ] NO [X] N.A. DATE SUBMITTED ____ DATE IMPLEMENTED ____

U. BACK-UP POWER SOURCE: [X] YES [ ] NO [ ] N.A.

V. POLLUTION INCIDENT PREVENTION PLAN: [X] YES [ ] NO [ ] N.A. DATE SUBMITTED 6/12/80 DATE IMPLEMENTED 6/82

W. NUMBER OF EMPLOYEES: 587

X. TYPE OF DISCHARGE: GROUNDWATER [ ] BOTH [X] SURFACE WATER [ ]

Y. DO YOU HAVE A CERTIFIED OPERATOR? [X] YES [ ] NO

OPERATOR'S NAME D. Fitzgerald-Stuart # 3019 710 4180 2

FACILITY # 11 11 0 0 5 1 4 CERTIFICATION # N 10 10 12 81 6 3

ITEM 2 MAILING ADDRESS OF APPLICANT

A. NAME: RICHARD C MENGE

B. NAME: INDIANA & MICHIGAN ELECTRIC CO

C. STREET ADDRESS OR POST OFFICE BOX: PO BOX 610

D. CITY NAME: FORT WAYNE

E. STATE: IN

F. ZIP CODE: 46801

REQUIRED SIGNATURE

I, the applicant, certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

SIGNATURE OF APPLICANT

SIGNATURE: R.C. Menge DATE: 12/23/86

NAME: R. C. Menge TITLE: Vice Presiden

SIGNATURE OF LOCAL GOVERNMENTAL REPRESENTATIVE (SEE NOTE ON REVERSE SIDE)

SIGNATURE: DATE:

NAME: TITLE:

INSTRUCTIONS FOR COMPLETING SECTION I

ITEMS 1 AND 2

This form requires information about the facility address, discharge location, plant controls, type of disposal facility and name, address, and signature of the applicant and local governmental representative.

Enter Environmental Protection Agency I.D. Number if available.

ENTER THE PERMIT NUMBER IN THE BOX AT THE TOP OF THIS FORM. THE PERMIT NUMBER CAN BE FOUND ON THE FRONT PAGE OF YOUR EXPIRING PERMIT. If this is a new or not previously permitted facility, then leave blank and a number will be assigned.

In the box titled "Request for Discharge is" check one of the five categories (modification, existing unpermitted, new, increased use, or reissuance) which your permit application falls into (see page 14 for definitions).

ITEM 1

PHYSICAL LOCATION ADDRESS AND INFORMATION

A.-C. Enter the naming information in accordance with the following:

- For industrial facilities, provide the parent company name (A.), the division name (B.), and the plant name (C.).
- For federal and state facilities provide the department name (A.), the division or the bureau name (B.), and the facility name (C.).
- For commercial facilities provide the owner's name, doing business as (d.b.a.) (A.) and the facility name (C.).

D. Enter type of facility. Examples of this are: foundry; high school; automatic car wash; dry cleaners; self-serve laundromat.

E. Refer to Table III (page 5) for the list of Standard Industrial Classification Code (SIC). Enter the code number that best describes the major product or service produced.

F.-I. Enter the physical location of the facility. DO NOT use post office box number.

J.-K. Enter the township and county in which this facility is located. The county code number can be found in Table I (page 3).

L.-R. Enter the name, title, address and telephone number of the facility's authorized contact person. This person should be thoroughly familiar with the facts reported on these forms in the event that contact regarding the permit application must be made.

S. Refer to Table II (page 4) for the list of Treatment Facility Types, enter up to five methods used by the facility to treat the wastewater.

T. Indicate whether this facility has a "Residuals Management Plan". If so, enter date plan was submitted and the date the plan was or is to be implemented. Such a plan may be needed as deemed appropriate by the proper Division staff.

U. Indicate whether the waste treatment facilities have a back-up source of power or whether emergency procedures have been developed in case of a power outage to the waste treatment facility. If the waste treatment facility is not dependent on a source of power, check the "NA" box.

V. Indicate whether this facility has submitted a Pollution Incident Prevention Plan as required under the Michigan Water Resources Commission Part 5 Rules for the "Spillage of Oil and Polluting Materials".

W. If facility has sanitary wastewater (water used for domestic purposes; e.g., toilets, sinks, showers), enter the number of people using this facility.

X. Check the type of discharge(s) from this facility.

Y. Indicate whether your waste treatment or control facilities are under the supervision of a certified operator. If yes, please provide the person's name, social security number, and certificate number plus the company's facility number.

ITEM 2

MAILING ADDRESS FOR ALL CORRESPONDENCE

A. Provide the name of the applicant. For the purposes of this application the applicant is defined as the person signing below in accordance with the directions provided on page 14. Correspondence regarding this application and future permit matters will be sent to the applicant.

B. Provide the name of the facility, company, or organization which the applicant in "A." above uses for receipt of mail.

C.-O. Provide the applicant's address to be used for future correspondence.

SIGNATURE OF LOCAL GOVERNMENTAL REPRESENTATIVE

NOTE: If sanitary sewage is to be discharged from housing developments, apartment buildings, shopping centers, or other commercial developments, into a system other than an approved municipal sanitary waste collection system, this application shall be co-signed by an authorized municipal official or township officer.

It is the rule of the Commission that applications involving the disposal of sewage of human origin from any entity other than local government should include the local government as a co-signer of the statement, and that all proceedings and hearings against said entity will include the local unit of government as a party by appropriate notice, and all permits issued as a result of such hearings and proceedings will be filed jointly against the said unit and entity (Water Resources Commission Part 3 Rules R 323.1038(3) and the Michigan Water Resources Commission Act 245 P.A. of 1929 as amended Section 6(b)). This co-signature requirement is only applicable to sanitary sewage discharges and is not for any nonsanitary waste streams from this facility.

SEE INSTRUCTIONS ON REVERSE SIDE

SECTION I

PERMIT NUMBER: MI0005827

ITEM 3 — SOURCE OF WATER SUPPLY

A. MUNICIPAL	NAME	
	QUANTITY (MAX.)	GALLONS/DAY
B. SURFACE WATER INTAKE	NAME OF WATERWAY	
	QUANTITY (MAX.)	GALLONS/DAY
C. PRIVATE WELL	QUANTITY (MAX.)	GALLONS/DAY
D. OTHER	SPECIFY	
	QUANTITY (MAX.)	GALLONS/DAY

ITEM 4 — FACILITY WATER USAGE

A. PROCESS WATER (INCLUDING CONTACT COOLING WATER)	QUANTITY (MAX.)	GALLONS/DAY
B. NONCONTACT COOLING WATER	QUANTITY (MAX.)	GALLONS/DAY
C. SANITARY WATER	QUANTITY (MAX.)	GALLONS/DAY
D. OTHER	SPECIFY	
	QUANTITY (MAX.)	GALLONS/DAY

ITEM 5 — CRITICAL MATERIALS & PRIORITY POLLUTANTS USED ■ STORED ■ PRODUCED

REFER TO TABLES IV & V

UNITS CODE
1 POUNDS
2 GALLONS
3 CUBIC YARDS
4 TONS

MATERIAL 1	NAME OF SUBSTANCE	
	PARAMETER NUMBER	
	QUANTITY	UNITS /YEAR
MATERIAL 2	NAME OF SUBSTANCE	
	PARAMETER NUMBER	
	QUANTITY	UNITS /YEAR
MATERIAL 3	NAME OF SUBSTANCE	
	PARAMETER NUMBER	
	QUANTITY	UNITS /YEAR
MATERIAL 4	NAME OF SUBSTANCE	
	PARAMETER NUMBER	
	QUANTITY	UNITS /YEAR
MATERIAL 5	NAME OF SUBSTANCE	
	PARAMETER NUMBER	
	QUANTITY	UNITS /YEAR
MATERIAL 6	NAME OF SUBSTANCE	
	PARAMETER NUMBER	
	QUANTITY	UNITS /YEAR
MATERIAL 7	NAME OF SUBSTANCE	
	PARAMETER NUMBER	
	QUANTITY	UNITS /YEAR

No change from information previously provided.

INSTRUCTIONS FOR COMPLETING SECTION I

ITEMS 3, 4, AND 5

This form requires information about the water supply to the facility, the facility's water usage, and critical materials and priority pollutants used, stored, or produced at this facility.

ENTER THE PERMIT NUMBER IN THE BOX AT THE TOP OF THIS FORM. THE PERMIT NUMBER CAN BE FOUND ON THE FRONT PAGE OF YOUR EXPIRING PERMIT. If this is a new or not previously permitted facility, then leave blank and a number will be assigned.

ITEM 3

SOURCE OF WATER SUPPLY

List all water supplies used. The volume may be estimated from water supply meter readings or from billing statements from a water supply utility. If water is not metered, estimate from pump capacity. Where a name is required, enter name of water supply; e.g., Mud Lake, Huron River, or the City of Millpond.

ITEM 4

FACILITY WATER USAGE

List amounts of water to be used for various purposes as:

Process Water - see Glossary for definition (page 48).

Noncontact Cooling Water - see Glossary for definition (page 48).

Sanitary Water - Water used for domestic purposes; e.g., toilets, sinks, showers.

If water is first used for one purpose and the same water is subsequently used for one or more other purposes, indicate the volume per day of the last designated use before treatment and/or discharge. For example, if water is initially used as noncontact cooling water and then as process water, the quantity of water given should be indicated as process water.

The total of Item 4 should equal the total of Item 3. Any difference in these totals should be explained in an attached sheet of this application.

ITEM 5

CRITICAL MATERIALS AND PRIORITY POLLUTANTS USED, STORED, PRODUCED

List all chemical substances which are in Michigan's Critical Materials Register Table IV (page 6) and/or U.S. EPA's Priority Pollutant List Table V (page 7) that are currently used, stored, or produced by this facility.

SEE INSTRUCTIONS ON REVERSE SIDE

SECTION I

PERMIT NUMBER MI0005827

ITEM 6

DESCRIPTION AND DIAGRAM

A. PROVIDE A BRIEF DESCRIPTION AND LINE DIAGRAM SHOWING THE WATER FLOW THROUGH YOUR FACILITY FROM INTAKE TO DISCHARGE. SHOW ALL OPERATIONS CONTRIBUTING WASTEWATER, INCLUDING PROCESS AND PRODUCTION AREAS, SANITARY FLOWS, COOLING WATER, AND STORMWATER RUNOFF. YOU MAY GROUP SIMILAR OPERATIONS INTO A SINGLE UNIT. THE WATER BALANCE SHOULD SHOW AVERAGE FLOWS. SHOW ALL SIGNIFICANT LOSSES OF WATER TO PRODUCTS, ATMOSPHERE, AND DISCHARGE. YOU SHOULD USE ACTUAL MEASUREMENTS WHENEVER AVAILABLE; OTHERWISE USE YOUR BEST ESTIMATE.

See line diagram on following page.

INSTRUCTIONS FOR COMPLETING SECTION I

ITEM 6

This form requires information about the water flow through your facility from intake to discharge.

ENTER THE PERMIT NUMBER IN THE BOX AT THE TOP OF THIS FORM. THE PERMIT NUMBER CAN BE FOUND ON THE FRONT PAGE OF YOUR EXISTING PERMIT. If this is a new or not previously permitted facility, then leave blank and a number will be assigned.

