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FROM: Minnesota Pollution Control Agency Minneapolis, Minnesota 55440 Grant J. Merritt	DATE OF DOC: 3-6-73	DATE REC'D 3-14-73	LTR x	MEMO	RPT	OTHER
TO: L. Manning Muntzing	ORIG	CC 23	OTHER	SENT AEC PDR X SENT LOCAL PDR X		
CLASS: <u>U</u> PROP INFO	INPUT	NO CYS REC'D 23	DOCKET NO: 50-263			

DESCRIPTION:
Ltr re Water Certification...with attached Regulations; permit provisions and Agreement.

ENCLOSURES:

ACKNOWLEDGED DO NOT REMOVE

PLANT NAMES: Monticello

FOR ACTION/INFORMATION 3-14-73 fod

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<input checked="" type="checkbox"/> OGC, ROOM P-506A	SCHROEDER	GAMMILL	NUSSBAUMER	<input checked="" type="checkbox"/> G. WILLIAMS	E
<input checked="" type="checkbox"/> MUNTZING/STAFF	MACCARY	KASTNER		SHEPPARD	E
CASE	KNIGHT(2)	BALLARD	<u>LIC ASST.</u>		
GIAMBUSSO	PAWLICKI	SPANGLER	SERVICE	L	A/T IND
BOYD	SHAO		WILSON	L	BRAITMAN
V. MOORE-L(BWR)	STELLO	ENVIRO	GOULBOURNE	L	SALTZMAN
DEYOUNG-L(PWR)	HOUSTON	MULLER	SMITH	L	
<input checked="" type="checkbox"/> SKOVHOLT-L	NOVACK	DICKER	GEARIN	L	PLANS
P. COLLINS	ROSS	KNIGHTON	<input checked="" type="checkbox"/> DIGGS	L	MCDONALD
REG OPR	IPPOLITO	YOUNGBLOOD	TEETS	L	DUBE
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1-NSIC(BUCHANAN)	1-R. CARROLL- C, GT-B227	1- GERALD LELLOUCHE
1-ASLB-YORE/SAYRE	<input checked="" type="checkbox"/> 1- R. CATLIN, E-256-GT	BROOKHAVEN NAT. LAB
WOODWARD/H ST.	1- CONSULTANT'S	1-AGMED(WALTER KOESTER,
16-CYS ACRS HOLDING	NEWMARK/BLUME/AGABIAN	RM C-427, GT)
	1- GERLAD ULRIKSON....ORNL	1- RD...MULLER...F-309G

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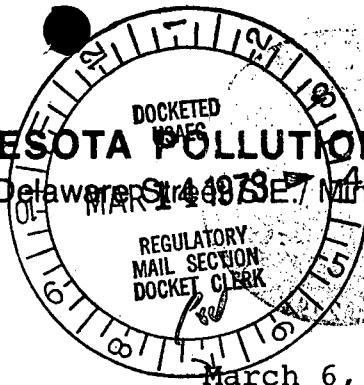
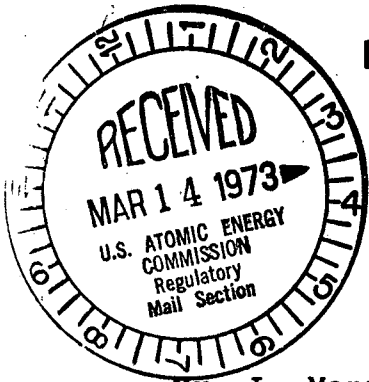
MINNESOTA POLLUTION CONTROL AGENCY

717 Delaware Street, S.E. Minneapolis, Minnesota 55440

Regulatory

File Cy.

50-268



March 6, 1973



Mr. L. Manning Muntzing
Director of Regulation
U.S. Atomic Energy Commission
Washington, D.C. 20545

Re: Certification for AEC 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. Muntzing:

Northern States Power Company has requested State certification from the Minnesota Pollution Control Agency (hereinafter the Agency) pursuant to Section 401 of the Federal Water Pollution Control Act, as amended by the Federal Water Pollution Control Act Amendments of 1972, P.L. 92-500, for its nuclear generating plant at Monticello, Minnesota. This request pertains to Provisional Operating License No. DPR-22 issued September 8, 1970, by the U.S. Atomic Energy Commission and an application dated June 15, 1972, for conversion of the Provisional Operating License No. DPR-22 to a full-term operating license.

Pursuant to the provisions of Section 401(a)(1), the undersigned hereby certifies that there is not an applicable effluent limitation or other limitation under Sections 301(b) and 302, and there is not an applicable standard under Sections 306 and 307 of the Federal Water Pollution Control Act.

Pursuant to Section 401(d), the appropriate requirements of the State of Minnesota in connection with the Monticello Plant are set forth in State Regulations WPC 15, 25 and 29, and the general conditions and special conditions relating to convention wastes set forth in permit No. 5633, dated May 20, 1969, as modified by the Agency by an agreement accepted by the Agency on May 8, 1972. Copies of the foregoing Regulations, permit provisions and agreement are attached hereto.

The applicant, Northern States Power Company, discharges from the Monticello plant a maximum of 648 cubic feet per second of industrial wastewater to the Mississippi River. This activity is in accord with the current requirements of the Agency as expressed by the permit provisions and agreement between the Agency and the Company concerning the discharge of heated wastewater to the Mississippi River.

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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, or for further certification to the U.S. Environmental Protection Agency or issuance of a permit by the State under Section 402 of the Act.

No requirements for permits or licenses by any units of government are waived by this certification.

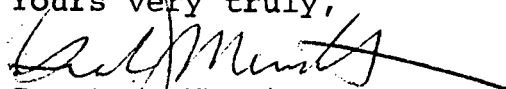
This certification is made on the basis of information submitted by the applicant and also other information made available to the Agency. Any omission, misrepresentation or error in the information submitted renders this certification null and void. Any change in the operations of the applicant's facility 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.

This certification is intended to satisfy the certification requirements of present Federal law with respect to the provisional license from the Atomic Energy Commission for the Monticello Plant, and the application to the AEC for conversion of such license to a full-term operating license.

On June 29, 1971, Northern States Power Company applied for a State certification for the Monticello plant pursuant to Section 21(b)(1) of the Federal Water Pollution Control Act, as amended by the Water Quality Improvement Act of 1970, P.L. 91-224, and a public notice of the application for such certification was given by the Agency on March 8, 1972. We further certify in connection with such application that there is reasonable assurance that the operation of the plant will be conducted in a manner which will not violate presently applicable water quality standards.

The issuance of this certification does not and is not intended to preclude the Agency from presenting issues and evidence at the forthcoming hearing concerning the application for conversion to a full-term operating license for the Monticello plant.

Yours very truly,


Grant J. Merritt
Executive Director

GJM/dg

Attachments

cc: David F. McElroy, President, Northern States Power Company
A. R. Rehnquist, Director of Legal Services, Northern States Power Company
A. Manzardo, EPA, Chicago
L. Breimhurst, EPA, Minneapolis

**MINNESOTA ADMINISTRATIVE
RULES AND REGULATIONS**

**Rules, Regulations, Classifications
and Water Standards**

1971 EDITION



Minn. Reg. WPC 15

**Filed with the Secretary of State June 30, 1969
and Department of Administration July 1, 1969**

Amended October 13, 1971

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**STATE OF MINNESOTA
POLLUTION CONTROL AGENCY**

CHAPTER FIFTEEN: WPC 15

**CRITERIA FOR THE CLASSIFICATION OF THE INTERSTATE WATERS
OF THE STATE AND THE ESTABLISHMENT OF STANDARDS OF
QUALITY AND PURITY**

WPC 15 The official policy and purpose of the State of Minnesota in regard to these matters is set forth in the Minnesota Water Pollution Control Statutes:

Sec. 115.42. It is the policy of the state to provide for the prevention, control and abatement of pollution of all waters of the state, so far as feasible and practical, in furtherance of conservation of such waters and protection of the public health and in furtherance of the development of the economic welfare of the state It is the purpose of Laws 1963, Chapter 874, to safeguard the waters of the state from pollution by: (a) preventing any new pollution; and (b) abating pollution existing when Laws 1963, Chapter 874, become effective, under a program consistent with the declaration of policy above stated.

