

# DISTRIBUTION AFTER ISSUANCE OF OPERATING LICENSE

NRC FORM 195  
(2-78)

U.S. NUCLEAR REGULATORY COMMISSION

DOCKET NUMBER

50-263

FILE NUMBER

## NRC DISTRIBUTION FOR PART 50 DOCKET MATERIAL

TO:

Mr. Victor Stello

FROM:

Minnesota Pollution Control Agency  
Roseville, Minnesota  
Sandra S. Gardebring

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DESCRIPTION

Certification for NRC Provisional  
Operating License DPR-22 & Application for Conversion  
Conversion of Said License to a Full-Term  
Operating License w/att Permits and  
stipulation agreement.....

(2-P)+(5-P)+(25-P)

PLANT NAME: Monticello  
RJL 1/3/78

ENCLOSURE

1 ENCL / REPRO AS NEEDED

SAFETY

FOR ACTION/INFORMATION

BRANCH CHIEF: (7)

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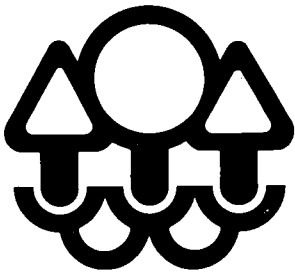
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CONTROL NUMBER

780030235



# Minnesota Pollution Control Agency

50-263

December 19, 1977



Mr. Victor Stello  
Office of Nuclear Reactor Regulation  
Division of Operating Reactors  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

RE: Certification for NRC Provisional Operating License  
DPR-22 and Application for Conversion of Said License  
to a Full-Term Operating License - Northern States  
Power Company, Monticello Plant

Dear Mr. Stello:

On March 6, 1973, pursuant to Section 401(a)(1) of the Federal Water Pollution Control Act Amendments of 1972, the Minnesota Pollution Control Agency issued a certification for the above-referenced nuclear generating plant. It is my understanding that the Nuclear Regulatory Commission has determined that a recertification is necessary prior to issuance of a full-term operating license.

Since the issuance of the prior certification, the Minnesota Pollution Control Agency has issued a National Pollutant Discharge Elimination System permit (Permit No. MN 0000868) pursuant to Section 402 of the Act and State Disposal System permit (same permit number) pursuant to Minn. Stat. §115.07 (1976) for the Monticello nuclear generating plant. In addition, the Minnesota Pollution Control Agency and Northern States Power Company have entered into a stipulation agreement regarding the reduction of the chlorine discharges from the plant. Copies of these permits and the stipulation agreement are enclosed.

To the extent Northern States Power is in compliance with the above-referenced permits and stipulation agreement and any modifications of such documents, the undersigned certifies that there is reasonable assurance that the plant is being operated in a manner that will not violate Minnesota water quality standards and other applicable limitations under Section 301(b) of the Act.

Mr. Victor Stello  
Page 2  
December 19, 1977

In addition, the undersigned certifies that to the best of my knowledge there is no standard applicable to the Monticello plant under Sections 302, 306, and 307 of the Act.

This certification is made on the basis of information submitted by Northern States Power and also other information made available to the Agency. Any omission, misrepresentation or error in the information submitted renders this certification null and void. Any change in the operations of the applicant's facility which results in a discharge of a lesser quality than that upon which this certification is based, without the written consent of the Agency, renders this certification null and void.

It is expressly made a condition of this certification, that nothing herein shall prevent the future adoption and establishment of any additional, more stringent water pollution control requirements applied to the discharge than those now in existence. Further, no requirements for permits or licenses by any units of government are waived by this certification.

Yours truly,

  
Sandra S. Gardebring  
Executive Director

Enclosures

cc: Steven Lewis, NRC  
Joseph Bizzano, NSP  
Jay Silberg, NSP  
Gary Welk, NSP  
A. Manzardo, EPA, Chicago

STATE OF MINNESOTA

MINNESOTA POLLUTION

COUNTY OF RAMSEY

CONTROL AGENCY

In the Matter of a Consolidated )  
Public Hearing on Seven National )  
Pollutant Discharge Elimination )  
System Permit Applications from )  
Seven Separate Northern States )  
Power Company Electric Generat- )  
ing Plant. )

STIPULATION AGREEMENT  
ON CHLORINE ISSUES  
FOR THE MONTICELLO  
NUCLEAR GENERATING  
PLANT

#### A. Recitals

1. Parties. The parties to this Stipulation are the Minnesota Pollution Control Agency (hereinafter MPCA) and Northern States Power Company (hereinafter NSP).

2. Permit Application. NSP has applied for a National Pollutant Discharge Elimination System permit for its Monticello Nuclear Generating Plant. In response to that application, a proposed permit was drafted and public notice of the application was issued by the MPCA. NSP requested a public hearing with respect to several conditions of the proposed permit including the proposed limitations on the discharge of chlorine. The MPCA authorized a public hearing on those issues raised by NSP in its request for hearing.

3. Stipulation. This stipulation shall constitute a settlement between the MPCA and NSP of all issues relating to the discharge of chlorine from the Monticello Nuclear Generating Plant.