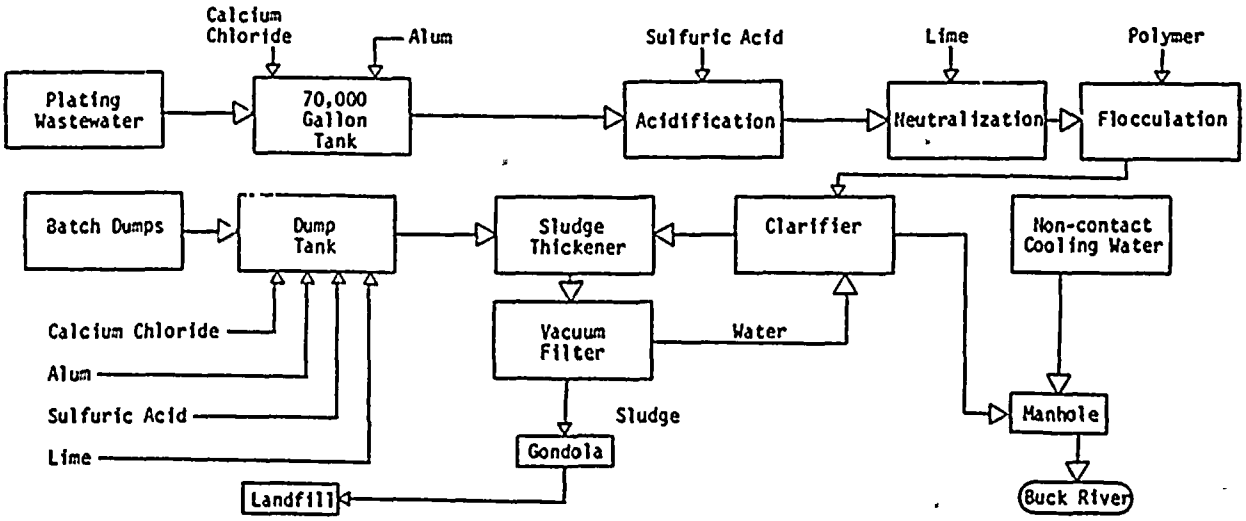
ITEM 6

DESCRIPTION AND LINE DIAGRAM OF FACILITY'S PROCESSES AND TREATMENT SCHEME

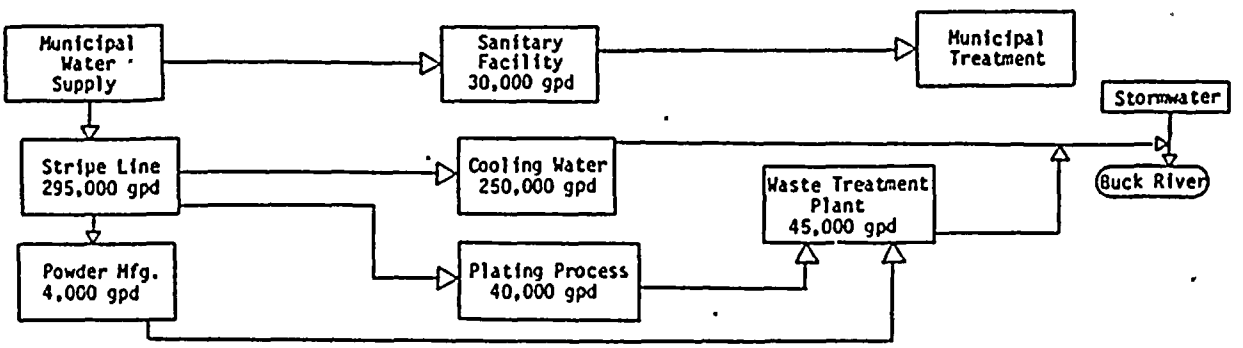
A. Briefly describe the route taken by water in your facility from the intake to the discharge and also provide a line drawing.

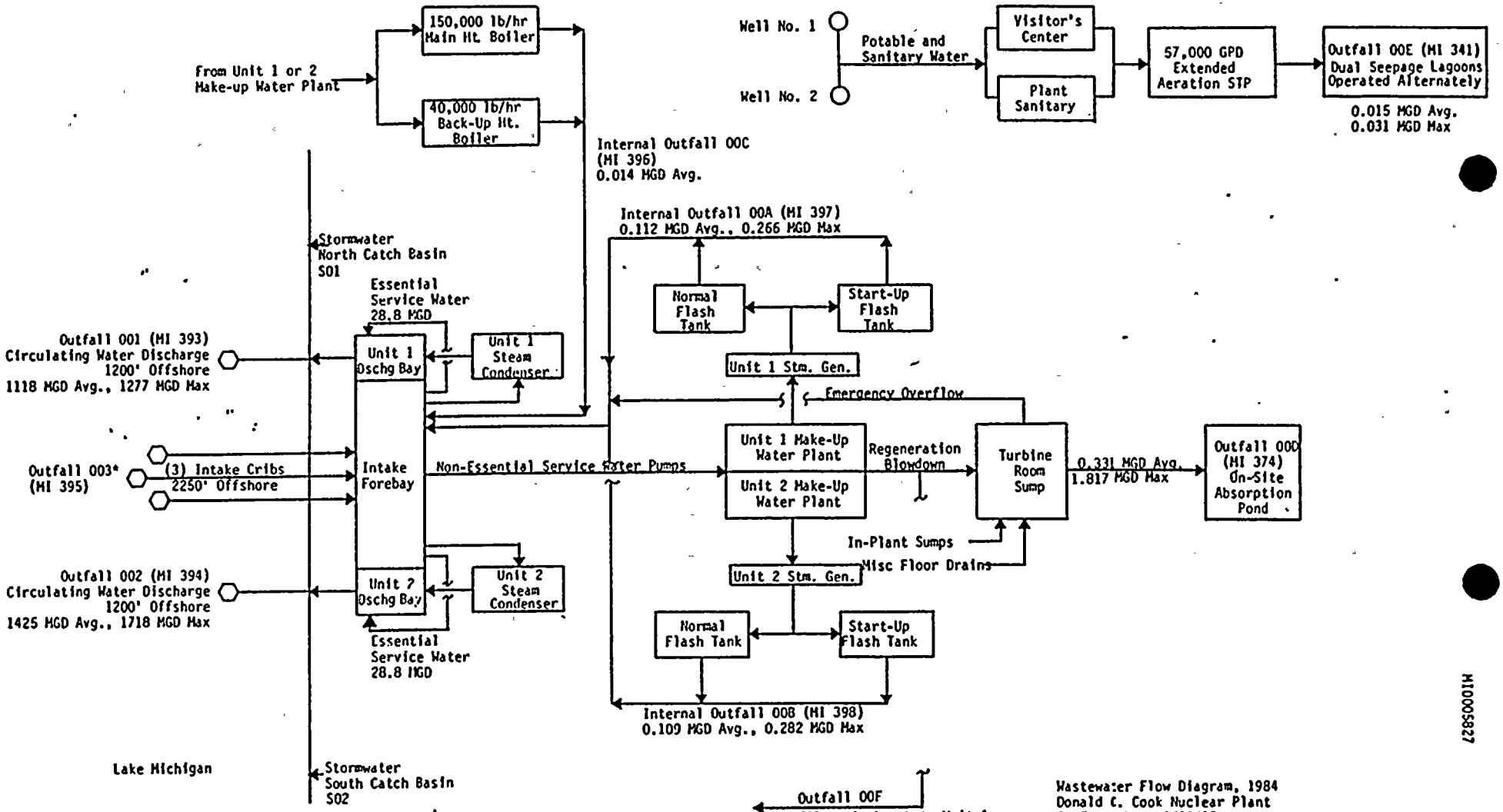
Example Description and Diagram

Narrative: The rinse water from the various plating operations is collected in one of the two 35,000 gallon tanks. Calcium chloride and alum are added to assist in fluoride removal and aid in coagulation. The water is adjusted to a pH of about 5.5 using dilute sulfuric acid. The pH is then raised to a pH of about 10.3 with lime to precipitate the metals as hydroxide. Polymer is added to flocculate the metal hydroxides. The waste stream flows through a clarifier, the metal hydroxide settles to the bottom as "sludge". The treated water flows from the clarifier to a manhole where it commingles with contact cooling water from the strip line. This commingled water is discharged to the Buck River. The sludge from the clarifier goes to a vacuum filter where it is dewatered. The sludge is later taken to a landfill.



John Doe, Inc., Deertown, manufactures sleeve bearings for automotive and truck engines. Production is divided into 3 phases. Metal powder is produced in the first phase. This is accompanied by melting copper, tin and lead into ingots in an electric furnace and applying a jet of water to quench and solidify the melting metal into powder form. The second phase consists of adhering the fine metal powder to a coil of steel by passing the two slowly through furnaces. Water used to cool the strip constitutes the contact cooling water. Bearings are then formed and machined from the coated steel. In the third phase, most bearings receive a nickel strike and lead, tin copper electroplate. The remaining bearings are aluminum or babbitt and receive a tin or lead plate. Rinse water before and after the various plating operations constitutes the process water.




150,000 lb/hr Main Ht. Boiler
40,000 lb/hr Back-Up Ht. Boiler
From Unit 1 or 2 Make-up Water Plant
Well No. 1
Well No. 2
Potable and Sanitary Water
Visitor's Center
Plant Sanitary
57,000 GPD Extended Aeration STP
Outfall 00E (MI 341) Dual Seepage Lagoons Operated Alternately
0.015 MGD Avg.
0.031 MGD Max
Internal Outfall 00C (MI 396) 0.014 MGD Avg.
Internal Outfall 00A (MI 397) 0.112 MGD Avg., 0.266 MGD Max
Stormwater North Catch Basin S01
Essential Service Water 28.8 MGD
Normal Flash Tank
Start-Up Flash Tank
Outfall 001 (MI 393) Circulating Water Discharge 1200' Offshore 1118 MGD Avg., 1277 MGD Max
Unit 1 Dschg Bay
Unit 1 Steam Condenser
Unit 1 Stm. Gen.
Emergency Overflow
Outfall 003* (MI 395)
(3) Intake Cribs 2250' Offshore
Intake Forebay
Non-Essential Service Water Pumps
Unit 1 Make-Up Water Plant
Unit 2 Make-Up Water Plant
Regeneration Blowdown
Turbine Room Sump
0.331 MGD Avg. 1.817 MGD Max
Outfall 000 (MI 374) On-Site Absorption Pond
In-Plant Sumps
Misc Floor Drains
Outfall 002 (MI 394) Circulating Water Discharge 1200' Offshore 1425 MGD Avg., 1718 MGD Max
Unit 2 Dschg Bay
Unit 2 Steam Condenser
Unit 2 Stm. Gen.
Normal Flash Tank
Start-Up Flash Tank
Essential Service Water 28.8 MGD
Internal Outfall 00B (MI 398) 0.109 MGD Avg., 0.282 MGD Max
Lake Michigan
Stormwater South Catch Basin S02
Outfall 00F
Pre-filter Backwash to Unit 1 or Unit 2 Discharge Bay
0.0972 MGD avg.
0.5832 MGD max.
Wastewater Flow Diagram, 1984
Donald C. Cook Nuclear Plant
C. E. Hawk - 2/20/85
Revised - 11/18/86
* Outfall 003 De-icing Dschg was used 42 days In 1984 -- 224 MGD Avg., 839 MGD Max
MI0005827

Outfall 00F - Pre-Filter Backwash

Make-up water of ultra-high purity is required for the steam generators. The first step in treating intake lake water is solids removal using multi-media filters. The filters are called pre-filters since they are the initial step in the treatment process.

Alum (aluminum sulfate) is injected into the water supply upstream of the pre-filters to act as a coagulant on the filter media. When the pre-filters are saturated with solids removed from the lake water, the pre-filters are backwashed with additional lake water, and the solids are flushed to the turbine room sump then discharged to an on-site absorption pond.

The proposed plant modification would reroute the pre-filter backwash to Lake Michigan. There would be a small net increase in the amount of solids returned to Lake MIchigan as a result of the alum added during treatment. The design maximum amount of alum which could be used is 624 lb alum per day which would cause a net increase of 0.05 ppm solids when discharged through Outfall 001 or 0.04 ppm solids when discharged through Outfall 002. The attached screening data show that the typical pre-filter backwash contains only 1.7 µg/l aluminum and 25 µg/l sulfate.

SEE INSTRUCTIONS ON REVERSE SIDE

SECTION I

PERMIT NUMBER MI0005827

ITEM 7

LOCATION MAP

A. PROVIDE A MAP OF THE TREATMENT FACILITY LOCATION, SHOWING THE LOCATION OF THE DISCHARGE POINT(S) AND OTHER INFORMATION REQUESTED ON REVERSE SIDE OF PAGE.

See topo map on following page.