Sec. 115.44 Subd. 2. In order to attain the objectives of Laws 1963, Chapter 874, the commission* after proper study, and after conducting public hearing upon due notice, shall, as soon as practicable, group the designated waters of the state into classes and adopt classifications and standards of purity and quality therefor. Such classification shall be made in accordance with considerations of best usage in the interest of the public and with regard to the considerations mentioned in subdivision 3 hereof.

Sec. 115.44 Subd. 8. The commission* may classify waters and adopt criteria and standards in such form and based on such evidence as it may deem necessary and sufficient for the purposes of meeting requirements of such federal laws, notwithstanding any provisions in Chapter 115 or any other state law to the contrary Notwithstanding the provisions of subdivision 4, wherever advisable and practicable the commission* may establish standards for effluent of disposal systems entering waters regardless of whether such waters are or are not classified.

In accordance with this declaration of policy and legislative intent, and under the powers delegated to the Agency, the following interstate water use classifications and corresponding standards of quality and purity are hereby adopted by the Pollution Control Agency as provided by law.

John P. Badalich, PE
Executive Secretary and
Chief Executive Officer

Robert C. Tuveson, Chairman
Attorney at Law

Homer C. Luick, Vice-Chairman

Dated: April 8, 1969

*Laws of 1967, Chapter 882, abolished the Water Pollution Control Commission and transferred its powers and duties to the Minnesota Pollution Control Agency.

(a) **Introduction**

(1) **Definitions.** The terms "waters of the state" for the purposes of this regulation shall be construed to mean interstate waters as herein below defined, and the terms "sewage," "industrial wastes," and "other wastes," as well as any other terms for which definitions are given in the Water Pollution Control Statutes, as used herein have the meanings ascribed to them in Minnesota Statutes, Sections 115.01 and 115.41, with the exception that disposal systems or treatment works operated under permit of the Agency shall not be construed to be "waters of the state" as the term is used herein. The current requirements of applicable federal laws which must be met are set forth in the Federal Water Pollution Control Act, as amended (33 U.S.C. 466 et seq.). Interstate waters are defined in Section 13 (e) thereof as including all rivers, lakes, and other waters that flow across or form a part of state boundaries. Other terms and abbreviations used herein which are not specifically defined in the law shall be construed in conformance with the context, and in relation to the applicable section of the statutes pertaining to the matter at hand, and current professional usage.

(2) **Uses of the Interstate Waters.** The classifications are listed separately in accordance with the need for interstate water quality protection, considerations of best use in the interest of the public and other considerations, as indicated in Minnesota Statutes, Section 115.44. The classifications should not be construed to be an order of priority, nor considered to be exclusive or prohibitory of other beneficial uses unless so stated in regard to discharge or disposal of sewage, industrial wastes or other wastes commonly associated with such other uses, where such discharges may adversely affect the specified uses. Only the uses of the interstate waters of the state as a medium for disposal of sewage, industrial wastes or other wastes is subject to regulation by the Agency, not their appropriation or other use such as for navigation or recreation. Where more than one of the listed uses may occur without reasonable separation in distance on the same interstate waters, appropriate adjustments will be made in the classifications and standards to take into account such intermingling of uses.

(3) **Determination of Compliance.** In making tests or analyses of the interstate waters of the state, sewage, industrial wastes or other wastes to determine compliance with the standards, samples shall be collected in such manner and place, and of such type, number and frequency as may be considered satisfactory by the Agency from the viewpoint of adequately reflecting the condition of the interstate waters, the composition of the effluents, and the effects of the pollutants upon the specified uses. Reasonable allowance will be made for dilution of the effluents in relation to the uses of the interstate waters into which they are discharged or other interstate waters which may be affected. The samples shall be preserved and analyzed in accordance with procedures given in the 1965 edition of Standard Methods for the Examination of Water and Waste-Water, by the American Public Health Association, American Water Works Association, and the Water Pollution Control Federation, and any revisions or amendments thereto, or other methods acceptable to the Agency.

(4) **Natural Interstate Water Quality.** The interstate waters may, in a state of nature, have some characteristics or properties approaching or exceeding the limits specified in the standards. The standards shall be construed as limiting the addition of pollutants of human origin to those of natural origin, where such be present, so that in total the specified limiting concentrations will not be exceeded in the interstate waters by reason of such

controllable additions; except that where the background level of the natural origin is reasonably definable and normally is higher than the specified standard the natural level may be used as the standard for controlling the addition of pollutants of human origin which are comparable in nature and significance with those of natural origin, but where the natural background level is lower than the specified standard and where reasonable justification exists for preserving the quality of the interstate waters as nearly as possible to that found in a state of nature, the natural level may be used instead of the specified standard as the maximum limit on the addition of pollutants. In the adoption of standards for individual interstate waters, the Agency will be guided by the standards set forth herein but may make reasonable modifications of the same on the basis of evidence brought forth at a public hearing if it is shown to be desirable and in the public interest to do so in order to encourage the best use of the interstate waters or the lands bordering such interstate waters.

Waters which are of quality better than the established standards will be maintained at high quality unless a determination is made by the State that a change is justifiable as a result of necessary economic or social development and will not preclude appropriate beneficial present and future uses of the waters. Any project or development which would constitute a source of pollution to high quality waters will be required to provide the highest and best practicable treatment to maintain high water quality and keep water pollution at a minimum. In implementing this policy, the Secretary of the Interior will be provided with such information as he requires to discharge his responsibilities under the Federal Water Quality Act, as amended.

(5) **Variance from Standards.** In any case where, upon application of the responsible person or persons, the Agency finds that by reason of exceptional circumstances the strict enforcement of any provision of these standards would cause undue hardship; that disposal of the sewage, industrial waste or other waste is necessary for the public health, safety or welfare; and that strict conformity with the standards would be unreasonable, impractical or not feasible under the circumstances; the Agency in its discretion may permit a variance therefrom upon such conditions as it may prescribe for prevention, control or abatement of pollution in harmony with the general purposes of these classifications and standards and the intent of the applicable state and national laws. The Federal Water Pollution Control Administration will be advised of any permits which may be issued under this clause together with information as to the need therefor.

(b) **Water Use Classifications—All Interstate Waters of the State**

Based on considerations of best usage in the interest of the public and in conformance with the requirements of the applicable statutes, the interstate waters of the state shall be grouped into one or more of the following classes:

(1) **Domestic Consumption.** (to include all interstate waters which are or may be used as a source of supply for drinking, culinary or food processing use or other domestic purposes, and for which quality control is or may be necessary to protect the public health, safety or welfare.)

(2) **Fisheries and Recreation.** (to include all interstate waters which are or may be used for fishing, fish culture, bathing or any other recreational purposes, and for which quality control is or may be necessary to protect aquatic or terrestrial life, or the public health, safety or welfare.)

(3) **Industrial Consumption.** (to include all interstate waters which are or may be used as a source of supply for industrial process or cooling water, or any other industrial or commercial purposes, and for which quality control is or may be necessary to protect the public health, safety or welfare.)

(4) **Agriculture and Wildlife.** (to include all interstate waters which are or may be used for any agriculture purposes, including stock watering and irrigation, or by waterfowl or other wildlife, and for which quality control is or may be necessary to protect terrestrial life or the public health, safety or welfare.)

(5) **Navigation and Waste Disposal.** (to include all interstate waters which are or may be used for any form of water transportation or navigation, disposal of sewage, industrial waste or other waste effluents, or fire prevention, and for which quality control is or may be necessary to protect the public health, safety or welfare.)

(6) **Other Uses.** (to include interstate waters which are or may serve the above listed uses or any other beneficial uses not listed herein, including without limitation any such uses in this or any other state, province, or nation of any interstate waters flowing through or originating in this state, and for which quality control is or may be necessary for the above declared purposes, or to conform with the requirements of the legally constituted state or national agencies having jurisdiction over such interstate waters, or any other considerations the Agency may deem proper.)

(c) **General Standards Applicable to All Interstate Waters of the State**

(1) No untreated sewage shall be discharged into any interstate waters of the state. No treated sewage, or industrial waste or other wastes containing viable pathogenic organisms, shall be discharged into interstate waters of the state without effective disinfection. Effective disinfection of any discharges, including combined flows of sewage and storm water, will be required where necessary to protect the specified uses of the interstate waters.

(2) No raw or treated sewage, industrial waste or other wastes shall be discharged into any interstate waters of the state so as to cause any nuisance conditions, such as the presence of significant amounts of floating solids, scum, oil slicks, excessive suspended solids, material discoloration, obnoxious odors, gas ebullition, deleterious sludge deposits, undesirable slimes or fungus growths, or other offensive or harmful effects.