#### B. Agreement

Therefore for the purposes of settling all issues relating to the discharge of chlorine from the Monticello Nuclear Generating

Plant, the MPCA and NSP stipulate and agree as follows:

1. The NPDES permit for the Monticello Nuclear Generating Plant shall contain limitations on the discharge of chlorine as follows:

- (a) From the effective date of the permit until July 1, 1978, the discharge of chlorine from outfall 001 shall not at any time exceed a concentration of .2 mg/l measured as total residual chlorine and the discharge of chlorinated water shall not exceed a total of 2 hours per day.
- (b) Notwithstanding subparagraph (a) above, for the purpose of avoiding condenser fouling, on not more than 30 days per year beginning with the effective date of the permit the Permittee may discharge chlorine at concentrations above that specified in subparagraph (a) but in no event above a maximum of .5 mg/l and an average of .2 mg/l measured as free available chlorine with the discharge of chlorinated water not to exceed a total of 2 hours per day. The Permittee shall notify the Agency at least 24 hours in advance of commencing chlorinations under this subparagraph (b).
- (c) From July 1, 1978, to the expiration of the permit the discharge of chlorine shall not at any time exceed a concentration of .2 mg/l measured

as total residual chlorine and the discharge of chlorinated water shall not exceed a total of 2 hours per day. This limitation is subject to the results of the study provided in paragraph B.2. of this stipulation. If the results of the study demonstrate that NSP cannot comply with the limitation of this paragraph (c), then NSP shall construct facilities or implement procedures to comply and shall be granted the shortest feasible period of time within which to construct such facilities or implement such procedures. During any construction or implementation period, the limitations of paragraphs 1(a) and (b) shall remain in force and effect until the construction or implementation is complete at which time the limitation of this paragraph shall become effective.

2. NSP shall by July 1, 1978, ascertain the minimum concentrations and dosage time of total residual chlorine which it requires for the cleanliness and efficient operation of its condensers. This study shall be conducted as set forth in Exhibit A which is attached hereto and incorporated herein by reference. This study shall be submitted to the MPCA by July 1, 1978, and shall include an opinion as to whether or not NSP can comply with the limitation of paragraph B.1.(c).


3. If NSP is unable to comply with the limitations of paragraph B.1.(c) of this agreement through minimization of chlorine usage as required to be studied under paragraph B.2. of this agreement, then NSP agrees to install within the shortest feasible period pollution abatement equipment or implement procedures which will achieve compliance with the limitations of paragraph B.1.(c). No later than April 1, 1978, NSP shall submit to the MPCA a study identifying and analyzing methods for achieving compliance with the limitation of paragraph B.1.(c). The analysis of each method shall include an estimate of the cost of each method and a schedule for implementation of each method. If NSP cannot comply with the limitation of paragraph B.1.(c), it shall indicate by July 1, 1978, which method for achieving compliance it will implement and construct such facilities or implement such procedures in the shortest feasible period.

4. This Stipulation Agreement shall become binding when signed by NSP and the MPCA and shall be enforceable by either party in a court of competent jurisdiction.

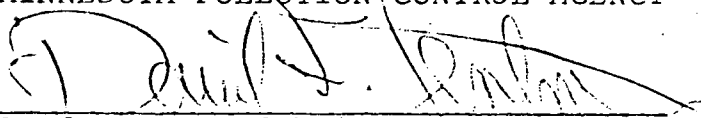
5. Nothing herein shall prevent the future adoption of any regulations, standards, statutes or orders relating to the subject of this stipulation.

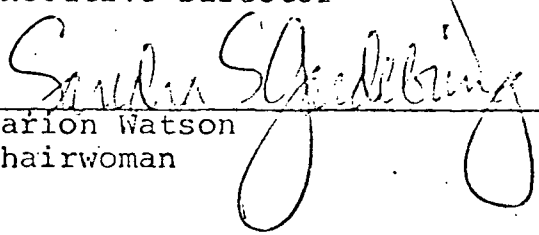
Dated this 3rd day of August, 1977

NORTHERN STATES POWER COMPANY

  
LEWIS J. CRAIN

MINNESOTA POLLUTION CONTROL AGENCY

  
Sandra S. Gardebring,  
Executive Director

  
Marion Watson  
Chairwoman



## Exhibit A

### Chlorine Reduction

#### Study

This study shall determine the optimal use of chlorine at the Monticello Nuclear Generating Plant by reducing the amount of chlorine discharged to the Mississippi River to the lowest concentrations and shortest dosage commensurate with the clean and efficient operations of the condensers. For purposes of conducting this study NSP shall submit a detailed outline to the Director of the MPCA by August 16, 1977, and shall proceed with the study after written approval by the Director of the MPCA. This study shall at a minimum include the following:

- I. A Determination of the Relationship Between Chlorine Injection and Discharge Concentrations of Total Residual Chlorine

#### DEFINITIONS

- |                       |   |  |
|-----------------------|---|--|
| <u>Lag Time</u>       | - | The period of time during which dye or chlorine is injected into the cooling water before the condenser but is not detected in the condenser cooling water discharge at outfall 001. |
| <u>Injection Time</u> | - | The period of time during which dye or chlorine is actually injected into the circulating water.   |
| <u>Contact Time</u>   | - | The period of time (specific to an injection time) during which dye or chlorine is detected at the condenser cooling water discharge at outfall 001.                                 |

## INTRODUCTION

Many times, chlorine is present in the condenser cooling water discharge in concentrations lower than the detectable limit of the amperometric titration method. As a result, the proposed method for calculating daily average and daily maximum free and total chlorine residual requires information regarding lag and contact times. To effectively estimate lag and contact times in condenser cooling water, NSP will correlate injection time with contact time to determine lag time and if necessary in the judgment of the Agency Director conduct dye studies.