INSTRUCTIONS FOR COMPLETING SECTION I

ITEM 7

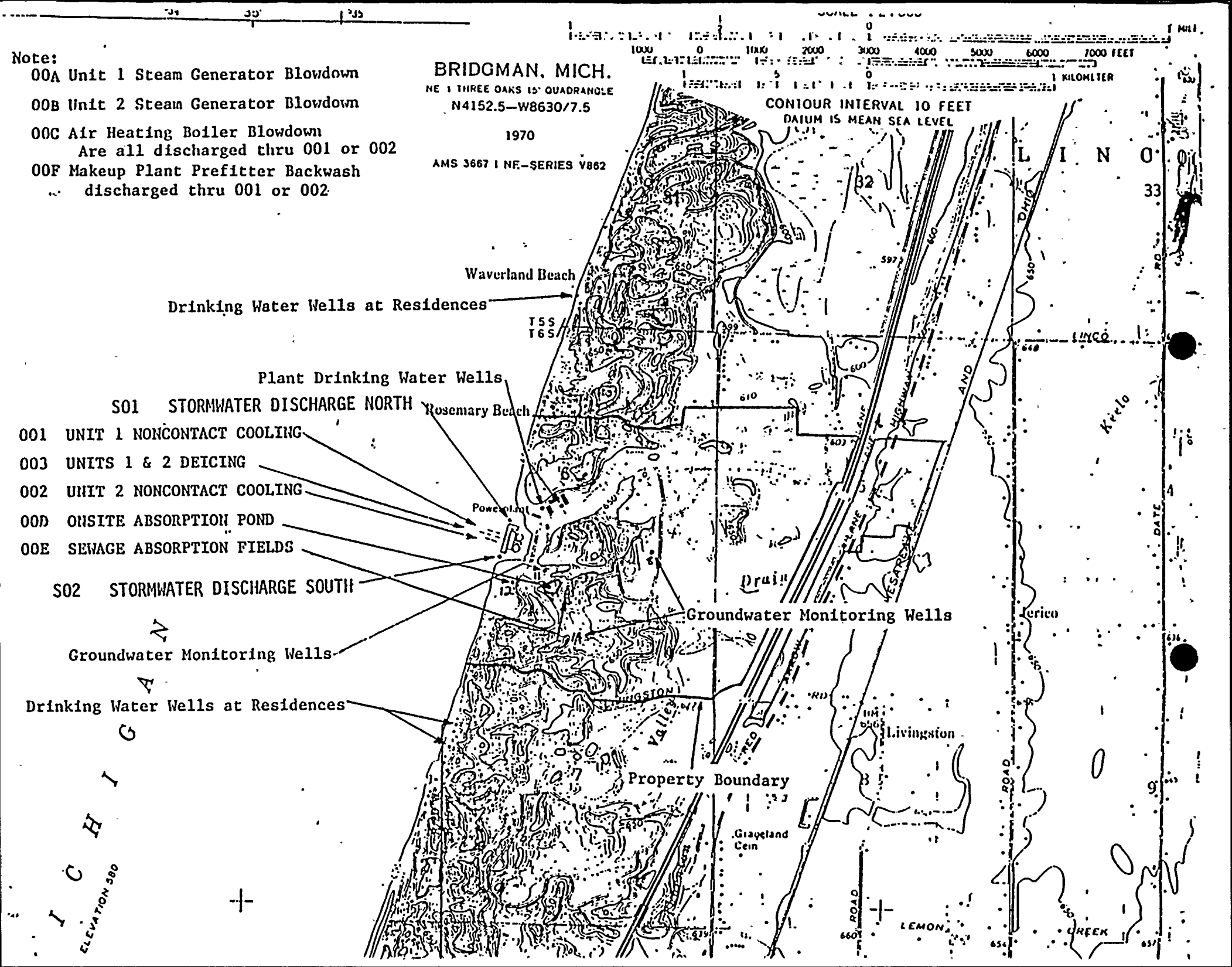
This form requires a location map of the treatment facility showing discharge point(s).

ENTER THE PERMIT NUMBER IN THE BOX AT THE TOP OF THIS FORM. THE PERMIT NUMBER CAN BE FOUND ON THE FRONT PAGE OF YOUR EXPIRING PERMIT. If this is a new or not previously permitted facility, then leave blank and a number will be assigned.

ITEM 7

LOCATION MAP

A. Provide a detailed location map of the treatment facility, showing the location of the discharge point(s) for all surface water and groundwater discharges, and all known supply and drinking water wells of adjacent properties to the facility. For both surface and groundwater discharge applicants, indicate the location and identification number of any groundwater monitoring wells relative to the facility which are currently being used by the applicant to monitor the groundwater. Also, include the receiving stream, lake, or storm sewer and the streets and roads in the area.


Note:
00A Unit 1 Steam Generator Blowdown
00B Unit 2 Steam Generator Blowdown
00C Air Heating Boiler Blowdown
Are all discharged thru 001 or 002
00F Makeup Plant Prefitter Backwash
discharged thru 001 or 002
BRIDGMAN, MICH.
NE 1 THREE OAKS 15' QUADRANGLE
N4152.5—W8630/7.5
1970
AMS 3667 I NE.—SERIES V862
CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL
Waverland Beach
Drinking Water Wells at Residences
T5S
T6S
Plant Drinking Water Wells
S01 STORMWATER DISCHARGE NORTH
Rosemary Beach
001 UNIT 1 NONCONTACT COOLING
003 UNITS 1 & 2 DEICING
002 UNIT 2 NONCONTACT COOLING
00D ONSITE ABSORPTION POND
00E SEWAGE ABSORPTION FIELDS
S02 STORMWATER DISCHARGE SOUTH
Groundwater Monitoring Wells
Groundwater Monitoring Wells
Drinking Water Wells at Residences
Property Boundary
Livingston
Jerico
Graceland Cem
LINCO
LEMON
CREEK
ELEVATION 580

SEE INSTRUCTIONS ON REVERSE SIDE

SECTION I

PERMIT NUMBER → MI0005827

ITEM 8 — CONCENTRATED ANIMAL FEEDING OPERATION

A.	DO YOU OPERATE A CONCENTRATED ANIMAL FEEDING FACILITY? (IF NO CONTINUE TO ITEM 10)	☐ YES ☒ NO
B.	NUMBER OF ACRES USED FOR CONFINEMENT FEEDING?	____.____ ACRES
C.	IF THERE IS OPEN CONFINEMENT, HAS A RUNOFF DIVERSION AND CONTROL SYSTEM BEEN CONSTRUCTED? (IF NO, CONTINUE TO ITEM 9)	☐ YES ☐ NO
D.	WHAT IS THE DESIGN BASIS FOR THE CONTROL SYSTEM? CHECK ONE OF THE FOLLOWING AND ENTER NUMBER OF INCHES OF RAIN?	☐ 10 YEAR, 24 HOUR STORM ____.____ INCHES ☐ 25 YEAR, 24 HOUR STORM ____.____ INCHES ☐ OTHER (SPECIFY) ____.____ INCHES
	TYPE _____	
E.	WHAT IS THE NUMBER OF ACRES OF CONTRIBUTING DRAINAGE?	____.____ ACRES
F.	WHAT IS THE DESIGN SAFETY FACTOR FOR THIS CONTROL SYSTEM?	____.____

ITEM 9 — TYPE & NUMBER OF ANIMALS IN OPEN AND HOUSED CONFINEMENT

TYPE 1	A. LIST TYPE OF ANIMAL.	
	B. GIVE THE NUMBER OF THIS TYPE OF ANIMAL IN OPEN CONFINEMENT.	
	C. GIVE THE NUMBER OF THIS TYPE OF ANIMAL IN HOUSED CONFINEMENT.	
TYPE 2	A. LIST TYPE OF ANIMAL.	
	B. GIVE THE NUMBER OF THIS TYPE OF ANIMAL IN OPEN CONFINEMENT.	
	C. GIVE THE NUMBER OF THIS TYPE OF ANIMAL IN HOUSED CONFINEMENT.	
TYPE 3	A. LIST TYPE OF ANIMAL.	
	B. GIVE THE NUMBER OF THIS TYPE OF ANIMAL IN OPEN CONFINEMENT.	
	C. GIVE THE NUMBER OF THIS TYPE OF ANIMAL IN HOUSED CONFINEMENT.	
TYPE 4	A. LIST TYPE OF ANIMAL.	
	B. GIVE THE NUMBER OF THIS TYPE OF ANIMAL IN OPEN CONFINEMENT.	
	C. GIVE THE NUMBER OF THIS TYPE OF ANIMAL IN HOUSED CONFINEMENT.	
TYPE 5	A. LIST TYPE OF ANIMAL.	
	B. GIVE THE NUMBER OF THIS TYPE OF ANIMAL IN OPEN CONFINEMENT.	
	C. GIVE THE NUMBER OF THIS TYPE OF ANIMAL IN HOUSED CONFINEMENT.	
TYPE 6	A. LIST TYPE OF ANIMAL.	
	B. GIVE THE NUMBER OF THIS TYPE OF ANIMAL IN OPEN CONFINEMENT.	
	C. GIVE THE NUMBER OF THIS TYPE OF ANIMAL IN HOUSED CONFINEMENT.	
TYPE 7	A. LIST TYPE OF ANIMAL.	
	B. GIVE THE NUMBER OF THIS TYPE OF ANIMAL IN OPEN CONFINEMENT.	
	C. GIVE THE NUMBER OF THIS TYPE OF ANIMAL IN HOUSED CONFINEMENT.	
TYPE 8	A. LIST TYPE OF ANIMAL.	
	B. GIVE THE NUMBER OF THIS TYPE OF ANIMAL IN OPEN CONFINEMENT.	
	C. GIVE THE NUMBER OF THIS TYPE OF ANIMAL IN HOUSED CONFINEMENT.	

INSTRUCTIONS FOR COMPLETING SECTION I

ITEMS 8 AND 9

This form requires information about the design, size, and type and numbers of animals in a concentrated animal feedlot.

ENTER THE PERMIT NUMBER IN THE BOX AT THE TOP OF THIS FORM. THE PERMIT NUMBER CAN BE FOUND ON THE FRONT PAGE OF YOUR EXPIRING PERMIT. If this is a new or not previously permitted facility, then leave blank and a number will be assigned.

GENERAL INFORMATION

Not all animal feeding operations are required to obtain NPDES permits. Exclusions are based on size and occurrence of discharge. In particular, for animal feeding operations, the size cutoffs depend on whether or not pollutants are discharged through a manmade device or by direct contact with the facility or animals. A facility for laying hens or broilers is not required to have a permit unless it has a liquid manure handling system or continuous overflow watering. Also, facilities which discharge only in the case of a 25 year, 24 hour storm event are not required to have a permit.

ITEM 9-B

Give only the area used for the animal confinement or feeding facility. Do not include any area used for growing or operating feed.

ITEM 9-C

Check "yes" if any system for collection of runoff has been constructed. Supply the information under D, E, and F to the best of your knowledge.

ITEM 10-B AND C

Give the maximum number of each type of animal in open confinement or housed under roof (either partially or totally) which are held at your facility for a total of 45 days or more in any 12 month period.

Use the following categories for type of animals:

- Slaughter Cattle
- Feeder Cattle
- Mature Dairy Cattle (milked or dry)
- Swine (each weighing over 55 pounds)
- Horses
- Sheep
- Lambs
- Turkeys
- Laying Hens[1]
- Broilers[1]
- Ducks

[1]A permit is not required unless the facility has a liquid manure handling system or continuous overflow watering.

ANIMAL FEEDING OPERATION means a lot or facility (other than an aquatic animal production facility) where the following conditions are met:

(A) Animals (other than aquatic animals) have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12 month period; and

(B) Crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility.

Two or more animal feeding operations under common ownership are a single animal feeding operation if they adjoin each other or if they use a common area or system for the disposal of wastes.

ANIMAL UNIT means a unit of measurement for any animal feeding operation calculated by adding the following numbers: The number of slaughter and feeder cattle multiplied by 1.0; plus the number of mature dairy cattle multiplied by 1.4; plus the number of swine weighing over 25 kilograms (approximately 55 pounds) multiplied by 0.4; plus the number of sheep multiplied by 0.1; plus the number of horses multiplied by 2.0.

CONCENTRATED ANIMAL FEEDING OPERATION means an animal feeding operation which meets the criteria set forth in either (A) or (B) below or which the Director designates as such on a case-by-case basis.

A. More than the numbers of animals specified in any of the following categories are confined (REGARDLESS OF WHETHER A SURFACE WATER DISCHARGE EXISTS):

1. 1,000 slaughter or feeder cattle.
2. 700 mature dairy cattle (whether milked or dry cows).
3. 2,500 swine each weighing over 25 kilograms (approximately 55 pounds).
4. 500 horses.
5. 10,000 sheep or lambs.
6. 55,000 turkeys.
7. 100,000 laying hens or broilers (if the facility has a continuous overflow watering).
8. 30,000 laying hens or broilers (if the facility has a liquid manure handling system).
9. 5,000 ducks.
10. 1,000 animal units.

OR

B. More than the following numbers and types of animals are confined (WITH SURFACE WATER DISCHARGE AS DESCRIBED BELOW*):

1. 300 slaughter or feeder cattle.