(3) Existing discharges of inadequately treated sewage, industrial waste or other wastes shall be abated, treated or controlled so as to comply with the applicable standards. Separation of sanitary sewage from natural run-off may be required where necessary to ensure continuous effective treatment of sewage.

(4) The highest possible levels of water quality, including dissolved oxygen, which are attainable in the interstate waters by continuous operation at their maximum capability of all units of treatment works discharging effluents into the interstate waters shall be maintained in the interstate waters in order to enhance conditions for the specified uses.

(5) Means for expediting mixing and dispersion of sewage, industrial waste, or other waste effluents in the receiving interstate waters shall be provided so far as practicable when deemed necessary by the Agency to maintain the quality of the receiving interstate waters in accordance with applicable standards.

(6) It is herein established that the Agency will require secondary treatment or the equivalent as a minimum for all municipal sewage and biodegradable, industrial or other wastes to meet the adopted water quality standards and a comparable high degree of treatment or its equivalent also will be required of all non-biodegradable industrial or other wastes unless the discharger can demonstrate to the Agency that a lesser degree of treatment or control will provide for water quality enhancement commensurate with present and proposed future water uses and a variance is granted under the provisions of the variance clause. Secondary treatment facilities are defined as works which will provide effective sedimentation, biochemical oxidation, and disinfection, or the equivalent, including effluents conforming to the following:

Substance or Characteristic	Limiting Concentration or Range
5-Day biochemical oxygen demand	25 milligrams per liter
Total coliform group organisms	1,000 MPN/100 ml
Total suspended solids	30 milligrams per liter
Oil	Essentially free of visible oil
Turbidity	25
pH range	6.5 - 8.5

(7) Allowance shall not be made in the design of treatment works for low stream flow augmentation unless such flow augmentation of minimum flow is dependable under applicable laws or regulations.

(8) In any instance where it is evident that natural mixing or dispersion of an effluent is not effective in preventing pollution, or that it may not be feasible to provide by other means for effective mixing or dispersion of an effluent, or if at the applicable stream flows mentioned in the sections on specific standards of interstate water quality and purity it is evident that the specified stream flow may be less than the effluent flow, the specific standards may be interpreted as effluent standards for control purposes, where applicable. The period of record for determining the specific flow for the stated recurrence interval, where records are available, will include at least the most recent 10 years of record, including flow records obtained after establishment of flow regulation devices, if any. Such calculations will not be applied to lakes and their embayments which have no comparable flow recurrence interval. Where stream flow records are not available, the flows may be estimated on the basis of available information on the watershed characteristics, precipitation, run-off and other pertinent data. In addition, the following effluent standards may be applied without any allowance for dilution where stream flow or other factors are such as to prevent adequate dilution, or where it is otherwise necessary to protect the interstate waters for the stated uses:

Item	Limits
5-day biochemical oxygen demand	20 milligrams per liter
Total phosphorus	1 milligram per liter
Total suspended solids	20 milligrams per liter

It is the intention of the Agency to require removal of nutrients from all sources to the fullest practicable extent wherever sources of nutrients are considered to be actually or potentially inimical to preservation or enhancement of the designated water uses.

(9) In any case where, after a public hearing, the Agency finds it necessary for conservation of the interstate waters of the state, or protection

of the public health, or in furtherance of the development of the economic welfare of the state, it may prohibit or further limit the discharge to any designated interstate waters of any sewage, industrial waste, or other waste effluents, or any component thereof, whether such effluents are treated or untreated, or existing or new, notwithstanding any other provisions of classifications or specific standards stated herein which may be applicable to such designated interstate waters.

(10) In any proceeding where specific standards have been adopted which are directly or indirectly applicable to named interstate waters of the state, it shall be incumbent upon all persons responsible for existing or new sources of sewage, industrial wastes or other wastes which are or will be discharged to such interstate waters, to treat or control their wastes so as to produce effluents having a common level or concentration of pollutants of comparable nature and effect as may be necessary to meet the specified standards or better, and in no case shall the concentration of polluting substances in any individual effluent be permitted to exceed the common concentration or level required of the other sources of comparable nature and effect discharging to the same classified and named interstate waters, regardless of differences in the amount of pollutorial substances discharged, or degree of treatment involved.

(11) Liquid substances which are not commonly considered to be sewage or industrial wastes but which could constitute a pollution hazard shall be stored in accordance with Regulation WPC 4, and any revisions or amendments thereto. Other wastes as defined by law or other substances which could constitute a pollution hazard shall not be deposited in any manner such that the same may be likely to gain entry into any interstate waters of the state in excess of or contrary to any of the standards herein adopted, or cause pollution as defined by law.

(12) No sewage, industrial waste or other wastes shall be discharged into the interstate waters of the state in such quantity or in such manner alone or in combination with other substances as to cause pollution thereof as defined by law. In any case where the interstate waters of the state into which sewage, industrial wastes or other waste effluents discharge are assigned different standards than the interstate waters into which such receiving interstate waters flow, the standards applicable to the interstate waters into which such sewage, industrial waste or other wastes discharged shall be supplemented by the following:

The quality of any waters of the state receiving sewage, industrial waste or other waste effluents shall be such that no violation of the standards of any interstate waters of the state in any other class shall occur by reason of the discharge of such sewage, industrial waste or other waste effluents.

(13) Questions concerning the permissible levels, or changes in the same, of a substance, or combination of substances, of undefined toxicity to fish or other biota shall be resolved in accordance with the methods specified by the National Technical Advisory Committee of the Federal Water Pollution Control Administration, U. S. Department of the Interior. The Committee's recommendations also will be used as official guidelines in other aspects where the recommendations may be applicable.

(14) All persons operating or responsible for sewage, industrial waste or other waste disposal systems which are adjacent to or which discharge effluents to these waters or to tributaries which affect the same, shall submit

regularly every month a report to the Agency on the operation of the disposal system, the effluent flow, and the characteristics of the effluents and receiving waters. Sufficient data on measurements, observations, sampling and analyses, and other pertinent information shall be furnished as may be required by the Agency to in its judgment adequately reflect the condition of the disposal system, the effluent, and the waters receiving or affected by the effluent.

(d) **Specific Standards of Quality and Purity for Designated Classes of Interstate Waters of the State.** The following standards shall prescribe the qualities or properties of the interstate waters of the state which are necessary for the designated public use or benefit and which, if the limiting conditions given are exceeded, shall be considered indicative of a polluted condition which is actually or potentially deleterious, harmful, detrimental or injurious with respect to such designated uses or established classes of the interstate waters:

(1) **Domestic Consumption**

Class A The quality of this class of the interstate waters of the state shall be such that without treatment of any kind the raw waters will meet in all respects both the mandatory and recommended requirements of the Public Health Service Drinking Water Standards—1962 for drinking water as specified in Publication No. 956 published by the Public Health Service of the U. S. Department of Health, Education and Welfare, and any revisions, amendments or supplements thereto. This standard will ordinarily be restricted to underground waters with a high degree of natural protection. The basic requirements are given below:

Substance or Characteristic	Limit or Range
Total coliform organisms	1 most probable number per 100 milliliters
Turbidity value	5
Color value	15
Threshold odor number	3
Methylene blue active substance (MBAS)	0.5 milligram per liter
Arsenic (As)	0.01 milligram per liter
Chlorides (Cl)	250 milligrams per liter
Copper (Cu)	1 milligram per liter
Carbon Chloroform extract	0.2 milligram per liter
Cyamides (CN)	0.01 milligram per liter
Fluorides (F)	1.5 milligrams per liter
Iron (Fe)	0.3 milligram per liter
Manganese (Mn)	0.05 milligram per liter
Nitrates (NO ₃)	45 milligrams per liter
Phenol	0.001 milligram per liter
Sulfates (SO ₄)	250 milligrams per liter
Total dissolved solids	500 milligrams per liter
Zinc (Zn)	5 milligrams per liter
Barium (Ba)	1 milligram per liter
Cadmium (Cd)	0.01 milligram per liter
Chromium (Hexavalent, Cr)	0.05 milligram per liter
Lead (Pb)	0.05 milligram per liter
Selenium (Se)	0.01 milligram per liter
Silver (Ag)	0.05 milligram per liter