## DYE STUDIES

Since condenser cooling water requires time to travel from the point of chlorine injection to the point where grab samples of the discharge water will be taken, dye studies will be conducted to characterize this lag period. The results of the dye studies will be confirmed by the chlorine sampling program.

Dye will be injected into the condenser cooling water via the chlorine pump. Dye will be injected for a time period equivalent to the duration of normal chlorine injection. During the injection of the dye, grab samples will be taken simultaneously at the discharge from outfall 001. Samples will be analyzed as soon as possible for dye using a fluorometer. For each separate injection point, three replicate, dye injection studies will be performed.

Also to be determined by the dye studies will be contact times. Due to diffusion and mixing of dye or chlorine injection,

contact time cannot be equated with injection time. Hence, contact times will be estimated using dye.

#### SAMPLING PROCEDURES

After lag and contact times have been established for each injection point, sampling procedures for free and total chlorine will begin. At the end of the lag period (See Table 1) samples will be collected every two minutes for a duration equal to the contact time. For example, if a five minute lag time and a seventeen minute contact time have been previously established, sampling for chlorine in the condenser cooling water discharge area would commence five minutes after chlorine injection begins and terminate seventeen minutes later (see Table 1).

Two people will be required during the sampling procedures. One person will collect the samples from the discharge while the other measures the concentration of free and total chlorine residual in the grab samples. The method used in determining chlorine residuals will be the amperometric titration method, which is an approved EPA procedure found in ASTM, 1975. Samples will first be measured for free chlorine residual and then for total chlorine residual since free chlorine dissipates rapidly.

#### CALCULATION OF THE DAILY AVERAGE

Daily average shall be defined as the arithmetic average of the chlorine concentrations obtained for each chlorination period.

#### CALCULATION OF THE DAILY MAXIMUM

Daily maximum for total residual chlorine shall be defined as the average of the two highest instantaneous chlorine concentrations obtained for each chlorination period.

#### TIME-CONCENTRATION RELATIONSHIPS FOR CHLORINE

A time-concentration relationship for chlorine shall be done weekly and displayed as illustrated in Table 1 of this exhibit. The frequency of determining the time concentration relationship may be reduced by the Agency Director upon a showing that this relationship is consistent.

### II. Chlorine Reduction

A. NSP shall reduce the amount of chlorine used to a level at which the discharge of chlorine from outfall 001 does not exceed .2 mg/l measured as total residual and a total chlorinated discharge time of 2 hrs. per day. This reduction shall not eliminate the use of chlorine from March through June without the approval of the Director of the MPCA.

B. Monitoring. In addition to the weekly determination of the time concentration for chlorine, NSP shall monitor as follows:

<u>Parameter</u>	<u>Location</u>	<u>Frequency</u>
Total residual chlorine	Outfall 001	daily during contact time
Free available chlorine	Condenser in let	daily sample shall be taken in accordance with 1975 practice

<u>Parameter</u>	<u>Location</u>	<u>Frequency</u>
Chlorine feed	Chlorine Feed	daily
Chlorine demand of intake water	Intake	weekly
River NH <sub>3</sub>	Intake	weekly
pH	Intake	daily
River temperature	Intake	daily
Back pressure	-----	daily all daily monitoring shall be exclusive of weekends & holidays.

C. Reporting. NSP shall report the results of the chlorine reduction program quarterly. The report shall include a table of monitoring results and an evaluation of the ability to meet the limitations stated in B.1.(c) of the Stipulation.

Table 1

Calculation of Daily  
Average Concentrations for Free and  
Total Residual Chlorine: A Hypothetical Case

Hypothetical Assumptions:

- 1) Chlorine (Sodium Hypochlorite) is injected for 15 minutes, (i.e., injection time = 15 min.).
- 2) It takes 5 minutes from the point of chlorine injection for dye to reach the Discharge area where samples are collected, (i.e., the lag time = 5 minutes).
- 3) Contact Time = 17 minutes as determined by the dye study.

Time After  
Injection  
(minutes)

Discharge Chlorine  
Concentrations  
(mg/l) (Example Data)

5 min.  
Lag Time

0  
2  
4

17 Minute Contact Time

6  
8  
10  
12  
14  
16  
18  
20  
22

Injection Time

<0.02

0.03

0.34

0.30

0.20

0.05

0.02

<0.02

<0.02

Arithmetic Average of these  
Values = Daily Average

AUTHORIZATION TO DISCHARGE AND CONSTRUCT WASTEWATER TREATMENT FACILITIES  
UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM  
AND STATE DISPOSAL SYSTEM PERMIT PROGRAM

In compliance with the provisions of the Federal Water Pollution Control Act, as amended, (33 U.S.C. 1251 et seq; hereinafter the "Act"), Minnesota Statutes Chapters 115 and 116 as amended and Minnesota Pollution Control Agency Regulation WPC 36 (hereinafter Agency Regulation WPC 36)

NORTHERN STATES POWER COMPANY

is authorized by the Minnesota Pollution Control Agency to construct wastewater treatment facilities and/or to discharge from

Monticello Nuclear Generating Plant  
Monticello, Minnesota


to receiving water named Mississippi River,

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I and II, thereof.