SEE INSTRUCTIONS ON REVERSE SIDE

SECTION I

PERMIT NUMBER → MI0005827

ITEM 10 — AQUATIC ANIMAL PRODUTION FACILITY

	A. DO YOU OPERATE AN AQUATIC ANIMAL PRODUCTION FACILITY? (IF NO, CONTINUE TO ITEM 12)	☐ YES ☒ NO
	B. INDICATE THE TOTAL NUMBER OF PONDS, RACEWAYS AND SIMILAR STRUCTURES AT YOUR FACILITY.	____ . PONDS
		____ . RACEWAYS
	SPECIFY ____	____ . OTHER
	C. INDICATE IN WHICH CALENDAR MONTH MAXIMUM FEEDING OCCURS.	____
	D. ENTER THE TOTAL NUMBER OF POUNDS OF FOOD FED DURING THIS MONTH?	____ POUNDS

ITEM 11 — SPECIES OF AQUATIC ANIMALS PRODUCED AT THIS FACILITY

SPECIES 1	A. IS THIS SPECIE A WARM OR COLD WATER SPECIE?	☐ WARM ☐ COLD
	B. GIVE THE NAME OF THIS SPECIE.	____
	C. ENTER THE TOTAL HARVESTABLE WEIGHT OF THIS SPECIE PRODUCED BY THIS FACILITY PER YEAR IN POUNDS.	____ POUNDS
	D. ENTER THE MAXIMUM WEIGHT PRESENT FOR THIS SPECIE WHICH WOULD REPRESENT YOUR NORMAL OPERATION.	____ POUNDS
SPECIES 2	A. IS THIS SPECIE A WARM OR COLD WATER SPECIE?	☐ WARM ☐ COLD
	B. GIVE THE NAME OF THIS SPECIE.	____
	C. ENTER THE TOTAL HARVESTABLE WEIGHT OF THIS SPECIE PRODUCED BY THIS FACILITY PER YEAR IN POUNDS.	____ POUNDS
	D. ENTER THE MAXIMUM WEIGHT PRESENT FOR THIS SPECIE WHICH WOULD REPRESENT YOUR NORMAL OPERATION.	____ POUNDS
SPECIES 3	A. IS THIS SPECIE A WARM OR COLD WATER SPECIE?	☐ WARM ☐ COLD
	B. GIVE THE NAME OF THIS SPECIE.	____
	C. ENTER THE TOTAL HARVESTABLE WEIGHT OF THIS SPECIE PRODUCED BY THIS FACILITY PER YEAR IN POUNDS.	____ POUNDS
	D. ENTER THE MAXIMUM WEIGHT PRESENT FOR THIS SPECIE WHICH WOULD REPRESENT YOUR NORMAL OPERATION.	____ POUNDS
SPECIES 4	A. IS THIS SPECIE A WARM OR COLD WATER SPECIE?	☐ WARM ☐ COLD
	B. GIVE THE NAME OF THIS SPECIE.	____
	C. ENTER THE TOTAL HARVESTABLE WEIGHT OF THIS SPECIE PRODUCED BY THIS FACILITY PER YEAR IN POUNDS.	____ POUNDS
	D. ENTER THE MAXIMUM WEIGHT PRESENT FOR THIS SPECIE WHICH WOULD REPRESENT YOUR NORMAL OPERATION.	____ POUNDS
SPECIES 5	A. IS THIS SPECIE A WARM OR COLD WATER SPECIE?	☐ WARM ☐ COLD
	B. GIVE THE NAME OF THIS SPECIE.	____
	C. ENTER THE TOTAL HARVESTABLE WEIGHT OF THIS SPECIE PRODUCED BY THIS FACILITY PER YEAR IN POUNDS.	____ POUNDS
	D. ENTER THE MAXIMUM WEIGHT PRESENT FOR THIS SPECIE WHICH WOULD REPRESENT YOUR NORMAL OPERATION.	____ POUNDS
SPECIES 6	A. IS THIS SPECIE A WARM OR COLD WATER SPECIE?	☐ WARM ☐ POUNDS
	B. GIVE THE NAME OF THIS SPECIE.	____
	C. ENTER THE TOTAL HARVESTABLE WEIGHT OF THIS SPECIE PRODUCED BY THIS FACILITY PER YEAR IN POUNDS.	____ POUNDS
	D. ENTER THE MAXIMUM WEIGHT PRESENT FOR THIS SPECIE WHICH WOULD REPRESENT YOUR NORMAL OPERATION.	____ POUNDS

INSTRUCTIONS FOR COMPLETING SECTION I

ITEMS 10 AND 11

This form requires information about the design, size, and type and numbers of animals in an aquatic animal production facility.

ENTER THE PERMIT NUMBER IN THE BOX AT THE TOP OF THIS FORM. THE PERMIT NUMBER CAN BE FOUND ON THE FRONT PAGE OF YOUR EXPIRING PERMIT. If this is a new or not previously permitted facility, then leave blank and a number will be assigned.

GENERAL INFORMATION

Not all fish farms are required to obtain NPDES permits. Exclusions are based on size and occurrence of discharge. For aquatic animal production facilities, the size cutoffs are based on whether the species are warm water or cold water, on the production weight per year in harvestable pounds, and on the amount of feeding in pounds of food (for cold water species). Also, facilities which discharge less than 30 days per year, or only during periods of excess runoff (for warm water fish) are not required to have a permit.

CONCENTRATED AQUATIC ANIMAL PRODUCTION FACILITY means a hatchery, fish farm, or other facility which contains, grows or holds aquatic animals in either of the following categories, or which the Director designates as such on a case-by-case basis.

A. Cold water fish species or other cold water aquatic animals including, but not limited to, the Salmonidae family of fish (e.g., trout and salmon) in ponds, raceways or other similar structures which discharge at least 30 days per year but does not include:

   1. Facilities which produce less than 9,090 harvest weight kilograms (approximately 20,000 pounds) of aquatic animals per year.

   2. Facilities which feed less than 2,272 kilograms (approximately 5,000 pounds) of food during the calendar month of maximum feeding.

B. Warm water fish species or other warm water aquatic animals including, but not limited to, the Ameluridae, Cetrachidae, and Cyprinidae families of fish (e.g., respectively, catfish, sunfish, and minnows) in ponds, raceways, or other similar structures which discharge at least 30 days per year, but does not include:

   1. Closed ponds which discharge only during periods of excess runoff.

   2. Facilities which produce less than 45,454 harvest weight kilograms (approximately 100,000 pounds) of aquatic animals per year.

ITEM 11-B

Give the total number of discrete ponds or raceways in your facility. Under "other" give a descriptive name of any structure which is not a pond or a raceway but which results in discharge to waters of the United States.

ITEM 11-D

The value given for maximum monthly pounds of food should be representative of your normal operation.

ITEM 12-B

The name of fish species should be proper, common, or scientific names.

ITEM 12-C AND D

The values given for total weight produced by your facility per year and the maximum weight present at any one time should be representative of your normal operation.

NOTE: The permittee shall continue with Section II and address items 1, 2, 4, and 5 on pages 31, 33, and 35.

ITEM 12

MAILING LIST OF ADJACENT PROPERTY OWNERS

LIST NAME AND MAILING ADDRESS OF ALL PROPERTY OWNERS ADJACENT TO THE TREATMENT FACILITY AND OR DISCHARGE/DISPOSAL AREA.

No change from information previously provided.

SEE INSTRUCTIONS ON REVERSE SIDE

SECTION II

PERMIT NUMBER → MI0005827

ITEM 1 — DISCHARGE LOCATION, SCHEDULE, FLOW RATE

WASTEWATER TYPE CODE
1 CONTACT COOLING
2 NONCONTACT COOLING
3 PROCESS
4 SANITARY
5 STORMWATER

UNIT CODE
1 MGY
2 MGD
3 GPD

OUTFALL NUMBER	0 0 F
A. LOCATION OF DISCHARGE	N W ¼, S W ¼, SECTION 0 6, TOWN 0 6 S, RANGE 1 9 W
B. NAME OF RECEIVING WATER (IE. GROUNDWATER OR NAME OF SURFACE WATER)	L A K E M I C H I G A N
C. DO YOU DISCHARGE SEASONALLY? (IF NO, CONTINUE TO E)	☐ YES ☒ NO
D. IF YES, LIST DISCHARGE PERIODS	NA — MO. / DAY THROUGH MO. / DAY (3 lines)
E. LAND APPLICATION RATE	NA — IN./HR. / HR./DAY / IN./WK. ☐
F. TYPE OF WASTEWATER DISCHARGE	WASTEWATER TYPE CODE: 3
G. DISCHARGE SCHEDULE (YEARLY AVERAGE)	HOURS/DAY 0 12 — DAY/YEAR 3 6 5
H. DISCHARGE FLOW RATE	TOTAL YEARLY 5 1 0 (UNIT CODE 1); DAILY MINIMUM 0 . 0 9 7 2 (2); DAILY MAXIMUM 0 . 5 8 3 2 (2)
I. THE MAXIMUM DISCHARGE FLOW RATE TO BE AUTHORIZED IN PERMIT.	AUTHORIZED 0 . 5 8 3 2 (UNIT CODE 2)
J. MAXIMUM DESIGN DISCHARGE FLOW RATE.	DESIGN 0 . 5 8 3 2 (UNIT CODE 2)

ITEM 2 — WATER TREATMENT ADDITIVES

UNITS CODE
1 Mg/l
2 Ug/l

A. DO YOU USE WATER TREATMENT ADDITIVES TO TREAT YOUR DISCHARGE? (IF NO, CONTINUE TO ITEM 3)	☐ YES ☒ NO
B. NAME, FUNCTION, AND CHEMICAL COMPOSITION OF THESE ADDITIVES.	NAME / FUNCTION
C. NAME AND ADDRESS OF MANUFACTURERS OF THESE ADDITIVES.	

D. EXPECTED DISCHARGE CONCENTRATION OF ADDITIVES.	MINIMUM	UNITS CODE	AVERAGE	UNITS CODE	MAXIMUM	UNITS CODE
ADDITIVE NAME						
ADDITIVE NAME						
ADDITIVE NAME						

E. DO YOU TREAT THE DISCHARGE TO REMOVE ADDITIVES?	☐ YES ☒ NO

F. WHAT IS THE REMOVAL EFFICIENCY AND DISCHARGE FREQUENCY?	% REMOVAL	DISCHARGE FREQUENCY HRS./DAY	DISCHARGE FREQUENCY DAYS/WK.
ADDITIVE NAME			
ADDITIVE NAME			
ADDITIVE NAME			

G. AS AN ATTACHMENT TO THIS APPLICATION PROVIDE SPECIFIC MAMMALIAN OR AQUATIC TOXICOLOGICAL DATA OR REFERENCE WHICH ARE AVAILABLE AND INFORMATION ON THE RATE OF DEGRADATION OF THE PRODUCTS FOR EACH ADDITIVE.

INSTRUCTIONS FOR COMPLETING SECTION II

ITEMS 1 AND 2

This form requires information on the facility's discharge location, discharge schedule, volume flow rate and water treatment additives.

ENTER THE PERMIT NUMBER IN THE BOX AT THE TOP OF THIS FORM. THE PERMIT NUMBER CAN BE FOUND ON THE FRONT PAGE OF YOUR EXPIRING PERMIT. If this is a new or not previously permitted facility, then leave blank and a number will be assigned.

Enter the outfall number in space provided for each page of Section II. For each individual discharge point a separate set of Section II forms must be filled out.

ITEM 1

DISCHARGE LOCATION, SCHEDULE AND FLOW RATES

A. Enter the location of discharge, this should include quarter-quarter section, quarter section, town, and range.

B. List name of receiving water (if surface water discharge).

C. Indicate whether facility discharges on a seasonal basis.

D. If yes, list discharge periods.

E. Provide the land application rates used or expected to be used in terms of inches per hour, hours per day, and inches per week.

F. Indicate the type of wastewater to be discharged from this outfall. Refer to the wastewater type code given in the left margin. More than one code may be applicable.

G. Provide the average number of hours per day in which the facility discharges treated wastewater and the total number of days per year in which the discharge occurs.

H. Provide current (from the last 12 months) or expected flow rates as requested. Refer to unit code given in the left margin for the appropriate flow units. MGY - million gallons per year; MGD - million gallons per day; GPD - gallons per day.

I. Provide the maximum discharge flow rate which you want to have authorized within the permit. NOTE: For NPDES permits only, the use of such a flow rate will not place an actual limit restriction on the flow but will be the flow rate used to develop effluent limits. Also, when the Monthly Operating Reports are reviewed by Compliance staff it will help them to determine if any new or increased uses might have occurred at the facility.

J. Provide the design flow for this specific outfall discharge (e.g. batch treatment system flow, packaged treatment system flow, or some other finite treatment system flow).