Class B The quality of this class of the interstate waters of the state shall be such that with approved disinfection, such as simple chlorination or its equivalent, the treated water will meet in all respects both the mandatory and recommended requirements of the Public Health Service Drinking Water Standards—1962 for drinking water as specified in Publication No. 956 published by the Public Health Service of the U. S. Department of Health, Education and Welfare, and any revisions, amendments or supplements thereto. This standard will ordinarily be restricted to surface and underground waters with a moderately high degree of natural protection. The physical and chemical standards quoted above for Class A interstate waters shall also apply to these interstate waters in the untreated state, except as listed below:

Substance or Characteristic	Limit or Range
Total coliform organisms	50 most probable number per 100 milliliters

Class C The quality of this class of the interstate waters of the state shall be such that with treatment consisting of coagulation, sedimentation, filtration, storage and chlorination, or other equivalent treatment processes, the treated water will meet in all respects both the mandatory and recommended requirements of the Public Health Service Drinking Water Standards—1962 for drinking water as specified in Publication No. 956 published by the Public Health Service of the U. S. Department of Health, Education and Welfare, and any revisions, amendments or supplements thereto. This standard will ordinarily be restricted to surface waters, and ground waters in aquifers not considered to afford adequate protection against contamination from surface or other sources of pollution. Such aquifers normally would include fractured and channeled limestone, unprotected impervious hard rock where interstate water is obtained from mechanical fractures, joints, etc., with surface connections, and coarse gravels subjected to surface water infiltration. The physical and chemical standards quoted above for Class A interstate waters shall also apply to these interstate waters in the untreated state, except as listed below:

Substance or Characteristic	Limit or Range
Total coliform organisms	4,000 most probable number per 100 milliliters
Turbidity value	25

Class D The quality of this class of the interstate waters of the state shall be such that after treatment consisting of coagulation, sedimentation, filtration, storage and chlorination, plus additional pre, post, or intermediate stages of treatment, or other equivalent treatment processes, the treated water will meet in all respects the recommended requirements of the Public Health Service Drinking Water Standards—1962 for drinking water as specified in Publication No. 956 published by the Public Health Service of the U. S. Department of Health, Education and Welfare, and any revisions, amendments or supplements thereto. This standard will ordinarily be restricted to surface waters, and ground waters in aquifers not considered to afford adequate protection against contamination from surface or other sources of pollution. Such aquifers normally would include fractured and channeled limestone, unprotected impervious hard rock where water is obtained from mechanical fractures, joints, etc., with surface connections, and coarse gravels subjected to surface water infiltration.

The concentrations or ranges given below shall not be exceeded in the raw waters before treatment:

Substance or Characteristic	Limit or Range
Total coliform organisms	4,000 most probable number per 100 milliliters
Arsenic (As)	0.05 milligram per liter
Barium (Ba)	1 milligram per liter
Cadmium (Cd)	0.01 milligram per liter
Chromium (Cr + 6)	0.05 milligram per liter
Cyanide (CN)	0.2 milligram per liter
Fluoride (F)	1.5 milligrams per liter
Lead (Pb)	0.05 milligram per liter
Selenium (Se)	0.01 milligram per liter
Silver (Ag)	0.05 milligram per liter

In addition to the above listed standards, no sewage, industrial waste or other wastes, treated or untreated, shall be discharged into or permitted by any person to gain access to any interstate waters classified for domestic consumption so as to cause any material undesirable increase in the taste, hardness, temperature, toxicity, corrosiveness or nutrient content, or in any other manner to impair the natural quality or value of the interstate waters for use as a source of drinking water.

(2) Fisheries and Recreation

Class A The quality of this class of the interstate waters of the state shall be such as to permit the propagation and maintenance of warm or cold water sport or commercial fishes and be suitable for aquatic recreation of all kinds, including bathing, for which the waters may be usable. Limiting concentrations or ranges of substances or characteristics which should not be exceeded in the interstate waters are given below:

Substance or Characteristic	Limit or Range
Dissolved oxygen	Not less than 7 milligrams per liter from October 1st and continuing through May 31st, and Not less than 5 milligrams per liter at other times
Temperature	No material increase
Ammonia (N)	Not to exceed a trace
Chlorides (Cl)	50 milligrams per liter
Chromium (Cr)	Not to exceed a trace
Copper (Cu)	Not to exceed a trace
Cyanides (CN)	Not to exceed a trace
Oil	Not to exceed a trace
pH value	6.5 - 8.5
Phenols	Not to exceed a trace
Turbidity value	10
Color value	30
Total coliform organisms	1,000 most probable number per 100 milliliters
Radioactive materials	Not to exceed the lowest concentrations permitted to be discharged to an uncontrolled environment as prescribed by the appropriate authority having control over their use.

Discharges of sewage, industrial waste or other waste effluents shall be controlled so that the standards will be maintained at all stream flows which are equal to or exceeded by 90 percent of the seven consecutive daily average flows of record (the lowest weekly flow with a once in ten year recurrence interval) for the critical month(s).

Class B The quality of this class of the interstate waters of the state shall be such as to permit the propagation and maintenance of sport or commercial fishes and be suitable for aquatic recreation of all kinds, including bathing, for which the waters may be usable. Limiting concentrations or ranges of substances or characteristics which should not be exceeded in the interstate waters are given below:

Substance or Characteristic	Limit or Range
Dissolved oxygen	Not less than 6 milligrams per liter from April 1 through May 31, and Not less than 5 milligrams per liter at other times.
Temperature	5°F above natural, except in no case shall it exceed 90°F.
Ammonia (N)	1 milligram per liter
Chromium (Cr)	0.05 milligram per liter
Copper (Cu)	0.2 milligram per liter
Cyanides (CN)	0.02 milligram per liter
Oil	Not to exceed a trace
pH Value	6.5 - 9.0
Phenols	0.01 milligram per liter
Turbidity value	25
Total coliform organisms	1,000 most probable number per 100 milliliters
Radioactive materials	Not to exceed the lowest concentration permitted to be discharged to an uncontrolled environment as prescribed by the appropriate authority having control over their use.

Discharges of sewage, industrial waste or other waste effluents shall be controlled so that the standards will be maintained at all stream flows which are equal to or exceeded by 90 percent of the 7 consecutive daily average flows of record (the lowest weekly flow with a once in 10 year recurrence interval) for the critical month.

Class C The quality of this class of the interstate waters of the state shall be such as to permit the propagation and maintenance of fish of species, commonly inhabiting waters of the vicinity under natural conditions, and be suitable for boating and other forms of aquatic recreation not involving prolonged intimate contact with the water for which the inter-

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state waters may be usable. Limiting concentrations or ranges of substances or characteristics which should not be exceeded in the interstate waters are given below:

Substance or Characteristic	Limit or Range
Dissolved oxygen	Not less than 5 milligrams per liter from April 1 through May 31, and Not less than 3 milligrams per liter at other times.
Temperature	5°F above natural, except in no case shall it exceed 90°F.
Ammonia	2 milligrams per liter
Chromium (Cr)	0.05 milligram per liter
Copper (Cu)	0.2 milligram per liter
Cyanides (CN)	0.02 milligram per liter
Oil	None in such quantities as to (1) produce a visible color film on the surface, (2) impart an oil odor to water or an oil taste to fish and edible invertebrates, (3) coat the banks and bottom of the watercourse or taint any of the associated biota, or (4) become effective toxicants according to the criteria recommended.
pH value	6.0 - 9.5
Phenols	None that could impart odor or taste to fish flesh or other fresh-water edible products such as crayfish, clams, prawns and like creatures. Where it seems probable that a discharge may result in tainting of edible aquatic products, bioassays and taste panels will be required to determine whether tainting is likely.
Turbidity value	25
Total coliform organisms	5,000 most probable number per 100 milliliters
Radioactive materials	Not to exceed the lowest concentrations permitted to be discharged to an uncontrolled environment as prescribed by the appropriate authority having control over their use.

Discharges of sewage, industrial waste or other waste effluents shall be controlled so that the standards will be maintained at all stream flows which are equal to or exceeded by 90 percent of the 7 consecutive daily average flows of record (the lowest weekly flow with a once in 10 year recurrence interval) for the critical month.

The aquatic habitat, which includes the interstate waters and stream bed, shall not be degraded in any material manner, there shall be no material increase in undesirable slime growths or aquatic plants, including algae, nor shall there be any significant increase in harmful pesticide or other residues in the waters, sediments and aquatic flora and fauna; the normal fishery and

lower aquatic biota upon which it is dependent and the use thereof shall not be seriously impaired or endangered, the species composition shall not be altered materially, and the propagation or migration of the fish and other biota normally present shall not be prevented or hindered by the discharge of any sewage, industrial waste or other waste effluents to the interstate waters.