This permit shall become effective on the date of issuance by the Director pending final approval by the Agency. The Permittee shall be notified of the final decision of the Agency regarding this permit.

This permit and the authorization to discharge shall expire at midnight, June 30, 1982. The Permittee is not authorized to discharge after the above date of expiration. In order to receive authorization to discharge beyond the above date of expiration, the Permittee shall submit such information and forms as are required by the Agency no later than 180 days prior to the above date of expiration pursuant to Agency Regulation WPC 36.

Date: AUG 26 1977

  
Sandra S. Gardebring  
Executive Director  
Minnesota Pollution Control Agency

Description

This facility is a nuclear fueled steam electric generating plant with a maximum nameplate generating capacity of 558 megawatts. The disposal system presently consists of a cooling tower system, radwaste treatment system, waste holdup pond, waste sump treatment system, pumps and piping. Plant cooling water, radwaste treatment system effluent, and holdup pond effluent are discharged from outfall serial number 001. Radwaste treatment system effluent is discharged via outfall serial number 001a to outfall 001. Holdup pond effluent consisting of heating system blowdown, softener waste, demineralizer regenerant, filter backwash and deicing water is discharged via outfall serial number 001b to outfall 001. Turbine building sump effluent, miscellaneous floor and area drainage, and roof drains are discharged from outfall serial number 002. Screen backwash water is discharged from outfall serial number 003. The discharges at this facility are characterized as follows:

<u>Discharge Serial No.</u>	<u>Type of Wastewater</u>	<u>Maximum Flow</u>	<u>Typical Flow</u>
001	Plant Cooling Water	417 MGD	400 MGD
001a	Radwaste Treatment System Effluent	150,000 g/d	0 g/d
001b	Holdup Pond Effluent	25,000 g/d	20,000 g/d
002	Turbine Building Sump and Miscellaneous Drainage Effluent	58,000 g/d	46,000 g/d
003	Screen Backwash	2.2 MGD	1.5 MGD



## PART I

## A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

2. During the period beginning on July 1, 1977 and lasting until June 30, 1982 the Permittee is authorized to discharge plant cooling water, radwaste treatment system effluent, and holdup pond effluent from outfall serial number 001. Such discharges shall be limited and monitored by the Permittee as specified below:

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATIONS</u>				<u>MONITORING REQUIREMENTS</u>	
	kg/day (lbs/day)		Other Units(Specify)		Measurement	Sample
	<u>Monthly Avg</u>	<u>Daily Max</u>	<u>Monthly Avg</u>	<u>Daily Max</u>	<u>Frequency</u>	<u>Type</u>
Flow-M <sup>3</sup> /Day (MGD)	-	-	-	-	Continuous	Daily Average estimate
*Temperature °C (°F)	(See Page 8 of 18)				Continuous	-
Plant Capacity Factor - Percent	-	-	-	-	Monthly Average	-
Total Capacity	-	-	-	-		
Total Residual Chlorine	-	-	-	**		

The discharge of chlorine (Total Residual) shall be limited to a total of two hours per day. The Permittee shall monitor the amount and time of chlorine application daily and report it monthly along with other monitoring reports.

There shall be no discharge of floating solids or visible foam except that which occurs naturally in the river in other than trace amounts. The discharge shall not contain oil or other substances in amounts sufficient to create a visible color film on the surface of the receiving waters.

Samples taken in compliance with the monitoring requirements specified above shall be taken at a point representative of the discharge.

\* Intake and discharge

\*\* See page 9a of 18

## PART I

## A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

3. During the period beginning on the effective date of this permit and lasting until June 30, 1982, the Permittee is authorized to discharge radwaste treatment system effluent from discharge serial number 001a.

Such discharges shall be limited and monitored by the Permittee as specified below:

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATIONS</u>				<u>MONITORING REQUIREMENTS</u>	
	kg/day (lbs/day)		Other Units(Specify)		<u>Measurement Frequency</u>	<u>Sample Type</u>
	<u>Monthly Avg</u>	<u>Daily Max</u>	<u>Monthly Avg</u>	<u>Daily Max</u>		
Flow-M <sup>3</sup> /Day (Gals/Day)	-	-	-	-	Weekly	Daily Average Estimate
Total Suspended Solids	-	-	30 mg/l*	100 mg/l*	Weekly	Grab
Turbidity	-	-	-	25 NTU	Weekly	Grab

The pH shall not be less than 6.5 nor greater than 8.5 and shall be monitored by weekly grab samples. These upper and lower limitations are not subject to averaging and shall be met at all times.

Samples taken in compliance with the monitoring requirements specified above shall be taken at a point representative of the discharge prior to mixing with other waste streams.

\* In addition to the monthly average and daily maximum limitations, the seven (7) consecutive day average concentration shall not exceed 45 mg/l.

## PART I

## A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

4. During the period beginning on the effective date of this permit and lasting until June 30, 1982 the Permittee is authorized to discharge holdup pond effluent from outfall serial number 001b.