ITEM 2

WATER TREATMENT ADDITIVES

A. Indicate whether discharge is treated with conditioners, inhibitors, or microbiocide. If not, continue to item 3.

B. Give name, function, and chemical composition of additives used.

C. Give name and address of the manufacturer(s) of the additives used.

D. Indicate expected minimum, average and maximum discharge concentrations of the additive(s) for this discharge.

E. Indicate whether you treat the discharge to remove the additive(s) before discharge of wastewater.

F. Indicate the removal efficiency of each additive from the wastewater and the discharge frequency of each additive to the surface water or groundwater.

G. NOTE: It is the responsibility of the applicant to supply the product information as requested in this item 4. Information requested but not supplied may result in the application being returned to the applicant for completion.

SEE INSTRUCTIONS ON REVERSE SIDE

SECTION II

PERMIT NUMBER → MI0005827

ITEM 3

PROCESS STREAMS CONTRIBUTING TO OUTFALL DISCHARGE

OUTFALL NUMBER: 0 0 F

PROCESS 1

A. NAME OF PROCESS CONTRIBUTING TO THE DISCHARGE THROUGH THIS OUTFALL AND SIC CODE: FILTER BACKWASH 4911

B. PROCESS SCHEDULE (YEARLY AVERAGE): HOURS/DAY 01 2 DAYS/YEAR 365

C. PROCESS VOLUME FLOW RATE: UNIT CODE

TOTAL YEARLY	50.	5
DAILY MINIMUM	0.0972	6
DAILY MAXIMUM	0.6812	6

D. PROCESS PRODUCTION RATE: NA — UNITS / TIME

PROCESS 2

A. NAME OF PROCESS CONTRIBUTING TO THE DISCHARGE THROUGH THIS OUTFALL AND SIC CODE

B. PROCESS SCHEDULE (YEARLY AVERAGE): HOURS/DAY ___ DAYS/YEAR ___

C. PROCESS VOLUME FLOW RATE: UNIT CODE

TOTAL YEARLY	
DAILY MINIMUM	
DAILY MAXIMUM	

D. PROCESS PRODUCTION RATE: UNITS / TIME

PROCESS 3

A. NAME OF PROCESS CONTRIBUTING TO THE DISCHARGE THROUGH THIS OUTFALL AND SIC CODE

B. PROCESS SCHEDULE (YEARLY AVERAGE): HOURS/DAY ___ DAYS/YEAR ___

C. PROCESS VOLUME FLOW RATE: UNIT CODE

TOTAL YEARLY	
DAILY MINIMUM	
DAILY MAXIMUM	

D. PROCESS PRODUCTION RATE: UNITS / TIME

PROCESS 4

A. NAME OF PROCESS CONTRIBUTING TO THE DISCHARGE THROUGH THIS OUTFALL AND SIC CODE

B. PROCESS SCHEDULE (YEARLY AVERAGE): HOURS/DAY ___ DAYS/YEAR ___

C. PROCESS VOLUME FLOW RATE: UNIT CODE

TOTAL YEARLY	
DAILY MINIMUM	
DAILY MAXIMUM	

D. PROCESS PRODUCTION RATE: UNITS / TIME

PROCESS 5

A. NAME OF PROCESS CONTRIBUTING TO THE DISCHARGE THROUGH THIS OUTFALL AND SIC CODE

B. PROCESS SCHEDULE (YEARLY AVERAGE): HOURS/DAY ___ DAYS/YEAR ___

C. PROCESS VOLUME FLOW RATE: UNIT CODE

TOTAL YEARLY	
DAILY MINIMUM	
DAILY MAXIMUM	

D. PROCESS PRODUCTION RATE: UNITS / TIME

UNITS CODE
1 POUNDS
2 GALLONS
3 CUBIC YARDS
4 TONS
5 MGY
6 MGD
7 GPD

TIME
1 HOUR
2 DAY
3 WEEK
4 MONTH
5 YEAR

INSTRUCTIONS FOR COMPLETING SECTION II

ITEM 3

This form requires information on the process streams which contribute to this discharge.

ENTER THE PERMIT NUMBER IN THE BOX AT THE TOP OF THIS FORM. THE PERMIT NUMBER CAN BE FOUND ON THE FRONT PAGE OF YOUR EXPIRING PERMIT. If this is a new or not previously permitted facility, then leave blank and a number will be assigned.

Enter outfall number in space provided for each page of Section II. For each individual discharge point a separate set of Section II forms must be filled out.

ITEM 3

PROCESS STREAMS CONTRIBUTING TO DISCHARGE: FOR EACH SEPARATE PROCESS PROVIDE THE FOLLOWING INFORMATION

A. Enter the name of the process which contributes to this discharge. Also provide the proper SIC code.

B. Indicate the yearly average process schedule in hours per day and days-per-year.

C. Provide the flow rate information as requested based on your last 12 months of operations. Refer to unit code given in the left margin for the appropriate flow units.

D. Process Production Rate - Certain permit limitations may be based on production rates. The production rates used to determine permit limits shall be represented by a reasonable measure of actual production of the facility, such as the production during the high month of the previous year, or the monthly average for the highest of the previous five years, or other reasonable measure as stated in applicable U.S.E.P.A. categorical rules and regulations.

For new sources or new dischargers, actual production shall be estimated using projected production.

Record your production rates in the terms and units used in the applicable U.S.E.P.A. categorical rules and regulations for your type of facility.

SEE INSTRUCTIONS ON REVERSE SIDE

SECTION II

PERMIT NUMBER → MI0005827

ITEM 4 GROUNDWATER DISCHARGE INFORMATION

OUTFALL NUMBER	001
A. IS THE DISCHARGE FROM THIS OUTFALL DIRECTED TO THE GROUND OR GROUNDWATERS? (IF NO, CONTINUE TO ITEM 5)	☐ YES ☒ NO
B. HAS A HYDROGEOLOGICAL STUDY OR ITS EQUIVALENT BEEN PERFORMED OR IS THERE SUFFICIENT CURRENT HYDROGEOLOGICAL INFORMATION AVAILABLE AS REQUIRED BY THE WATER RESOURCES COMMISSION PART 22 GROUNDWATER RULES OF AUGUST 14, 1980 R.323.2207 (PAGE 45) FOR THIS EXISTING OR PROPOSED DISCHARGE? IF YES ATTACH A COPY OF THE REPORT.	☐ YES ☐ NO
C. ARE YOU REQUESTING AN EXEMPTION FROM SUBMITTING A HYDROGEOLOGICAL REPORT UNDER RULE R.323.2207 (1)) (PAGE 45) OR FROM GROUNDWATER MONITORING REQUIREMENTS UNDER RULE R.323.2208 (5) (PAGE 47) OF THE PART 22 RULES. IF "YES" ATTACH DOCUMENTS AND EXPLANATION TO DEMONSTRATE THAT YOUR DISCHARGE WOULD QUALIFY FOR AN EXEMPTION.	☐ YES ☐ NO
D. ARE YOU REQUESTING A VARIANCE FROM RULE 323.2205 (PAGE 45) (NONDEGRADATION) OF THE WATER RESOURCES COMMISSION PART 22 GROUNDWATER RULES? IF YES, ATTACH SUCH DOCUMENTS AS NECESSARY TO DEMONSTRATE THE NEED FOR A VARIANCE IN TERMS OF THE CRITERIA SPECIFIED IN RULE 323.2210 (PAGE 47) OF THE PART 22 RULES.	☐ YES ☐ NO
E. LIST ALL CHEMICAL SUBSTANCES WHICH ARE IN MICHIGAN'S CRITICAL MATERIALS REGISTER TABLE IV (PAGE 6) AND/OR U.S. EPA'S PRIORITY POLLUTANT LIST TABLE V (PAGE 7) OR ANY OTHER SUBSTANCES WHICH ARE OR MAY BECOME INJURIOUS TO THE DESIGNATED USES OF THE GROUNDWATER OR TO THE PUBLIC HEALTH THAT ARE DISCHARGED OR EXPECTED TO BE DISCHARGED TO THE GROUNDWATER BY THIS FACILITY. ESTIMATE THE FINAL EFFLUENT CONCENTRATION AND RECORD ALL DATA IN ITEM 7 OF SECTION II IN THIS BOOKLET. THE APPLICANT MAY BE REQUIRED TO DO ADDITIONAL WASTE ANALYSES.	☐ NOT APPLICABLE/BELIEVED ABSENT ☐ PRESENT, DATA PROVIDED IN ITEM 7

ITEM 5 EXPECTED WASTEWATER CHARACTERISTICS

UNITS CODE: 1 Mg/l; 2 Ug/l; 3 COUNTS/100 ml; 4 S.U.; 5 °F; 6 LBS/DAY

SAMPLE TYPE: 1 GRAB; 2 24 HOUR COMPOSITE

A. DISCHARGE CHARACTERISTICS

	CONCENTRATION AVE	CONCENTRATION MAX	UNITS CODE	# ANALYSES	SAMPLE TY CODE
*BOD5 (FIVE DAY BIOLOGICAL OXYGEN DEMAND)			1		
*COD (CHEMICAL OXYGEN DEMAND)			1		
*TOC (TOTAL ORGANIC CARBON)			1		
*AMMONIA NITROGEN (AS N)			1		
*TOTAL SUSPENDED SOLIDS			1		
TOTAL PHOSPHORUS (AS P)			1		
TOTAL RESIDUAL CHLORINE			1		
DISSOLVED OXYGEN	MIN		1		
*PH	MIN		4		
FECAL COLIFORM BACTERIA			3		
*TEMPERATURE (SUMMER)			5		
*TEMPERATURE (WINTER)			5		

B. OTHER WASTEWATER CHARACTERISTICS

OIL & GREASE					

See attached sheets for data.

INSTRUCTIONS FOR COMPLETING SECTION II

ITEMS 4 AND 5

This form requires information on a specific outfall discharging to either the groundwaters or the surface waters.

ENTER THE PERMIT NUMBER IN THE BOX AT THE TOP OF THIS FORM. THE PERMIT NUMBER CAN BE FOUND ON THE FRONT PAGE OF YOUR EXPIRING PERMIT. If this is a new or not previously permitted facility, then leave blank and a number will be assigned.

Enter the outfall number in the space provided for each page of Section II. For each individual discharge point a separate set of Section II forms (Items 4 and 5) must be filled out.

ITEM 4

GROUNDWATER DISCHARGE INFORMATION (DO NOT INCLUDE DEEP WELL INJECTION INFORMATION IN THIS ITEM)

A.-D. The applicant shall address each of these parts if the discharge from this outfall is to the groundwater.

ITEM 5

EXISTING OR EXPECTED (FOR A NEW DISCHARGE) WASTEWATER CHARACTERISTICS OF GROUNDWATER OR SURFACE WATER DISCHARGE (DO NOT INCLUDE DEEP WELL INJECTION INFORMATION IN THIS FORM)

A. The applicant shall report available discharge data (real data for existing discharge or expected data for a proposed discharge) for the parameters as listed. These parameters shall be addressed for either a surface water discharge or as appropriate for a groundwater discharge. For assistance in determining appropriate parameters a groundwater discharge applicant may contact the Groundwater Quality Division, Permits Section or the appropriate Groundwater Quality Division's District office.

   The applicant shall report the sample type code best describing each reported piece of data. See coding on the left margin of this form.

   If this outfall is a surface water discharge, the applicant must report quantitative data for each parameter identified by an asterisk. The applicant may, however, request that the reporting of data for one or more of these required parameters be waived. Such request must be supported by adequate rationale. Make such a request an attachment to this application.

B. If data is available for other parameters not listed above in A. or other parts of this application the applicant should report that data in the blank spaces provided in this part.

NOTES:

1. Unit codes for parameters reported in parts A and B can be found on the left hand side of this form.

2. Grab sample shall be used to analyze for pH, temperature, total phenols, residual chlorine, oil and grease, and fecal coliform in a surface water discharge unless other frequency-sample type analyses are available. See Glossary (page 46) for definition of grab sample.

3. 24-hour composite samples shall be used to analyze for Total BOD_5, COD, TOC, Ammonia Nitrogen, and Total Suspended Solids in a surface water discharge unless other frequency-sample type analyses are available. See Glossary (page 46) for definition of composite sample.

4. REPORTING OF INTAKE DATA. You are not required to report unless you wish to demonstrate your eligibility for a "net" effluent limitation for one or more pollutants, that is, an effluent limitation adjusted by subtracting the average level of the pollutant(s) present in your intake water. NPDES regulations allow net limitations only in certain circumstances. To demonstrate your eligibility, report the average of the results of analyses on your intake water (if your water is treated before use, test the water after it is treated), and attach a separate sheet containing the following for each pollutant:

   (a) A statement that the intake water is drawn from the body of water into which the discharge is made. (Otherwise, you are not eligible for net limitations.)