No sewage, industrial waste or other wastes shall be discharged into any of the interstate waters of this category so as to cause any material change in any other substances or characteristics which may impair the quality of the interstate waters or the aquatic biota of any of the above-listed classes or in any manner render them unsuitable or objectionable for fishing, fish culture or recreational uses. Additional selective limits or changes in the discharge hases may be imposed on the basis of local needs.

Amended and filed with Secretary of State and Commissioner of Administration October 13, 1971.

(3) Industrial Consumption

Class A The quality of this class of the interstate waters of the state shall be such as to permit their use without chemical treatment, except softening for ground water, for most industrial purposes, except food processing and related uses, for which a high quality of water is required. The quality shall be generally comparable to Class B waters for domestic consumption, except for the following:

Substance or Characteristics	Permissible Limit or Range	
Chlorides (Cl)	50 milligrams per liter	
Hardness	50 milligrams per liter	
pH value	6.5 - 8.5	
Temperature	75° F in July and August, 70° F in June and September, 60° F in May and October, 50° F in April and November, 40° F in March and December, and 35° F in January and February.	(Surface)
	55° F	(Ground)
Total coliform organisms	5,000 most probable number per 100 milliliters	

Class B The quality of this class of the interstate waters of the state shall be such as to permit their use for general industrial purposes, except food processing, with only a moderate degree of treatment. The quality shall be generally comparable to Class D interstate waters used for domestic consumption, except for the following:

Substance or Characteristic	Permissible Limit or Range	
Chlorides (Cl)	100 milligrams per liter	
Hardness	250 milligrams per liter (Surface) 350 milligrams per liter (Ground)	
pH value	6.0 - 9.0	
Temperature	65° F (ground) 86° F (surface)	
Total coliform organisms	5,000 most probable number per 100 milliliters	

Class C The quality of this class of the interstate waters of the state shall be such as to permit their use for industrial cooling and materials transport without a high degree of treatment being necessary to avoid

severe fouling, corrosion, scaling, or other unsatisfactory conditions. The following shall not be exceeded in the interstate waters:

Substance or Characteristic	Limit or Range
Chlorides (Cl)	250 milligrams per liter
Hardness	500 milligrams per liter
pH value	6.0 - 9.5
Temperature	65° F (ground) 90° F (surface)
Total coliform organisms	5,000 most probable number per 100 milliliters

Additional selective limits may be imposed for any specific interstate waters as needed.

(4) Agriculture and Wildlife

Class A The quality of this class of the interstate waters of the state shall be such as to permit their use for irrigation without significant damage or adverse effects upon any crops or vegetation usually grown in the area, including truck garden crops. The following concentrations or limits shall be used as a guide in determining the suitability of the waters for such uses, together with the recommendations contained in Handbook 60 published by the Salinity Laboratory of the U. S. Department of Agriculture, and any revisions, amendments or supplements thereto:

Substance or Characteristic	Permissible Limit or Range
Bicarbonates (HCO ₃)	5 milliequivalents per liter
Boron (B)	0.5 milligram per liter
pH value	5.0 - 8.5
Specific conductance	1,000 micromhos per centimeter
Total dissolved salts	700 milligrams per liter
Sodium (Na)	60% of total cations as milliequivalents per liter
Total coliform organisms	5,000 most probable number per 100 milliliters
Radioactive materials	Not to exceed the lowest concentrations permitted to be discharged to an uncontrolled environment as prescribed by the appropriate authority having control over their use.

Class B The quality of this class of the interstate waters of the state shall be such as to permit their use by livestock and wildlife without inhibition or injurious effects. The limits or concentrations of substances or characteristics given below shall not be exceeded in the interstate waters:

Substance or Characteristic	Limit or Range
pH value	6.0 - 9.5
Total salinity	1,000 milligrams per liter
Total coliform organisms	5,000 most probable number per 100 milliliters
Radioactive materials	Not to exceed the lowest concentrations permitted to be discharged to an uncontrolled environment as prescribed by the appropriate authority having control over their use.
Unspecified toxic substances	None at levels harmful either directly or indirectly.

Additional selective limits may be imposed for any specific interstate waters as needed.

(5) **Navigation and Waste Disposal.** The quality of this class of the interstate waters of the state shall be such as to be suitable for esthetic enjoyment or scenery and to avoid any interference with navigation or damaging effects on property. The following limits or concentrations shall not be exceeded in the interstate waters:

Substance or Characteristics	Limit or Range
Total coliform organisms	5,000 most probable number per 100 milliliters
pH value	5.5 - 10.0
Hydrogen sulfide	Not to exceed a trace

Additional selective limits may be imposed for any specific interstate waters as needed.

(6) **Other Uses.** The uses to be protected in this class may be under other jurisdictions and in other areas to which the interstate waters of the state are tributary, and may include any or all of the uses listed in the foregoing categories, plus any other possible beneficial uses. The Agency therefore reserves the right to impose any standards necessary for the protection of this class, consistent with legal limitations.

[June 14, 1967; Amended July 1, 1969; Amended October 13, 1971]

**STATE OF MINNESOTA
POLLUTION CONTROL AGENCY**

CHAPTER TWENTY-FIVE: WPC 25

CLASSIFICATIONS OF INTERSTATE WATERS OF MINNESOTA

WPC 25: The following regulation establishing classifications applies to all interstate surface waters of the state except as otherwise indicated herein.

(a) All interstate waters except those previously classified are included, although some minor watercourses such as unnamed streams or interconnecting waters and/or intermittently flowing creeks, ditches, or draws, etc., are not listed individually herein. Previously classified interstate waters are listed in Regulations WPC 1, 2, 3, 5, 6, 10, 11, 12, 13, 16, 17, which may be purchased from the Documents Section, Minnesota Department of Administration, St. Paul; and all such classifications shall remain in force unless changed herein.

(b) The regulation includes known present uses and/or uses which may be made of the waters in the future. In addition to the classification(s) given below, the interstate waters are also included in Classes 3C, 4A and B, 5 and 6 for all reaches or areas where such uses are possible. Where specific criteria are common to two or more listed classes the more restrictive value shall apply. For additional information refer to Regulation WPC 15, Criteria for Classification and Establishment of Standards for Interstate Waters, April 8, 1969.

WATERS	REACH OR AREA INVOLVED OR LOCATION	CLASSIFICATION
Streams		
Red Cedar River Basin		
Little Cedar River	Source to Iowa border	2C, 3B
Red Cedar River	Source to Austin	2B, 3B
Red Cedar River	Austin to Iowa border	2C, 3B
Deer Creek	Source to Iowa border	2C, 3B
Lime Creek	Source to Iowa border	2C, 3B
Otter Creek	Source to Iowa border	2C, 3B
Shell Rock River	Source to Iowa border	2B, 3B
Lakes		
Albert Lea Lake	(T. 102; R. 20, 21)	2B, 3B
Bear Lake	(T. 101; R. 22)	2B, 3B
Fountain Lake	(T. 102; R. 20, 21)	2B
State Line Lake	(T. 101; R. 22)	2B, 3B
Streams		
Des Moines River Basin		
East Fork of the Des Moines River	Source to Iowa border	2B, 3B
West Fork of the Des Moines River	Lake Yankton outlet to Iowa border	2C, 3B
Soldier Creek	Source to Iowa border	2C, 3B
Lakes		
Long Lake	(T. 108, 109; R. 41)	2B, 3B