Such discharges shall be limited and monitored by the Permittee as specified below:

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATIONS</u>				<u>MONITORING REQUIREMENTS</u>	
	kg/day (lbs/day)		Other Units(Specify)		Measurement	Sample
	<u>Monthly Avg</u>	<u>Daily Max</u>	<u>Monthly Avg</u>	<u>Daily Max</u>	<u>Frequency</u>	<u>Type</u>
Flow-M <sup>3</sup> /Day (Gals/Day)	-	-	-	-	Weekly	Daily Average
Total Suspended Solids	-	-	30 mg/l*	100 mg/l*	Weekly	Estimate
Turbidity	-	-	-	25 NTU	Weekly	Grab

The pH shall not be less than 6.5 nor greater than 8.5 and shall be monitored by weekly grab samples. These upper and lower limitations are not subject to averaging and shall be met at all times.

Samples taken in compliance with the monitoring requirements specified above shall be taken at a point representative of the discharge prior to mixing with other waste streams.

\*In addition to the monthly average and daily maximum limitations, the seven (7) consecutive day average concentration shall not exceed 45 mg/l.

## PART I

## A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

5. During the period beginning on the effective date of this permit and lasting until June 30, 1982 the Permittee is authorized to discharge turbine building sump and miscellaneous drainage from outfall serial number 002.

Such discharges shall be limited and monitored by the Permittee as specified below:

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
	kg/day (lbs/day)		Other Units(Specify)		Measurement Frequency	Sample Type
	Monthly Avg	Daily Max	Monthly Avg	Daily Max		
Flow-M <sup>3</sup> /Day (Gals/Day)	-	-	-	-	Weekly	Daily Average Estimate
Total Suspended Solids	-	-	30 mg/l*	100 mg/l*	Weekly	Grab
Turbidity	-	-	-	25 NTU	Weekly	Grab
Oil and Grease	-	-	10 mg/l	15 mg/l	Monthly	Grab

The pH shall not be less than 6.5 nor greater than 8.5 and shall be monitored by weekly grab samples. These upper and lower limitations are not subject to averaging and shall be met at all times.

There shall be no discharge of floating solids or visible foam except that which occurs naturally in the river in other than trace amounts.

The discharge shall not contain oil or other substances in amounts sufficient to create a visible color film on the surface of the receiving waters.

Samples taken in compliance with the monitoring requirements specified above shall be taken at a point representative of the discharge.

\*In addition to the monthly average and daily maximum limitations, the seven (7) consecutive day average concentration shall not exceed 45 mg/l.

## PART I

## A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

6. During the period beginning on the effective date of this permit and lasting until June 30, 1982 the Permittee is authorized to discharge screen backwash from outfall serial number 003.

Such discharges shall be limited and monitored by the Permittee as specified below:

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATIONS</u>				<u>MONITORING REQUIREMENTS</u>					
	kg/day (lbs/day		Other Units (Specify)		Measurement	Sample				
	<u>Monthly</u>	<u>Avg</u>	<u>Daily</u>	<u>Max</u>	<u>Monthly</u>	<u>Avg</u>	<u>Daily</u>	<u>Max</u>	<u>Frequency</u>	<u>Type</u>
Flow-M <sup>3</sup> /Day (MGD)	-	-	-	-	-	-	-	-	Continuous	Daily Average Estimate

For the purpose of this permit, the above discharge shall be limited solely to screened river water used to backwash intake screens. Debris, sludges, or other pollutants collected as a result of treatment of the intake water prior to use by the Permittee shall be disposed of as specified on page 10 of 19.

The discharge shall not contain oil or other substances in amounts sufficient to create a visible color film on the surface of the receiving water.

## B. OTHER REQUIREMENTS

1. Interim Effluent Requirements

During the period beginning with the effective date of the permit and lasting until the final determination by the Agency on final effluent limitations, the cooling tower system shall be operated as specified below:

- (a) Both circulating water pumps at the plant screen house shall be operated to limit temperature rise through the condenser and thereby minimize cold shock potential except in the event one of the pumps is out of service due to equipment failure or performance of nonscheduled maintenance to prevent equipment damage.
- (b) All the existing cooling towers shall be operated in a helper mode whenever ambient river temperature measured at some point unaffected by the plant's discharge is consistently at or above 20°C(68°F) except in the event the cooling towers or a portion of the cooling towers is out of service due to equipment failure or performance of nonscheduled maintenance to prevent equipment damage. In such case the portion of the cooling towers out of service shall be limited to those portions necessary to perform said repair or nonscheduled maintenance work.
- (c) In no case shall the maximum daily average temperature at the end of the discharge canal exceed the following limiting temperatures:
  - (i) During the months April through October - 35°C(95°F).
  - (ii) During the months November and March - 29.4°C(85°F)
  - (iii) During the months December through February - 26.7°C(80°F)
- (d) Whenever the permittee is required by the terms of its water appropriation permit dated March 12, 1970, from the Minnesota Department of Natural Resources to operate the cooling towers in a "partial recirculation" or "closed cycle" mode, the permittee may discharge heated water in excess of the limitations established in PART I, B. 1. (c).

2. Final Effluent Limitations

The discharges from this facility are subject to the thermal limitations established by Minnesota Regulation WPC 15 (d) (2) Class B. The permittee has submitted a demonstration in support of alternative effluent limitations pursuant to Minnesota Regulation WPC 36 (u) (3). Final effluent limitations shall be established by the Agency after public hearing on the permittee's request.

PART I

Page 9 of 18

Permit No: MN0000868

B. Other Requirements

3. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluids.

4. Intake Requirements

- (a) The Permittee shall conduct a study of its intake structure. This study shall be carried out in accordance with a study design approved by the Director. Such study will be commenced upon approval of the study design and a final report on the study will be submitted to the Director within 5 months of the effective date of this permit.