   (b) A statement of the extent to which the level of the pollutant is reduced by treatment of your wastewater. (Your limitations will be adjusted only to the extent that the pollutant is not removed.)

   (c) When applicable (for example, when the pollutant represents a class of compounds), a demonstration of the extent to which the pollutants in the intake vary physically, chemically, or biologically from the pollutants contained in your discharge. (Your limitations will be adjusted only to the extent that the intake pollutants do not vary from the discharged pollutants.)

5. If you have two or more substantially identical outfalls, you may request permission from your permitting authority to sample and analyze only one outfall and submit the results of the analysis for other substantially identical outfalls. If your request is granted by the permitting authority, on a separate sheet attached to the application form identify which outfall you did test, and describe why the outfalls which you did not test are substantially identical to the outfall which you did test.

SEE INSTRUCTIONS ON REVERSE SIDE

SECTION II

PERMIT NUMBER → MI0005827

ITEM 6

PRIORITY POLLUTANTS AND ADDITIONAL INFORMATION FOR SURFACE WATER DISCHARGE ONLY

OUTFALL NUMBER	0 0 1 F
THE FOLLOWING REQUESTED INFORMATION SHALL BE ADDRESSED BY ALL SURFACE WATER DISCHARGERS. NOTE! NEW USE DISCHARGERS SHALL PROVIDE EXPECTED VALUES FOR THE QUANTITATIVE AND QUALITATIVE INFORMATION REQUESTED BELOW.	
A. IS THIS FACILITY A PRIMARY INDUSTRY? (REFER TO TABLE IA PAGE 41) (IF NO, GO TO E) (IF YES, GO TO B)	[X] YES [ ] NO
B. INDICATE TYPE OF PRIMARY INDUSTRY AS LISTED IN TABLE IA PAGE 41. (CONTINUE WITH C.)	S T M E P L R
C. DOES THIS OUTFALL DISCHARGE CONTAIN ANY PROCESS WASTEWATER? (IF NO, GO TO E) (IF YES, GO TO D)	[X] YES [ ] NO
D. INDICATE WHICH GC/MS FRACTIONS MUST BE TESTED FOR. (REFER TO TABLE IA PAGE 41) NOTE! FOR EACH GC/MS FRACTION CHECKED, EACH SPECIFIC ORGANIC TOXIC POLLUTANT WITHIN EACH FRACTION MUST BE ANALYZED FOR (SEE TABLE IIA PAGE 42. IN ADDITION, ALL PRIMARY INDUSTRY APPLICANTS WITH A PROCESS WASTEWATER DISCHARGE MUST PROVIDE QUANTITATIVE DATA FOR EACH TOXIC POLLUTANT IN TABLE IIIA PAGE 43). RECORD ALL DATA ON FORMS PROVIDED (ITEM 7) IN THIS BOOKLET. (CONTINUE WITH E-K BELOW)	[X] VOLATILE [X] BASE/NEUTRAL [X] ACID [ ] PESTICIDE
E. IF ANY SURFACE WATER DISCHARGE APPLICANT (PRIMARY OR SECONDARY INDUSTRY), REGARDLESS OF THE TYPE OF DISCHARGE, KNOWS OR HAS REASON TO BELIEVE THAT ANY POLLUTANT LISTED IN TABLE IIA AND IVA PAGES 42-45 IS DISCHARGED FROM ANY OUTFALL, THE QUANTITATIVE MUST BE PROVIDED. RECORD ALL DATA ON FORMS PROVIDED (ITEM 7) IN THIS BOOKLET.	[ ] NOT APPLICABLE/BELIEVED ABSENT [X] PRESENT/DATA IS ATTACHED
F. IF ANY SURFACE WATER DISCHARGE APPLICANT (PRIMARY OR SECONDARY INDUSTRY), REGARDLESS OF TYPE OF DISCHARGE, KNOWS OR HAS REASON TO BELIEVE ANY POLLUTANTS LISTED IN TABLE VA PAGE 45 ARE DISCHARGED FROM ANY OUTFALL THE APPLICANT MUST DESCRIBE REASONS FOR THE POLLUTANT BEING PRESENT AND PROVIDE ANY AVAILABLE QUANTITATIVE DATA. RECORD ALL DATA ON FORMS PROVIDED (ITEM 7) IN THIS BOOKLET.	[X] NOT APPLICABLE/BELIEVED ABSENT [ ] PRESENT/DATA IS ATTACHED
G. ALL SURFACE WATER DISCHARGE APPLICANTS (PRIMARY AND SECONDARY INDUSTRIES) WHO: USES OR MANUFACTURES 2, 4, 5 - TRICHLOROPHENOXY ACETIC ACID (2, 4, 5-T); 2-(2, 4, 5-TRICHLOROPHENOXY) PROPANOIC ACID (SILVEX, 2, 4, 5, TP); 2-(2, 4, 5-TRICHLOROPHENOXY) ETHYL 2, 2-DICHLOROPROPIONATE (ERBON); 0, 0-DIMETHYL 0-(2, 4, 5-TRICHLOROPHENYL) PHOSPHOROTHIOATE (RONNEL); 2, 4, 5-TRICHLOROPHENOL (TCP); OR HEXACHLOROPHENE (HCP); (ALL DATA FOR THE ABOVE MUST BE GENERATED USING STANDARD ANALYTICAL CALIBRATION PROCEDURES) OR KNOWS OR HAS REASON TO BELIEVE THAT TCDD IS OR MAY BE PRESENT IN THEIR DISCHARGE. MUST REPORT QUALITATIVE DATA, GENERATED WHICH USED A SCREENING PROCEDURE NOT CALIBRATED WITH ANALYTICAL STANDARDS, FOR 2, 3, 7, 8, - TETRACHLORODIBENZO-P-DIOXIN (TCDD). RECORD ALL DATA ON FORMS PROVIDED (ITEM 7) IN THIS BOOKLET.	[X] NOT APPLICABLE/BELIEVED ABSENT [ ] PRESENT/DATA IS ATTACHED
J. IF THE SURFACE WATER DISCHARGE APPLICANT KNOWS OR HAS REASON TO BELIEVE THAT BIOLOGICAL TOXICITY TESTS WERE MADE IN THE LAST THREE (3) YEARS ON ANY OF THE APPLICANT'S DISCHARGES OR ON A RECEIVING WATER IN RELATION TO A DISCHARGE, PROVIDE THIS INFORMATION AS AN ATTACHMENT TO THIS APPLICATION.	[X] NOT APPLICABLE [ ] APPLICABLE/SEE ATTACHED
K. IF A CONTRACT LABORATORY OR CONSULTING FIRM PERFORMED ANY OF THE ANALYSES REQUIRED BY THIS APPLICATION, PROVIDE THE NAME AND ADDRESS OF EACH LABORATORY OR FIRM AND THE ANALYSES PERFORMED AS AN ATTACHMENT OF THIS APPLICATION.	[ ] NOT APPLICABLE [X] APPLICABLE/SEE ~~ATTACHED~~ BELOW
L. DO YOU DISCHARGE ANY OTHER TOXIC OR INJURIOUS CHEMICAL SUBSTANCES NOT LISTED IN TABLES IV PAGE 6 AND IIA THROUGH VA PAGES 42-45. IF YES, THEN IDENTIFY THE CHEMICAL SUBSTANCES AND ESTIMATE THE FINAL EFFLUENT CONCENTRATIONS. SUBMIT THIS INFORMATION AS AN ATTACHMENT TO THIS APPLICATION.	[X] NOT APPLICABLE [ ] APPLICABLE/SEE ATTACHED

K. NUS Corporation
Laboratory Services Division
5350 Campbells Run Road
Pittsburgh, PA 15205

INSTRUCTIONS FOR COMPLETING SECTION II

ITEM 6

This form requires information on a specific outfall discharging to the surface waters.

ENTER THE PERMIT NUMBER IN THE BOX AT THE TOP OF THIS FORM. THE PERMIT NUMBER CAN BE FOUND ON THE FRONT PAGE OF YOUR EXPIRING PERMIT. If this is a new or not previously permitted facility, then leave blank and a number will be assigned.

Enter the outfall number in the space provided for each page of Section II. For each individual discharge point a separate set of Section II, Item 6 forms must be filled out.

ITEM 6

PRIORITY POLLUTANTS AND ADDITIONAL INFORMATION

NOTE: If you have two or more substantially indentical outfalls, you may request permission from your permitting authority to sample and analyze only one outfall and submit the results of the analysis for other substantially identical outfalls. If your request is granted by the permitting authority, on a separate sheet attached to the application form identify which outfall you did test, and describe why the outfalls which you did not test are substantially identical to the outfall which you did test.

NOTE: 40 CFR Part 122.21(g)(8), Friday, April 1, 1983, provides for a Small Business Exemption from the reporting of quantitative data for organic toxic pollutants and toxic pollutants as required by Part 122.21(g)(7)(ii)(A) or 122.21(g)(7)(iii)(A).

A.-C. and E.-J. These parts are self-explanatory and do not require further instructions. Simply go through each part and do as indicated.

D. Several industrial categories and subcategories have been exempted from submitting data on certain GC/MS Fractions (40 CFR Part 122, Vol. 48, No. 64, Friday, April 1, 1983, Notes 1, 2, and 3).

Review the following list to determine whether your facility qualifies to be exempt from reporting GC/MS (Gas Chromatography/Mass Spectroscopy) Fractions.

GC/MS Fraction

Testing and Reporting Exemptions

Textile Mills Industry

- All four GC/MS organic fractions in the Greige Mills Subcategory.
- Pesticide fraction in all other subparts of this industry.

Ore Mining and Dressing Industry

- Volatile, base/neutral, and pesticide fractions in the Base and Precious Metals Subcategory.
- All four GC/MS organic fractions in all other subcategories of this industry.

Porcelain Enameling Industry

- All four GC/MS organic fractions.

Gum and Wood Chemicals Industry

- Pesticide fraction in the Tall Oil Rosin Subcategory and the Rosin Based Derivatives Subcategory.
- Pesticide and base/neutral fractions in all other subcategories of this industry.

Leather Tanning and Finishing Industry

- Pesticide fraction in all subparts.

Paint and Ink Formulation Industry

- Pesticide fraction in all subparts.

Photographic Supplies Industry

- Pesticide fraction in all subparts.

Petroleum Refining Industry

- Acid, base/neutral, and pesticide fractions.

Pulp and Paper Industry

- Pesticide fraction in Papergrade Sulfite subcategories (subparts J and U).
- Base/neutral and pesticide fractions in Deink Subpart Q, Dissolving Kraft Subpart F, and Paperboard from Waste Paper Subpart E.
- Volatile, base/neutral, pesticide fractions in the BCT Bleached Kraft Subpart H, Semi-chemical Subparts B and C, and Nonintegrated-Fine Papers Subpart R.
- Acid, base/neutral, and pesticide fractions in Fine Bleached Kraft Subpart I, Dissolving Sulfite Pulp Subpart K, Groundwood Fine Papers Subpart O, Market Bleached Kraft Subpart G, Tissue from Wastepaper Subpart T, and Nonintegrated Tissue Papers Subpart S.

Steam Electric Power Plant Industry

- Base/neutral fraction in the Once-Through Cooling Water, Fly Ash, and Bottom Ash Transport Water process wastestreams.

SEE INSTRUCTIONS ON REVERSE SIDE

SECTION II

PERMIT NUMBER → MI0005827

ITEM 7

CRITICAL MATERIALS • TOXIC POLLUTANTS • HAZARDOUS SUBSTANCES IN DISCHARGE

OUTFALL NUMBER: 010 F

A. USE THIS DATA SHEET TO RECORD INFORMATION AS REQUIRED IN: (CHECK APPROPRIATE BOX FOR WHICH INFORMATION THIS DATA SHEET REPRESENTS.)

- [ ] 1. SECTION II, ITEM 4-E. GROUNDWATER DISCHARGE INFORMATION (PAGE 35)
- [X] 2. SECTION II, ITEM 6. PRIORITY POLLUTANTS IN SURFACE WATER DISCHARGE (PAGE 37) See attached data sheets.
- [ ] 3. B. BELOW: CRITICAL MATERIALS (TABLE IV) IN SURFACE WATER DISCHARGE (PAGE 39)

B. LIST ANY CRITICAL MATERIAL (TABLE IV PAGE 6) NOT ADDRESSED IN SECTION II ITEM 6 PRIORITY POLLUTANTS WHICH YOU KNOW OR HAVE REASON TO BELIEVE TO BE PRESENT IN THE DISCHARGE. SEE REVERSE SIDE OF THIS PAGE FOR FURTHER DIRECTIONS.