WATERS	REACH OR AREA INVOLVED OR LOCATION	CLASSIFICATION
Okamanpeedan Lake	(T. 101; R. 31)	2B, 3B
Lake Shetek	(T. 107, 108; R. 40, 41)	2B, 3B
Talcot Lake	(T. 105; R. 38, 39)	2B, 3B
Tuttle Lake	(T. 101; R. 31)	2B, 3B
Lake Yankton	(T. 109; R. 42)	2B, 3B
Streams		
Minnesota River Basin		
Brush Creek	Iowa border to mouth	2C, 3B
Canby Creek	South Dakota border to mouth	2C, 3B
Blue Earth River	Iowa border to mouth	2B, 3B
East Fork of the Blue Earth River	Brush Creek to mouth	2C, 3B
West Fork of the Blue Earth River	Iowa border to mouth	2C, 3B
Florida Creek	South Dakota border to mouth	2C, 3B
West Fork of the Lac Qui Parle River	South Dakota border to mouth	2C, 3B
Lazarus Creek	South Dakota border to Canby Creek	2C, 3B
Minnesota River	Big Stone Lake outlet to Granite Falls	1C, 2B, 3B
Minnesota River	Granite Falls to Mankato	2B, 3B
Minnesota River	Mankato to Carver Rapids	2B, 3B
Little Minnesota River	South Dakota border crossing to Big Stone Lake	2C, 3B
North Fork of the Yellow Bank River	South Dakota border to mouth	2C, 3B
South Fork of the Yellow Bank River	South Dakota border to mouth	2C, 3B
Yellow Medicine River	North Fork mouth to Minnesota River	2C, 3B
North Fork of the Yellow Medicine River	South Dakota border to mouth	2C, 3B
Lac Qui Parle River	Lake Hendricks outlet to Minnesota River	2C, 3B
South Creek	Rose Lake to mouth	2C, 3B
Whetstone River	South Dakota border to mouth	2C, 3B
Lakes		
East Chain Lake	(T. 101; R. 29, 30)	2B, 3B
Lake Hendricks	(T. 112; R. 46)	2B, 3B
Iowa Lake	(T. 101; R. 30)	2B, 3B
Rose Lake	(T. 102; R. 30)	2B, 3B
Sager Lake	(T. 102; R. 30)	2B, 3B
Salt Lake	(T. 117; R. 46)	2B, 3B
South Silver Lake	(T. 101; R. 30)	2B, 3B
Big Stone Lake	(T. 121, 122, 123, 124; R. 46, 47, 48, 49)	2B, 3B
Swan Lake	(T. 101; R. 30)	2B, 3B

WATERS	REACH OR AREA INVOLVED OR LOCATION	CLASSIFICATION
Streams		
Lower Mississippi River Basin		
Bear Creek	Source to Iowa border	2C, 3B
Beaver Creek	Source to Iowa border	2C, 3B
Crooked Creek	Source to mouth	1B, 2A, 3B
Upper Iowa River	Source to Iowa border and Iowa border to Iowa border	2C, 3B
Mississippi River	Lock and Dam No. 2 at Hastings to Iowa border	2B, 3B
Pine Creek	Source to Iowa border	2C, 3B
Riceford Creek	Source to mouth	2C, 3B
Root River	South Fork mouth to mouth	2B, 3B
South Fork of the Root River	Riceford Creek mouth to mouth	2B, 3B
Wapsipinicon River	Source to Iowa border	2C, 3B
Waterloo Creek	Source to Iowa border	1B, 2A, 3B
Lakes		
Minnesota Slough	(T. 101; R. 3, 4)	2B, 3B
Streams		
Upper Mississippi River Basin		
Mississippi River	Lake Itasca to Fort Ripley	2B, 3B
Mississippi River	Fort Ripley to Anoka	1C, 2B, 3B
Lakes		
Lake Andrusia	(T. 146; R. 31)	2B, 3B
Lake Bemidji	(T. 146, 147; R. 33)	2B, 3B
Cass Lake	(T. 145, 146; R. 30, 31)	2B, 3B
Lake Itasca	(T. 143; R. 36)	2B, 3B
Pokegama Lake	(T. 54, 55; R. 25, 26)	2B, 3B
Winnibigoshish Lake	(T. 145, 146, 147; R. 27, 28, 29)	2B, 3B
Streams		
Missouri River Basin		
Beaver Creek	Source to South Dakota border	2C, 3B
Flandreau Creek	Source to South Dakota border	2C, 3B
Kanaranzi Creek	Source to Iowa border	2C, 3B
Medary Creek	Source to South Dakota border	2C, 3B
Mud Creek	Source to Iowa border	2C, 3B
Ocheyedan River	Ocheda Lake outlet to Iowa border	2B, 3B
Pipestone Creek	Source to South Dakota border	2C, 3B
Rock River	Source to Iowa border	2C, 3B
Little Rock River	Source to Iowa border	2C, 3B
Little Sioux River	Source to Iowa border	2C, 3B
West Fork of the Little Sioux River	Source to Iowa border	2C, 3B
Split Rock Creek	Source to Split Rock Lake outlet	2B, 3B
Split Rock Creek	Split Rock Lake to South Dakota border	2C, 3B
Lakes		
Illinois Lake	(T. 101; R. 38)	2B, 3B
Iowa Lake	(T. 101; R. 38, 39)	2B, 3B
Loon Lake	(T. 101; R. 35, 36)	2B, 3B

WATERS	REACH OR AREA INVOLVED OR LOCATION	CLASSIFICATION
Ochleda Lake	(T. 101, 102; R. 39, 40)	2B, 3B
Pearl Lake	(T. 101; R. 36)	2B, 3B
Split Rock Lake	(T. 105; R. 46)	2B, 3B
Round Lake	(T. 101; R. 38)	2B, 3B
Rush Lake	(T. 101; R. 37)	2B, 3B
Spirit Lake	(T. 101; R. 35, 36)	2B, 3B
Little Spirit Lake	(T. 101; R. 36)	2B, 3B
Streams		
Red River of the North Basin		
Joe River	Source to Canadian border	2C
Pine Creek	Canadian border to Roseau River	2B, 3B
Pine Creek Diversion	Canadian border to and including Pine Creek diversion pools	2B, 3B
Roseau River	Source to Canadian border	2B, 3B
Bois de Sioux River	Mud Lake outlet to Breckenridge	2C
Sprague Creek	Canadian border to Roseau River	2B
Lakes		
Mud Lake	(T. 127; R. 47)	2B
Lake Traverse	(T. 125, 126; R. 47, 48, 49)	2B
Streams		
St. Croix River Basin		
Hay Creek	Wisconsin border to mouth	1B, 2A, 3B
St. Croix River	Wisconsin border crossing to Taylors Falls	1B, 2B
St. Croix River	Taylors Falls to mouth	1C, 2B, 3B
Lower Tamarack River	Hay Creek to mouth	1B, 2A, 3B
Upper Tamarack River (Spruce River)	Wisconsin border to mouth	1B, 2A, 3B
Streams		
Lake Superior Basin		
Pigeon River	South Fowl Lake to Pigeon Bay of Lake Superior	1B, 2B, 3A
Little Pokegama River	Source to Wisconsin border	2B, 3B
Red River	Source to Wisconsin border	1B, 2A, 3B
St. Louis River	Seven Beaver Lake outlet to Cloquet	2B, 3B
St. Louis River	Cloquet to Clough Island	2C, 3B
Lakes		
Fan Lake	(T. 65; R. 2E)	1B, 2B, 3A
North Fowl Lake	(T. 64, 65; R. 3E)	1B, 2B, 3A
South Fowl Lake	(T. 64, 65; R. 3E)	1B, 2B, 3A
Lily Lakes	(T. 65; R. 2E)	1B, 2B, 3A
Moose Lake	(T. 65; R. 2, 3E)	1B, 2B, 3A
Mountain Lake	(T. 65; R. 1, 2E)	1B, 2B
Rat Lake	(T. 65; R. 1W)	1B, 2B
Rose Lake	(T. 65; R. 1W)	1B, 2B
Rove Lake	(T. 65; R. 1E)	1B, 2B
St. Louis Bay	(T. 49, 50; R. 14, 15)	2B, 3B
Seven Beaver Lake	(T. 58; R. 11, 12)	2B, 3A
South Lake	(T. 65; R. 1, 2W)	1B, 2B
Superior Bay	(T. 49, 50; R. 13, 14)	2B, 3B