The report shall contain a detailed demonstration showing that the location, design, construction, capacity and operation of the existing cooling water intake structure reflects the best technology available for minimizing adverse environmental impact on the surrounding water body. The report shall provide a summary of all monitoring data relevant to determining the effects of the existing intake structure. In addition, the report shall contain an estimate of the amounts of debris and other litter which are collected on the intake screens. The development of this report shall be guided by the Minnesota Pollution Control Agency's "Guide for Intake Monitoring Programs and the Development Document for Best Technology Available for Minimizing Adverse Environmental Impact of Cooling Water Intake Structure," as promulgated by the U.S. Environmental Protection Agency.

If the Permittee's existing system is not determined by the Agency to meet the Best Available Technology requirement of Section 316 (b) of the Act then the Permittee shall have the right to request a public hearing within thirty (30) days of being advised in writing of the Agency's determination.

- (b) Large Debris collected at the trash racks shall be disposed of in such a manner as to prevent the materials from entering waters of the State. Until completion of the intake report specified in (a), the Permittee may return all material collected on the intake screen to the receiving water except that during any collection of intake material for purposes of the report the Permittee shall not return to the receiving water debris of other litter. Following completion of the intake report, this permit may be modified to specify the manner of debris disposal.

B. OTHER REQUIREMENTS

5. (a) From the effective date of the permit until July 1, 1978, the discharge of chlorine from outfall 001 shall not at any time exceed a concentration of .2 mg/l measured as total residual chlorine and the discharge of chlorinated water shall not exceed a total of 2 hours per day.
- (b) Notwithstanding subparagraph (a) above, for the purpose of avoiding condenser fouling, on not more than 30 days per year beginning with the effective date of the permit the Permittee may discharge chlorine at concentrations above that specified in subparagraph (a) but in no event above a maximum of .5 mg/l and an average of .2 mg/l measured as free available chlorine with the discharge of chlorinated water not to exceed a total of 2 hours per day. The Permittee shall notify the Agency at least 24 hours in advance of commencing chlorinations under this subparagraph (b).
- (c) From July 1, 1978, to the expiration of the permit the discharge of chlorine shall not at any time exceed a concentration of .2 mg/l measured as total residual chlorine and the discharge of chlorinated water shall not exceed a total of 2 hours per day. This limitation is subject to the results of the study provided in a stipulation between the Permittee and the Agency. If the results of the study demonstrate that the Permittee cannot comply with the limitation of this paragraph (c), then the Permittee shall construct facilities or implement procedures to comply and shall be granted the shortest feasible period of time within which to construct such facilities or implement such procedures. During any construction or implementation period, the limitations of paragraphs 5(a) and (b) shall remain in force and effect until the construction or implementation is complete at which time the limitation of this paragraph shall become effective.
- (d) Monitoring. From the effective date of this permit until the completion of the study provided in the stipulation between the Permittee and the Agency, the Permittee shall monitor in accordance with the stipulation. Thereafter, chlorine shall be monitored daily during application except holidays and weekends.



## C. MONITORING AND REPORTING

### 1. Representative Sampling

Samples shall be taken at a point representative of the discharge. Any monitoring measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.

### 2. Monitoring Plan

The Permittee shall submit a monitoring plan or an amendment to any approved monitoring plan, to the Director within forty five (45) days after date of issuance of this permit for approval and thereafter submit a written report to the Director each month in compliance with such plan. The monitoring plan shall include the items described in Agency Regulation WPC 35 (n) (2). A new monitoring plan need not be submitted if the Permittee has a previously approved monitoring plan. Amendments to previously approved monitoring plans shall be submitted if additional or different monitoring is required by this permit.

### 3. Reporting

Monitoring results obtained during the previous month shall be summarized and reported on the designated "Discharge Monitoring Report Form", and received or postmarked no later than the 21st day of the month following the completed reporting period. The first report is due on the 21st day of the month following approval of the monitoring plan specified in PART I. C. 2. Signed copies of these, and all other reports required herein, shall be submitted to the Director at the following address:

Minnesota Pollution Control Agency  
1935 West County Road B2  
Roseville, Minnesota 55113  
Attn: Compliance and Enforcement Section

### 4. Reduction or Elimination of Monitoring Requirements

If the Permittee after monitoring for six (6) months or some other reasonable time as determined by the Director, determines that he is consistently meeting the effluent limits contained herein, the Permittee may request of the Director that the monitoring requirements be reduced or eliminated.

### 5. Monitoring Report

The Permittee shall report the results of the monitoring requirements in the units specified in this permit. A report or written statement is to be submitted even if no discharge occurred during the reporting period. The monthly report shall include (a) a description of any modifications in the waste collection, treatment and disposal facilities; (b) any changes in operational procedures; (c) any other significant activities which alter the nature or frequency of the discharge; (d) any other material factors regarding the conditions of this permit and such information as the Minnesota Pollution Control Agency or Director may reasonably require of the Permittee, pursuant to Minnesota Statutes Chapters 115 and 116 as amended and Agency Regulation WPC 35 (n).