- [X] NOT APPLICABLE
- [ ] APPLICABLE (SEE BELOW)

MATERIAL 1	A. NAME OF CRITICAL MATERIAL OR PRIORITY POLLUTANT	
	B. AVERAGE CONCENTRATION; SAMPLE TYPE; # OF ANALYSES	UNIT CODE / SAMPLE TYPE / # OF ANALYSES
	C. MAXIMUM CONCENTRATION AND MASS	UNIT CODE / UNIT CODE
MATERIAL 2	A. NAME OF CRITICAL MATERIAL OR PRIORITY POLLUTANT	
	B. AVERAGE CONCENTRATION; SAMPLE TYPE; # OF ANALYSES	UNIT CODE / SAMPLE TYPE / # OF ANALYSES
	C. MAXIMUM CONCENTRATION AND MASS	UNIT CODE / UNIT CODE
MATERIAL 3	A. NAME OF CRITICAL MATERIAL OR PRIORITY POLLUTANT	
	B. AVERAGE CONCENTRATION; SAMPLE TYPE; # OF ANALYSES	UNIT CODE / SAMPLE TYPE / # OF ANALYSES
	C. MAXIMUM CONCENTRATION AND MASS	UNIT CODE / UNIT CODE
MATERIAL 4	A. NAME OF CRITICAL MATERIAL OR PRIORITY POLLUTANT	
	B. AVERAGE CONCENTRATION; SAMPLE TYPE; # OF ANALYSES	UNIT CODE / SAMPLE TYPE / # OF ANALYSES
	C. MAXIMUM CONCENTRATION AND MASS	UNIT CODE / UNIT CODE
MATERIAL 5	A. NAME OF CRITICAL MATERIAL OR PRIORITY POLLUTANT	
	B. AVERAGE CONCENTRATION; SAMPLE TYPE; # OF ANALYSES	UNIT CODE / SAMPLE TYPE / # OF ANALYSES
	C. MAXIMUM CONCENTRATION AND MASS	UNIT CODE / UNIT CODE
MATERIAL 6	A. NAME OF CRITICAL MATERIAL OR PRIORITY POLLUTANT	
	B. AVERAGE CONCENTRATION; SAMPLE TYPE; # OF ANALYSES	UNIT CODE / SAMPLE TYPE / # OF ANALYSES
	C. MAXIMUM CONCENTRATION AND MASS	UNIT CODE / UNIT CODE
MATERIAL 7	A. NAME OF CRITICAL MATERIAL OR PRIORITY POLLUTANT	
	B. AVERAGE CONCENTRATION; SAMPLE TYPE; # OF ANALYSES	UNIT CODE / SAMPLE TYPE / # OF ANALYSES
	C. MAXIMUM CONCENTRATION AND MASS	UNIT CODE / UNIT CODE
MATERIAL 8	A. NAME OF CRITICAL MATERIAL OR PRIORITY POLLUTANT	
	B. AVERAGE CONCENTRATION; SAMPLE TYPE; # OF ANALYSES	UNIT CODE / SAMPLE TYPE / # OF ANALYSES
	C. MAXIMUM CONCENTRATION AND MASS	UNIT CODE / UNIT CODE

UNITS CODE
1 Mg/l
2 Ug/l
3 LBS/DAY
4 KG/DAY

SAMPLE TYPE
1 GRAB
2 24 HR. COMP.

ADDITIONAL PAGES OF THIS ITEM 7 ARE ATTACHED FOR THE REST OF THE CRITICAL MATERIALS AND/OR PRIORITY POLLUTANTS REQUIRED TO BE REPORTED.

- [ ] YES
- [X] NO

INSTRUCTIONS FOR COMPLETING SECTION II

ITEM 7

This form is to be used by both surface and groundwater applicants to record information on any Michigan critical material, E.P.A. priority pollutant, or hazardous substance in which this application requires data to be provided. This would include any chemical substance from the Michigan Critical Materials Register (Table IV), the E.P.A. Priority Pollutant Listing (Table V), or Tables IIA-VA which lists Organic Toxic Pollutants, Other Toxic Pollutants, Conventional and Nonconventional Pollutants and Hazardous Substances.

ITEM 7

CRITICAL MATERIALS, PRIORITY POLLUTANTS, AND/OR HAZARDOUS SUBSTANCES IN THE DISCHARGE

Material 1, 2, 3 . . . 8

A. List the name of the chemical substance (critical material, priority pollutant, or hazardous substance) from Tables IV, V and IIA-VA as required in the box which you checked in A.1-3. above. Enter each chemical substance's parameter number as listed in Tables IV, V and IIA-VA if provided.

B. Provide the average concentration of the chemical substance named in A. Indicate the sample type used and the number of analyses made to provide the concentration data for the chemical substance named in A.

C. Provide the maximum concentration and determine the mass loading of the chemical substance named in A.

NOTES:
1. If only one analysis was made for a chemical substance then record that data as a maximum value. If more than one analysis has been made for a chemical substance then provide an average value of those analyses and the maximum value.

2. This Section II, Item 7, Data Sheet provides space for recording data for 8 chemical substances (Materials). Additional space for recording of data for more than 8 Materials can be made by making copies of this Item 7 Data Sheet as needed. It is also important to use a separate set of Data Sheets for each applicable reporting requirement as listed in A.1-3. and for each outfall.

3. Refer to the left margin for the code number representing the sample type used and the appropriate unit codes.

NUS CORPORATION

Laboratory Services Division
5350 Campbells Run Road
Pittsburgh, PA 15205
412-788-1080

REMIT TO:
Park West Two
Cliff Mine Road
Pittsburgh, PA 15275

LAB ANALYSIS REPORT

CLIENT NAME: INDIANA & MICHIGAN ELECTRIC CO.
ADDRESS: P.O. BOX 312/D.C. COOK PLANT
BRIDGEMAN, MI 49106

REPORT DATE: 08/29/86

ATTENTION: D FITZGERALD/STEWART

NUS CLIENT NO: 010904
NUS SAMPLE NO: 16080400
VENDOR NO: 05411000
WORK ORDER NO: 55830
DATE RECEIVED: 08/08/86

SAMPLE IDENTIFICATION: MAKEUP PLANT PREFILTER BACKWASH COMP 08/06 0930

TEST	DETERMINATION	RESULTS	UNITS
M360	NPDES PART V-A REQUIRED		
M032	Ammonia as N (distillation)	< 0.1	mg/l
M050	BOD, 5-day (02)	2	mg/l
M116	Organic Carbon(non-purgeable)	3.8	mg/l
M120	COD (02)	10	mg/l
M490	pH	7.9	
M610	Solids, suspended at 103 C	16	mg/l
M361	NPDES PART V-B		
M010	Aluminum (Al)	1.7	mg/l
M040	Barium (Ba)	< 0.1	mg/l
M150	Cobalt (Co)	< 0.01	mg/l
M190	Iron,total (Fe)	0.08	mg/l
M230	Magnesium (Mg)	9.9	mg/l
M240	Manganese (Mn)	< 0.01	mg/l
M260	Molybdenum (Mo)	< 0.03	mg/l
M340	Tin (Sn)	< 1	mg/l
M350	Titanium (Ti)	< 0.5	mg/l
M055	Boron (B)	< 0.2	mg/l
M060	Bromide (Br)	< 2.0	mg/l
M225	Color, True	5	Pt-Co
M310	Fluoride, total (F)	2.7	mg/l
M390	Nitrate (N)	0.3	mg/l
M410	Nitrite (N)	< 0.01	mg/l
M435	Nitrogen, Kjeldahl (N)	0.4	mg/l
M440	Nitrogen, Organic (N)	0.4	mg/l
M540	Phosphorus, total (P)	0.34	mg/l
M730	Sulfate, turbidimetric (SO4)	25	mg/l
M740	Sulfide (S)	< 0.1	mg/l
M760	Sulfite (SO3)	< 1	mg/l
M770	Surfactants (MBAS)	< 0.05	mg/l
M362	NPDES PART V-C TOXIC METALS		
M020	Antimony (Sb)	< 0.1	mg/l

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SAMPLE IDENTIFICATION: MAKEUP PLANT PREFILTER BACKWASH COMP 08/06 0930

TEST	DETERMINATION	RESULTS	UNITS
M030	Arsenic (As)	0.002	mg/l
M050	Beryllium (Be)	< 0.002	mg/l
M090	Cadmium (Cd)	< 0.005	mg/l
M140	Chromium (Cr)	< 0.01	mg/l
M160	Copper (Cu)	< 0.01	mg/l
M200	Lead (Pb)	< 0.03	mg/l
M250	Mercury (Hg)	< 0.0002	mg/l
M270	Nickel (Ni)	< 0.03	mg/l
M290	Selenium (Se)	< 0.004	mg/l
M300	Silver (Ag)	< 0.01	mg/l
M330	Thallium (Tl)	< 0.1	mg/l
M390	Zinc (Zn)	0.07	mg/l
M270	Cyanide, total (CN)	< 0.005	mg/l
M500	Phenolics	< 0.02	mg/l
0110	VOLATILES-PP IN WATER		
OV01	Acrolein	< 100	ug/l
OV02	Acrylonitrile	< 100	ug/l
OV03	Benzene	< 5	ug/l
OV05	Bromoform	< 5	ug/l
OV06	Carbon Tetrachloride	< 5	ug/l
OV07	Chlorobenzene	< 5	ug/l
OV08	Chlorodibromomethane	< 5	ug/l
OV09	Chloroethane	< 10	ug/l
OV10	2-Chloroethylvinyl Ether	< 10	ug/l
OV11	Chloroform	< 5	ug/l
OV12	Dichlorobromomethane	< 5	ug/l
OV14	1,1-Dichloroethane	< 5	ug/l
OV15	1,2-Dichloroethane	< 5	ug/l
OV16	1,1-Dichloroethylene	< 5	ug/l
OV17	1,2-Dichloropropane	< 5	ug/l
OV18	1,3-Dichloropropylene	< 5	ug/l
OV19	Ethylbenzene	< 5	ug/l

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NUS CLIENT NO: 010904
NUS SAMPLE NO: 16080400
VENDOR NO: 05411000
WORK ORDER NO: 55830
DATE RECEIVED: 08/08/86

SAMPLE IDENTIFICATION: MAKEUP PLANT PREFILTER BACKWASH COMP 08/06 0930

TEST	DETERMINATION	RESULTS	UNITS
0V20	Methyl Bromide	< 10	ug/l
0V21	Methyl Chloride	< 10	ug/l
0V22	Methylene Chloride	38	ug/l
0V23	1,1,2,2-Tetrachloroethane	< 5	ug/l
0V24	Tetrachloroethylene(Perchloro)	< 5	ug/l
0V25	Toluene	< 5	ug/l
0V26	1,2-Trans-Dichloroethylene	< 5	ug/l
0V27	1,1,1-Trichloroethane	< 5	ug/l
0V28	1,1,2-Trichloroethane	< 5	ug/l
0V29	Trichloroethylene	< 5	ug/l
0V30	Trichlorofluoromethane	< 5	ug/l
0V31	Vinyl chloride	< 10	ug/l
0120	ACIDS - PP IN WATER		
0A01	2-Chlorophenol	< 10	ug/l
0A02	2,4-Dichlorophenol	< 10	ug/l
0A03	2,4-Dimethylphenol	< 10	ug/l
0A04	4,6-Dinitro-o-cresol	< 50	ug/l
0A05	2,4-Dinitrophenol	< 50	ug/l
0A06	2-Nitrophenol	< 10	ug/l
0A07	4-Nitrophenol	< 50	ug/l
0A08	P-Chloro-m-cresol	< 10	ug/l
0A09	Pentachlorophenol	< 50	ug/l
0A10	Phenol	< 10	ug/l
0A11	2,4,6-Trichlorophenol	< 10	ug/l
0EJ0	Acid Extraction-Water		
0130	BASE NEUTRALS - PP IN WATER		
0B01	Acenaphthene	< 10	ug/l
0B02	Acenaphthylene	< 10	ug/l
0B03	Anthracene	< 10	ug/l
0B04	Benzidine	< 50	ug/l
0B05	Benzo(a)Anthracene	< 10	ug/l
0B06	Benzo(a)Pyrene	< 10	ug/l

See attached data sheet dat 11/7/86. Refers indicates less than detectable methylene chlorid