WATERS	REACH OR AREA INVOLVED OR LOCATION	CLASSIFICATION
Lake Superior	(T. 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64; R. 14W-7E)	1B, 2A, 3A
Wateb Lake	(T. 65; R. 1E)	1B, 2B
Streams		
Lake of the Woods Basin		
Basswood River	Basswood Lake to Crooked Lake	1B, 2B
Bear Creek	Canadian border to Lake of the Woods	2B, 3B
Bottle River	Bottle Lake to Lac LaCroix	1B, 2B
Granite River	Clove Lake to Gneiss Lake	1B, 2B
Harrison Creek	Canadian border to Lake of the Woods	2B, 3B
Kawishiwi River	Source to Fall Lake	1B, 2B, 3B
Knife River	Seed Lake to Carp Lake	1B, 2B
Loon River	Loon Lake to Little Vermillion Lake	1B, 2B
Pine River	Magnetic Lake to Clove Lake	1B, 2B
Poplar Creek	Canadian border to Lake of the Woods	2B, 3B
Stony Creek	Canadian border to Lake of the Woods	2B, 3B
Lakes		
Basswood Lake	(T. 64, 65; R. 9, 10, 11)	1B, 2B
Birch Lake	(T. 64, 65; R. 8, 9)	1B, 2B
Bottle Lake	(T. 67; R. 13)	1B, 2B
Carp Lake	(T. 65; R. 8)	1B, 2B
Clove (Pine) Lake	(T. 65; R. 4)	1B, 2B
Crane Lake	(T. 67, 68; R. 16, 17)	1B, 2B, 3A
Crooked Lake	(T. 65, 66; R. 12, 13)	1B, 2B
Cypress Lake	(T. 66; R. 6)	1B, 2B
Fall Lake	(T. 63, 64; R. 11, 12)	1B, 2B
Gneiss Lake	(T. 66; R. 4)	1B, 2B
Gunflint Lake	(T. 65; R. 2, 3, 4)	1B, 2B
Little Gunflint Lake	(T. 65; R. 2)	1B, 2B
Iron Lake	(T. 66, 67; R. 12, 13)	1B, 2B
Kabetogama Lake	(T. 69, 70; R. 20, 21, 22)	1B, 2B, 3A
Knife Lake	(T. 64, 65; R. 7, 8)	1B, 2B
Little Knife Lake	(T. 65, 66; R. 6, 7)	1B, 2B
Lac La Croix	(T. 67, 68; R. 13, 14, 15)	1B, 2B
Loon Lake	(T. 66, 67; R. 15)	1B, 2B
Magnetic Lake	(T. 65; R. 3, 4)	1B, 2B
Maraboeuf Lake	(T. 66; R. 4)	1B, 2B
Melon Lake	(T. 65; R. 8)	1B, 2B
Namakan Lake	(T. 69; R. 17, 18, 19)	1B, 2B, 3A
Newton Lake	(T. 63, 64; R. 11)	1B, 2B
North Lake	(T. 65; R. 2)	1B, 2B
Little North Lake	(T. 65; R. 2)	1B, 2B
Pipestone Bay	(T. 64, 65; R. 10, 11)	1B, 2B
Sand Point Lake	(T. 68, 69; R. 17)	1B, 2B, 3A
Rainy Lake	(T. 70, 71; R. 18, 19, 20, 21, 22, 23)	1B, 2B, 3A

WATERS	REACH OR AREA INVOLVED OR LOCATION	CLASSIFICATION
Saganaga Lake	(T. 66; R. 4, 5)	1B, 2B
Seed Lake	(T. 65; R. 8)	1B, 2B
Sucker Lake	(T. 64; R. 8, 9)	1B, 2B
Swamp Lake	(T. 66; R. 5, 6)	1B, 2B
Little Vermillion Lake	(T. 67; R. 16)	1B, 2B
Lake of the Woods	(T. 161, 162, 163, 164, 165, 166, 167, 168; R. 30, 31, 32, 33, 34, 35)	1B, 2B, 3A

*Filed with the Secretary of State and Commissioner of Administration
February 4, 1971.*

**STATE OF MINNESOTA
POLLUTION CONTROL AGENCY**

CHAPTER TWENTY-NINE: WPC 29

EFFLUENT STANDARDS FOR DISPOSAL SYSTEMS DISCHARGING TO THAT PORTION OF THE MISSISSIPPI RIVER FROM THE BLANDIN DAM IN THE CITY OF GRAND RAPIDS TO THE MOUTH OF THE RUM RIVER AND FROM THE MOUTH OF THE CHIPPEWA RIVER TO THE IOWA BORDER, THE RED CEDAR RIVER FROM AUSTIN TO THE MINNESOTA-IOWA BORDER, THE MINNESOTA RIVER FROM THE MOUTH OF THE POMME DE TERRE RIVER AND INCLUDING MARSH LAKE TO MANKATO, AND THE BLUE EARTH RIVER FROM THE MOUTH OF ELM CREEK TO THE JUNCTION WITH THE MINNESOTA RIVER IN MANKATO

WPC 29: The following standards of effluent quality and purity are hereby adopted and established for that portion of the Mississippi River from the Blandin dam at the outlet of Paper Mill Reservoir in the City of Grand Rapids approximately 400 feet upstream from the U.S. Highway 169 bridge to the mouth of the Rum River in the City of Anoka, and from the mouth of the Chippewa River at the lower end of Lake Pepin near the Village of Wabasha to the Minnesota-Iowa border; and that portion of the Red Cedar River from the bridge on Interstate Highway 90 in the City of Austin to the Minnesota-Iowa border in Section 33, Township 101 North, Range 18 West; and for that portion of the Minnesota River from the mouth of the Pomme de Terre River (Township 120 North, Range 43 West) to the mouth of the Blue Earth River in Mankato, and that portion of the Blue Earth River from the mouth of Elm Creek in Section 4, Township 103 North, Range 28 West to the mouth in Mankato.

(a) **Definitions.** The terms "person," "sewage," "industrial wastes," "other wastes," "treatment works," "disposal systems," and "waters of the state," as well as any other pertinent terms for which definitions are given in the water pollution control statutes, as used herein have the meanings ascribed to them in Minnesota Statutes (1969), Chapters 115 and 116. Other terms and abbreviations used herein not specifically defined in the law shall be construed in conformance with the context and professional usage.

(b) **Severability.** The provisions of this regulation shall be severable and the invalidity of any lettered paragraph or any subparagraph or subdivision thereof shall not make void any other lettered paragraph, subparagraph, subdivision or any other part thereof.

(c) **Standards of Effluent Quality and Purity.** Except as otherwise provided herein and notwithstanding any prior regulation it is hereby established as a requirement applicable to all persons operating or causing to be operated or in any way responsible for the operation of a disposal system which discharges sewage, industrial waste or other wastes to the above delineated waters, or which may affect these waters, that all effluents shall be treated prior to discharge so as to meet any or all of the following limiting concentrations:

Substance or Characteristic	Limiting Concentration
5-day biochemical oxygen demand	25 milligrams per liter
Total suspended solids	30 milligrams per liter
Fecal coliform group organisms	200 most probable number per 100 milliliters
Total coliform group organisms*	1,000 most probable number per 100 milliliters
Pathogenic organisms	None
Oil	Essentially free of visible oil
Turbidity value	25
pH	6.5-8.5
Unspecified toxic or corrosive substances	None at levels acutely toxic to humans or other animals or plant life, or directly damaging to real property.

(d) **Monthly Reports.** All persons operating sewage, industrial waste or other waste disposal systems adjacent to or discharging to the waters covered by this regulation shall submit every month a report to the Minnesota Pollution Control Agency on the operation of such disposal system, the effluent flow, and the characteristics and concentration of the effluents and receiving waters. Sufficient data on measurements, observations, sampling and analyses and other pertinent information shall be furnished as may be required by the Agency to reflect adequately the condition of the disposal system, the effluent and the waters receiving the effluent.

(e) **Determination of Compliance.** In making tests or analyses of the sewage, industrial wastes or other wastes to determine compliance with the standards, samples shall be collected in such manner and place, and of such type, number and frequency as may be considered satisfactory by the Agency. No allowance will be made for dilution of the effluents in the waters of the state into which they are discharged. The samples shall be preserved and analyzed in accordance with procedures given in Standard Methods for the Examination of Water and Waste Water, by the American Public Health Association, American Water Works Association, and the Water Pollution Control Federation, which is in effect on the effective date of this regulation or other methods acceptable to the Agency.

(f) **Variance from Standards.** In any case where, upon application of the responsible person or persons, the Agency finds that by reason of exceptional circumstances the strict enforcement of any provision of these standards would cause undue hardship, that disposal of the sewage, industrial waste or other waste is necessary for the public health, safety or welfare, or that strict conformity with the standards would be unreasonable, impractical or not feasible under the circumstances, the Agency in its discretion may permit a variance therefrom upon such conditions as it may prescribe for the prevention, control or abatement of pollution in harmony with the general purposes of these standards and the intent of the applicable state and national laws.

Filed with the Secretary of State and Commissioner of Administration February 4, 1971.