## 6. Definitions

### a. "Monthly Average" Discharge

1. Weight Basis - The "monthly average" discharge means the total discharge by weight during a calendar month divided by the number of days in the month that the facility was operating. Where less than daily sampling is required by this permit, the monthly average discharge shall be determined by the summation of the measured daily discharges by weight divided by the number of days during the calendar month when the measurements were made.
2. Concentration Basis - The "monthly average" concentration means the arithmetic average (weighted by flow value) of all the daily determinations of concentration made during a calendar month. Daily determinations of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the daily determination of concentration shall be the arithmetic average (weighted by flow value) of all the samples collected during the calendar day.

### b. "Daily Maximum" Discharge

1. Weight Basis - The "daily maximum" discharge means the total discharge by weight during any calendar day.
2. Concentration Basis - The "daily maximum" concentration means the daily determination of concentration for any calendar day.

- c. The "Agency" means the Minnesota Pollution Control Agency, as constituted pursuant to Minnesota Statutes, Section 116.02, Subd. 1.
- d. The "Director" means the Executive Director of the Minnesota Pollution Control Agency as described in Minnesota Statutes, Section 116.03 as amended.
- e. The "Regional Administrator" means the EPA Regional Administrator for the region in which Minnesota is located (now Region V).
- f. The "Act" means the Federal Water Pollution Control Act, as amended 33 U.S.C. 1251, et seq.
- g. A "Composite" sample, for monitoring requirements, shall be defined as no less than a series of grab samples collected at equally spaced hourly intervals and proportioned according to flow, unless otherwise approved in the monitoring plan.
- h. Pollutants, Toxic Pollutants, Other Wastes, Point Source, Disposal System, Waters of the State and other terms for the purpose of this permit are defined in Section 502 of the Act and Minnesota Statutes Section 115.01 as amended and Agency Regulation WPC 36 (b).

7. Test Procedures

Test procedures for the analysis of pollutants shall conform to regulations promulgated pursuant to Section 304 (g) of the Act, and Minnesota Statutes, Section 115.03, Subd. 1 (e) (7), as amended.

The Permittee shall periodically calibrate and perform maintenance on all monitoring and analytical instrumentation used to monitor pollutants discharged under authorization by this permit, at intervals to insure accuracy of measurements. The Permittee shall maintain written records of all such calibrations and maintenance.

8. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the Permittee shall record the following information:

- a. the exact place, date, and time of sampling;
- b. the dates the analyses were performed;
- c. the person who performed the analyses;
- d. the analytical techniques, procedures or methods used; and
- e. the results of such analyses.

9. Additional Monitoring by Permittee

If the Permittee monitors any pollutant at the location(s) designated herein more frequently than required pursuant to this permit, the results of such monitoring shall be included in the calculation and reporting of values submitted on the designated Discharge Monitoring Report Form. Any increased monitoring frequency shall also be indicated on such designated form.

10. Recording and Records Retention

All sampling and analytical records required by the conditions of this permit shall be retained by the Permittee for a minimum of three (3) years. The Permittee shall also retain all original recordings from any continuous monitoring instrumentation, and any calibration and maintenance records, for a minimum of three (3) years. These retention periods shall be extended during the course of any legal or administrative proceedings or when so requested by the Regional Administrator, the Minnesota Pollution Control Agency or the Director.

PART II

A. MANAGEMENT REQUIREMENTS

1. Change in Discharge

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit. Any anticipated facility expansions, production increases, or process modifications which will result in new, different, or increased discharges of pollutants shall be reported by submission of a new NPDES application or, if such changes will not violate the effluent limitations specified in this permit, by notice of such changes to the Director. Following such notice, the permit may be modified to specify and limit any pollutants not previously limited.

2. Non-compliance Notification

a. Telephone Communication

If for any reason, a discharge from the facility identified in this permit occurs accidentally or otherwise which:

- 1) violates any daily maximum effluent limitation or other provision of this permit which violation may cause substantial environmental effects including any adverse health effects; or
- 2) contains a pollutant that is not identified and limited in this permit; or
- 3) contains oil above the effluent limitations of the permit, any polychlorinated biphenyls, or toxic pollutant;

then the Permittee shall immediately notify the Compliance and Enforcement Section by telephone (612) 296-7373 of the occurrence of such discharge and shall immediately recover as rapidly and as thoroughly as possible such discharged substance(s) and take such other actions as may be reasonable to minimize or abate pollution of the waters of the state caused by such discharge. This telephone notification shall be confirmed in writing within five (5) days which written confirmation shall include to the extent known:

- a) a description of the discharge and its cause;
- b) the duration of the discharge, including exact dates and times and all remedial action; or, if not corrected, the anticipated time the discharge is expected to continue and all actions taken to correct and reduce, eliminate or prevent the discharge and its reoccurrence.

b. Written Notice

If, for any reason, the Permittee does not comply with or will be unable to comply with any daily maximum effluent limitation specified in this permit or other provisions of this permit, the Permittee shall notify the Compliance and Enforcement Section in writing, within five (5) days of becoming aware of such condition. The written notification shall contain the following information:

- a) a description of the discharge and cause of non-compliance; and
- b) the period of non-compliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue; and steps being taken to correct, reduce, eliminate and prevent recurrence of the noncomplying discharge.