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LAB ANALYSIS REPORT

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BRIDGEMAN, MI 49106

REPORT DATE: 08/29/86

ATTENTION: D FITZGERALD/STEWART

NUS CLIENT NO: 010904
NUS SAMPLE NO: 16060400
VENDOR NO: 05411000
WORK ORDER NO: 55830
DATE RECEIVED: 08/08/86

SAMPLE IDENTIFICATION: MAKEUP PLANT PREFILTER BACKWASH COMP 08/06 0930

TEST	DETERMINATION	RESULTS	UNITS
0B07	3,4-Benzofluoranthene	< 10	ug/l
0B08	Benzo(ghi)Perylene	< 10	ug/l
0B09	Benzo(k)Fluoranthene	< 10	ug/l
0B10	Bis(2-Chloroethoxy)Methane	< 10	ug/l
0B11	Bis(2-Chloroethyl)Ether	< 10	ug/l
0B12	Bis(2-Chloroisopropyl)Ether	< 10	ug/l
0B13	Bis(2-Ethylhexyl)Phthalate	< 10	ug/l
0B14	4-Bromophenyl Phenyl Ether	< 10	ug/l
0B15	Butyl Benzyl Phthalate	< 10	ug/l
0B16	2-Chloronaphthalene	< 10	ug/l
0B17	4-Chlorophenyl Phenyl Ether	< 10	ug/l
0B18	Chrysene	< 10	ug/l
0B19	Dibenzo(a,h)Anthracene	< 10	ug/l
0B20	1,2-Dichlorobenzene	< 10	ug/l
0B21	1,3-Dichlorobenzene	< 10	ug/l
0B22	1,4-Dichlorobenzene	< 10	ug/l
0B23	3,3'-Dichlorobenzidine	< 20	ug/l
0B24	Diethyl Phthalate	< 10	ug/l
0B25	Dimethyl Phthalate	< 10	ug/l
0B26	Di-N-Butyl Phthalate	< 10	ug/l
0B27	2,4-Dinitrotoluene	< 10	ug/l
0B28	2,6-Dinitrotoluene	< 10	ug/l
0B29	Di-N-Octyl Phthalate	< 10	ug/l
0B30	1,2-Diphenylhydrazine(Azobz)	< 20	ug/l
0B31	Fluoranthene	< 10	ug/l
0B32	Fluorene	< 10	ug/l
0B33	Hexachlorbenzene	< 10	ug/l
0B34	Hexachlorobutadiene	< 10	ug/l
0B35	Hexachloro-cyclopentadiene	< 10	ug/l
0B36	Hexachloroethane	< 10	ug/l
0B37	Indeno(1,2,3 cd)Pyrene	< 10	ug/l
0B38	Isophorone	< 10	ug/l

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NUS SAMPLE NO: 16080400
VENDOR NO: 05411000
WORK ORDER NO: 55830
DATE RECEIVED: 08/08/86

SAMPLE IDENTIFICATION: MAKEUP PLANT PREFILTER BACKWASH COMP 08/06 0930

TEST	DETERMINATION	RESULTS	UNITS
0B39	Naphthalene	< 10	ug/l
0B40	Nitrobenzene	< 10	ug/l
0B41	N-Nitrosodimethylamine	< 10	ug/l
0B42	N-Nitrosodi-N-Propylamine	< 10	ug/l
0B43	N-Nitrosodiphenylamine	< 10	ug/l
0B44	Phenanthrene	< 10	ug/l
0B45	Pyrene	< 10	ug/l
0B46	1,2,4-Trichlorobenzene	< 10	ug/l
0E25	Base Neutral Extraction-Water		
0142	PESTICIDES/PCB'S - PP IN WATER		
0E10	Pesticide/PCB Extraction-Water		
0P01	Aldrin	< 0.05	ug/l
0P02	alpha BHC	< 0.05	ug/l
0P03	beta BHC	< 0.05	ug/l
0P04	delta BHC	< 0.05	ug/l
0P05	gamma BHC (Lindane)	< 0.05	ug/l
0P06	Chlordane	< 0.50	ug/l
0P07	4-4'DDD	< 0.10	ug/l
0P08	4-4'DDE	< 0.10	ug/l
0P09	4-4'DDT	< 0.10	ug/l
0P10	Dieldrin	< 0.10	ug/l
0P11	Endosulfan I	< 0.05	ug/l
0P12	Endosulfan II	< 0.10	ug/l
0P13	Endosulfan Sulfate	< 0.10	ug/l
0P14	Endrin	< 0.10	ug/l
0P15	Endrin Aldehyde	< 0.10	ug/l
0P16	Heptachlor	< 0.05	ug/l
0P17	Heptachlor Epoxide	< 0.05	ug/l
0P18	Toxaphene	< 1.0	ug/l
0P19	PCB-1016	< 0.5	ug/l
0P20	PCB-1221	< 0.5	ug/l
0P21	PCB-1232	< 0.5	ug/l

A Halliburton Company

CLIENT ORIGINAL

NUS CORPORATION

Laboratory Services Division
5350 Campbells Run Road
Pittsburgh, PA 15205

REMIT TO:
Park West Two
Cliff Mine Road
Pittsburgh, PA 15275

412-788-1080

LAB ANALYSIS REPORT

CLIENT NAME: INDIANA & MICHIGAN ELECTRIC CO.
ADDRESS: P.O. BOX 312/B.C. COOK PLANT
BRIDGEMAN, MI 49106

REPORT DATE: 08/29/86

ATTENTION: B FITZGERALD/STEWART

NUS CLIENT NO: 010904
NUS SAMPLE NO: 16080400
VENDOR NO: 05411000
WORK ORDER NO: 55830
DATE RECEIVED: 08/08/86

SAMPLE IDENTIFICATION: MAKEUP PLANT PREFILTER BACKWASH COMP 08/06 0930

TEST	DETERMINATION	RESULTS	UNITS
OP22	PCB-1242	< 0.5	ug/l
OP23	PCB-1248	< 0.5	ug/l
OP24	PCB-1254	< 1.0	ug/l
OP25	PCB-1260	< 1.0	ug/l
R450	RADIUM 226 AND 228		
R804	Radium-226	< 0.5	pCi/l
R805	Radium-228	< 3	pCi/l
R800	Gross Alpha	< 4	pCi/l
R801	Gross Beta	< 6	pCi/l
M150	Chlorine, Total Res DPD (Cl2)	< 0.1	mg/l

COMMENTS:

Reviewed and Approved by: JMS

NUS CORPORATION

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LAB ANALYSIS REPORT

CLIENT NAME: INDIANA & MICHIGAN ELECTRIC CO.
ADDRESS: P.O. BOX 312/B.C. COOK PLANT
BRIDGEMAN, MI 49106

REPORT DATE: 08/29/86

ATTENTION: B FITZGERALD/STEWART

NUS CLIENT NO: 010904
NUS SAMPLE NO: 16080403
VENDOR NO: 05411000
WORK ORDER NO: 55830
DATE RECEIVED: 08/08/86

SAMPLE IDENTIFICATION: MAKEUP PLANT PREFILTER BACKWASH-GRAB III 08/06 0300

TEST	DETERMINATION	RESULTS	UNITS
BA34	Fecal Coliform (MPN)3	43	col/100ml
M682	Oil,extraction-gravimetric(3)	< 3.0	mg/l

COMMENTS:

Reviewed and Approved by: JMC

NUS CORPORATION

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Pittsburgh, PA 15275

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LAB ANALYSIS REPORT

CLIENT NAME: INDIANA & MICHIGAN ELECTRIC CO.
ADDRESS: P.O. BOX 312/D.C. COOK PLANT
BRIDGEMAN, MI 49106
ATTENTION: D FITZGERALD/STEWART

REPORT DATE: 08/29/86

NUS CLIENT NO: 010904
NUS SAMPLE NO: 16080404
VENDOR NO: 05411000
WORK ORDER NO: 55830
DATE RECEIVED: 08/08/86

SAMPLE IDENTIFICATION: MAKEUP PLANT PREFILTER BACKWASH-GRAB IV 08/06 0920

TEST	DETERMINATION	RESULTS	UNITS
BA35	Fecal Coliform (MPN)4	23	col/100ml
M683	Oil, extraction-gravimetric(4)	< 3.0	mg/l

COMMENTS:

Reviewed and Approved by: JMS

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412-788-1080

LAB ANALYSIS REPORT

CLIENT NAME: INDIANA & MICHIGAN ELECTRIC CO.
ADDRESS: P.O. BOX 312/B.C. COOK PLANT
BRIDGEMAN, MI 49106

ATTENTION: B FITZGERALD/STEHART

REPORT DATE: 08/29/86

NUS CLIENT NO: 010904
NUS SAMPLE NO: 16080402
VENDOR NO: 05411000
WORK ORDER NO: 55830
DATE RECEIVED: 08/08/86

SAMPLE IDENTIFICATION: MAKEUP PLANT PREFILTER BACKWASH-GRAB II 08/05 1645

TEST	DETERMINATION	RESULTS	UNITS
BA33	Fecal Coliform (MPN)2	< 3	col/100ml
H681	Oil,extraction-gravimetric(2)	3.4	mg/l

COMMENTS:

Reviewed and Approved by:

NUS CORPORATION

Laboratory Services Division
5350 Campbell Run Road
Pittsburgh, PA 15205

REMIT TO:
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Cliff Mine Road
Pittsburgh, PA 15275

412-788-1080

LAB ANALYSIS REPORT

CLIENT NAME: INDIANA & MICHIGAN ELECTRIC CO.
ADDRESS: P.O. BOX 312/B.C. COOK PLANT
BRIDGEMAN, MI 49106

REPORT DATE: 08/29/86

ATTENTION: B FITZGERALB/STEWART

NUS CLIENT NO: 010904
NUS SAMPLE NO: 16080401
VENDOR NO: 05411000
WORK ORDER NO: 55830
DATE RECEIVED: 08/08/86

SAMPLE IDENTIFICATION: MAKEUP PLANT PREFILTER BACKWASH-GRAB I 08/05 1125

TEST	DETERMINATION	RESULTS	UNITS
BA32	Fecal Coliform - MPN	< 3	col/100ml
M680	Oil, extraction-gravimetric	< 3.0	mg/l

COMMENTS:

Reviewed and Approved by:

NUS CORPORATION

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Cliff Mine Road
Pittsburgh, PA 15275

LAB ANALYSIS REPORT

CLIENT NAME: INDIANA & MICHIGAN ELECTRIC CO.
ADDRESS: P.O. BOX 312/D.C. COOK PLANT
BRIDGEMAN, MI 49106

ATTENTION: B FITZGERALD/STEWART

REPORT DATE: 11/07/86

NUS CLIENT NO: 010904
NUS SAMPLE NO: 16101256
VENDOR NO: 05411000
WORK ORDER NO: 55830
DATE RECEIVED: 10/17/86

SAMPLE IDENTIFICATION: MAKEUP PLANT PRE-FILTER BACKWASH COMP 10/13-14

TEST	DETERMINATION	RESULTS	UNITS
0110	VOLATILES-PP IN WATER		
OV01	Acrolein	< 100	ug/l
OV02	Acrylonitrile	< 100	ug/l
OV03	Benzene	< 5	ug/l
OV05	Bromoform	< 5	ug/l
OV06	Carbon Tetrachloride	< 5	ug/l
OV07	Chlorobenzene	< 5	ug/l
OV08	Chlorodibromomethane	< 5	ug/l
OV09	Chloroethane	< 10	ug/l
OV10	2-Chloroethylvinyl Ether	< 10	ug/l
OV11	Chloroform	< 5	ug/l
OV12	Dichlorobromomethane	< 5	ug/l
OV14	1,1-Dichloroethane	< 5	ug/l
OV15	1,2-Dichloroethane	< 5	ug/l
OV16	1,1-Dichloroethylene	< 5	ug/l
OV17	1,2-Dichloropropane	< 5	ug/l
OV18	1,3-Dichloropropylene	< 5	ug/l
OV19	Ethylbenzene	< 5	ug/l
OV20	Methyl Bromide	< 10	ug/l
OV21	Methyl Chloride	< 10	ug/l
OV22	Methylene Chloride	< 5	ug/l
OV23	1,1,2,2-Tetrachloroethane	< 5	ug/l
OV24	Tetrachloroethylene(Perchloro)	< 5	ug/l
OV25	Toluene	< 5	ug/l
OV26	1,2-Trans-Dichloroethylene	< 5	ug/l
OV27	1,1,1-Trichloroethane	< 5	ug/l
OV28	1,1,2-Trichloroethane	< 5	ug/l
OV29	Trichloroethylene	< 5	ug/l
OV30	Trichlorofluoromethane	< 5	ug/l
OV31	Vinyl chloride	< 10	ug/l

COMMENTS:

Reviewed and Approved by: JMC