**May be used as the control parameter in lieu of fecal coliforms if desired.*



STATE OF MINNESOTA
POLLUTION CONTROL AGENCY
717 DELAWARE STREET S.E.
(OAK AND DELAWARE STREETS S.E.)
MINNEAPOLIS, MINNESOTA
55440

WASTE DISPOSAL PERMIT

Monticello Nuclear Generating Plant,
Northern States Power Company,
Monticello Township, Wright County

Pursuant to authorization by the Minnesota Pollution Control Agency, and in accordance with the provisions of Minnesota Statutes, 1967, Chapters 115 and 116, a permit is hereby granted to Northern States Power Company, Minneapolis, for disposal of waste from a steam electric generating plant being constructed by the company in the west half of Section 33, Township 122 N, Range 25 W, Wright County, including the discharge of effluents, as herein below specified therefrom to the Mississippi River, subject to the conditions given below.

General Conditions

1. This permit shall not release the permittee from any liability or obligation imposed by Minnesota statutes or local ordinances and shall remain in force subject to all conditions and limitations now or hereafter imposed by law. The permit shall be permissive only and shall not be construed as estopping or limiting any claims against the permittee for damage or injury to person or property, or any waters of the state, resulting from any acts, operations, or omissions of the permittee, its agents, contractors or assigns, nor as estopping or limiting any legal claim of the state against the permittee, its agents, contractors or assigns, for damage to state property, or for any violation of subsequent regulations or conditions of this permit.
2. No assignment of this permit shall be effective until it is executed in writing and signed by the parties thereto and thereafter approved by the Agency.
3. No major alterations or additions to the disposal system shall be made without the written consent of the Agency.
4. The use of the disposal system shall be limited to the treatment or disposal of the waste materials or substances described in the permit application dated July 11, 1967, and associated material filed with the Agency.

5. The permit is subject to modification or revocation, and may be suspended at any time for failure to comply with the terms stated herein or the provisions of any other applicable regulations or standards of the Agency or its predecessors, and is issued with the understanding that it does not estop subsequent establishment of further requirements for treatment or control at any time by insertion of appropriate additional clauses herein at the discretion of the Agency in order to prevent or reduce possible pollution of the environment.

6. The permittee or assigns shall defend, indemnify and hold harmless the State of Minnesota, its officers, agents and employees, officially or personally, against any and all actions, claims or demands whatsoever which may arise from or on account of the issuance of this permit, or the construction or maintenance of any facilities hereunder.

7. Certification of completion of the project shall be made immediately after construction is finished, reports on effluent quality and operational practices shall be submitted regularly every month, and the permit holder shall certify that he is in all respects in conformance with the conditions given in the Agency policy statement of August 22, 1967 entitled, "Policy Regarding Operation Permits for Sewage and Industrial Waste Treatment Works."

Special Conditions Relating to Conventional Wastes

1. No raw sewage or treated sewage effluent shall be discharged to surface waters of the state from the plant site.

2. Any additional construction plans and design data which may be required for all disposal systems needed for collection, treatment and disposal of sewage, industrial wastes and other wastes originating at this site, and for effective containment of stored liquids or other pollutional materials, for the prevention of water pollution to conform with the requirements of this permit, shall be submitted together with any other information requested for review by the Agency. All such plans shall meet with the approval of the Agency and the systems be completed before operation of the plant is started.

3. The following standards of quality and purity applicable to the effluent of the holding pond shall not be exceeded at the point of discharge from the pond:

pH value	6.5 - 8.5
Turbidity value	25
5-day biochemical oxygen demand	25 milligrams/liter
Total suspended solids	30 milligrams/liter

4. Cooling facilities shall be provided and operated to insure that the heat content of the cooling water after reasonable dilution and mixing in the river does not raise the temperature of the river above the limits specified below:

<u>Period</u>	<u>Maximum Temperature</u>	
July and August, inclusive	86°F	(or 5°F above the ambient temperature of the river, whichever is greater, except that in no case shall the river temperature be raised above 90°F by the discharge of this effluent.)
June and September, inclusive	80°F	
May and October, inclusive	67°F	
April and November, inclusive	55°F	
March and December, inclusive	43°F	
January and February, inclusive	37°F	

The design of treatment works for compliance with the stream standards, unless otherwise specified, shall be based on the seven consecutive day low flow of the river which is equal to or exceeded by 90% of such seven-day minimum average flows of record (the lowest seven-day flow with a once in ten year recurrence interval) for the critical month. The extent of the mixing zone to be permitted will be determined by the Agency at a later date after reviewing the data made available on the characteristics of the river and the effluent and other pertinent considerations.

5. No industrial waste, or other wastes, treated or untreated, shall be discharged into the waters so as to cause any nuisance conditions, including, without limitation, the presence of substantial amounts of floating solids, scum, oil, suspended solids, discoloration, obnoxious odors, sludge deposits, slimes, or fungus growths, or other offensive effects; or so as to cause any material increase in any other chemical constituents; or cause any substantial change in any characteristics which may impair the quality of the water so as to render it objectionable or unsuitable for fish and wildlife or as a source of water for municipal, industrial or agricultural purposes; or otherwise impair the quality of the waters for any other uses.

6. The company shall measure the quantity and characteristics of and sample and analyze the industrial wastes, other wastes and stored liquids at the site as may be requested by the Agency, and shall provide the Agency every month with a complete report on such measurements, samples and analyses, together with any other information relating to waste disposal or pollution control which may be requested.

7. Facilities for monitoring the quality of the receiving waters shall be provided and used as requested by the Agency. Results of the monitoring shall be reported to the Agency at monthly intervals.

8. The company shall cause to be made without cost to the state, technical studies and investigations of the biota and quality and related matters pertaining to the waters of the state which receive the plant effluents, or which are in the immediate vicinity of the plant, as may be requested by the Agency. Complete reports shall be submitted annually, or more frequently upon request.

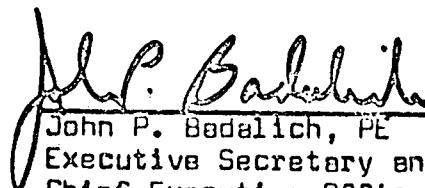
9. Continuous operation of all of the treatment works at their maximum capability consistent with practical limitations and maintenance needs of such works shall be maintained at all times when the plant is in operation and when necessary to provide adequate treatment of the sewage, industrial wastes or other wastes by the terms of this permit.

10. The company shall expeditiously make any changes in waste disposal monitoring, and reporting practices, and provide any additional treatment works or disposal systems or other safeguards for the prevention of pollution of the environment upon the request of the Agency.

11. Liquid substances which could constitute a source of pollution of the waters of the state shall be stored in accordance with regulation WPC 4. Other wastes as defined by Minnesota statutes, section 115.01, subdivision 4, shall not be deposited in any manner such that the same may be likely to gain entry into these waters. In any case where such substances, either liquid or solid, as a result of accident or natural catastrophe should gain entry into any waters of the state, it shall be the responsibility and duty of the company to inform the Agency in the quickest time possible and immediately remove and recover all such polluttional substances to the fullest extent reasonably possible under existing conditions.

12. The industrial or other waste effluents as discharged shall comply with any and all applicable requirements of effluent standards or river classifications and standards which may be adopted by the Agency for this type of source and/or for these waters in the future.

(Special Conditions Relating to Radioactive Wastes omitted)



John P. Badalich, PE
Executive Secretary and
Chief Executive Officer

Permit No. 5633

Dated May 20, 1969

Excerpts from Minutes of Minnesota
Pollution Control Agency Meeting,
Monday May 8, 1972

AGREEMENT

WATER QUALITY:

Monticello NSP Thermal Discharges:

Mr. Johannes briefed the members on this and following his presentation, Mr. Gary Welk of the NSP Company addressed the Agency. He stated that he felt the problem was in the interpretation of the permit. He said that NSP Company will operate the cooling towers on a helper basis when intake temperatures are 68° (degrees) or above. This will roughly cover the period from Memorial Day through Labor Day.

Following discussion from the members, Mrs. Watson moved that the Agency accept the terms of this proposal as outlined by Mr. Welk but to operate the cooling towers when the intake temperature is 68°F or above which is approximately from Memorial Day to Labor Day, but that the Agency maintain the right to amend this pending the results of the forthcoming hearing on thermal standards. Dr. Olsen seconded the motion and it carried unanimously.