3. Facilities Operation and Quality Control

All waste collection, control, treatment, and disposal facilities shall be operated in a manner consistent with the following:

- a) The Permittee shall at all times maintain in good working order and operate as efficiently as possible any facilities or systems of control installed or used to achieve compliance with the terms and conditions of the permit.
- b) The Permittee shall provide an adequate operating staff which is duly qualified under Minnesota Regulations WWOB 1 if applicable (as determined by the Director pursuant to Agency Regulation WPC 36 (1) (6) (ee) to carry out the operation, maintenance and testing functions required to insure compliance with the conditions of this permit.

4. Adverse Impact

The Permittee shall take all reasonable steps to minimize any adverse impact to navigable waters resulting from non-compliance with any effluent limitations specified in this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge. The results of such monitoring shall be submitted to the Director as required under this provision.

5. Bypassing

Any diversion from or bypass of facilities necessary to maintain compliance with the terms and conditions of this permit is prohibited, except (i) where unavoidable to prevent loss of life or severe property damage, or (ii) where excessive storm drainage or runoff would damage any facilities or processes

necessary for compliance with the effluent limitations and prohibitions of this permit. The Permittee shall promptly notify the Director, Att: Compliance and Enforcement Section, in writing, of each such diversion or bypass.

Notification of any bypass which causes noncompliance with the daily effluent limitations shall be done in accordance with PART II, 2. (a) Non-compliance Notification.

6. Removed Substances

The Permittee shall dispose of solids, sludges, filter backwash, or other pollutants removed from or resulting from treatment or control of wastewater in such manner as to prevent any pollutant from such materials from entering waters of the state. The Permittee in disposal of such material shall comply with all applicable water, air and solid waste statutes and regulations. When requested the Permittee shall submit a plan for such disposal for approval by the Director.

7. Power Failures

Upon the reduction, loss, or failure of the sources of power to the wastewater control facilities, the Permittee shall reduce or otherwise control production and/or all discharges to the greatest extent possible commensurate with maintaining the reliability of the Permittee's electrical generation system, provided that this condition shall not authorize a violation of any condition or limitation of this permit.

8. Construction

This permit only authorizes the construction of treatment works to attain compliance with the limitations and conditions of this permit, after plans and specifications for treatment facilities have been submitted and approved in writing by the Director prior to the start of any construction.

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B. RESPONSIBILITIES

1. Right of Entry

The Permittee shall pursuant to Section 308 of the Act and Minnesota Statutes 115.04, allow the Director of the Minnesota Pollution Control Agency, the Regional Administrator, and their authorized representatives:

- a. to enter upon the Permittee's premises where a disposal system or other point source or portion thereof is located for the purpose of obtaining information, or examination of records or conducting surveys or investigations; and
- b. to bring such equipment upon the Permittee's premises as is necessary to conduct such surveys and investigations; and
- c. to examine and copy any books, paper, records or memoranda pertaining to the installation, maintenance, or operation or discharge, including but not limited to, monitoring data of the disposal system or point source or records required to be kept under the terms and conditions of this permit; and
- d. to inspect any monitoring equipment or monitoring procedures required in this permit; and
- e. to sample any discharge of pollutants.

2. Transfer of Ownership or Control

In the event of any changes in control or ownership of facilities from which the authorized discharges emanate, the Permittee shall notify the succeeding owner or controller of the existence of this permit by letter, prior to the effective date of the transfer. A copy of this letter shall be forwarded to the Regional Administrator and the Director. Any succeeding owner or controller shall comply with the terms and conditions of this permit.

3. Availability of Reports

Except for data determined to be confidential under Section 308 of the Act, and Minnesota Statutes, Section 116.075, Subd. 2, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Minnesota Pollution Control Agency and the Regional Administrator. Procedures for submitting such confidential material shall be pursuant to Minnesota Regulation WPC 36 (j) (2). As required by the Act, effluent data shall not be considered confidential. The Permittee shall immediately upon discovery report, in writing to the Director any errors or omissions of such record, reports, plans or other documents prepared in accordance with the terms and conditions of this permit. Knowingly making any false statement on any such report, confidential or otherwise, may result in the imposition of criminal penalties as provided for in Section 309 of the Act and Minnesota Statutes, Section 115.071 Subd. 2 (b).

#### 4. Permit Modification

After notice and opportunity for a hearing, this permit may be modified, suspended or revoked in whole or in part during its term for cause including, but not limited to, the following:

- a. violation of any terms or conditions of this permit;
- b. obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
- c. a change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
- d. Agency Regulation WPC 36 (s) (1).

#### 5. Toxic Pollutants

Notwithstanding PART II, B, 4, above, if a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307 (a) of the Act or Minnesota Statutes, Chapters 115 and 116 as amended, for a toxic pollutant which is present in the discharge and such standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit shall be revised or modified in accordance with the toxic effluent standard or prohibition and in accordance with applicable laws and regulation.

#### 6. Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the Permittee from civil or criminal penalties for noncompliance with the terms and conditions except as otherwise provided in PART II, A. 5. Bypassing and PART II, A. 7. Power Failures.

#### 7. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties to which the Permittee is or may be subject under Section 311 of the Act and Minnesota Statutes, Chapters 115 and 116 as amended.

#### 8. Federal, State and Local Laws

Nothing in this permit shall be construed to preclude the institution of any legal or administrative proceedings or relieve the Permittee from any responsibilities, liabilities, or penalties for violation of effluent and water quality limitations not included in this permit.



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9. Property Rights

The issuance of this permit does not convey any property rights, in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any violation of Federal, State, or Local laws or regulations.

10. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.