



State of Wisconsin \

September 13, 1976

DEPARTMENT OF NATURAL RESOURCES

Anthony S. Earl Secretary

BOX 459 MADISON, WISCONSIN 53701

IN REPLY REFER TO:

8300

Mr. Allen W. Williams, Jr. Attorney at Law Foley & Lardner 777 East Wisconsin Avenue Milwaukee, Wisconsin 53202

Mr. Kenneth Euers, President Brown County Conservation Alliance 1406 9th Street Green Bay, Wisconsin 54304

Mr. Thomas D. Eisele, Deputy Director The Leke Michigan Federation 53 West Jackson Blvd. Chicago, Illinois 60604

Mr. Daniel F. Buss, Program Manager CDH/Limnetics, Point Beach Nuclear Plant 6132 West Fond du Lec Avenue Milwaukee, Wisconsin 53218 Mr. Bill Rudolph, Vice President CDM/Limmetics, Point Beach Nuclear Plant 6132 West Fond du Lac Avenue Milwaukee, Wisconsin 53218

Mr. Charles H. Wahtola Wisconsin Electric Power Company 231 West Michigan Avenue Milwaukee, Wisconsin 53201

Mr. Robert J. Mussallem Attorney at Law P. O. Box 7921 Madison, Wisconsin 53707

Re: Petition of Wisconsin Public Service Corporation for the Imposition of Alternative Effluent Limitations and Thermal Mixing Zone Requirements for the Kewaunee Nuclear Power Plant, Town of Carlton, Kewaunee County - EX-76-143

Centlemen:

Please find enclosed a copy of Findings of Fact, Conclusion of Law

and Order in regard to the above-captioned matter.

Sincerely,

huren H. Var Sudterer

Maurice H. Van Susteren 🤺 Hearing Examiner

Enc.

THIS IS 100% RECYCLED PAPER

BEFORE THE

DEPARTMENT OF NATURAL RESOURCES

Petition of Wisconsin Public Service Corporation for the Imposition of Alternative Effluent Limitations and Thermal Mixing Zone Requirements for the Kewaunee Nuclear Power Plant, Town of Carlton, Kewaunee County

EX-76-143 WI-0001571

FINDINGS OF FACT, CONCLUSION OF LAW AND ORDER

In May of 1976 the Wisconsin Public Service Corporation for and on behalf of itself as the manager and for Wisconsin Power and Light Company and Madison Gas and Electric Company as co-owners filed a petition with the Department of Natural Resources for a public adjudicatory hearing pursuant to Sections 147.05(4)(a) and 147.20, Wisconsin Statutes, and Wisconsin Administrative Code NR 209.05 and 102.07 for the imposition of alternative effluent limitations and thermal mixing zone requirements for the Kewaunee Nuclear Power Plant in the Town of Carlton, Kewaunee County.

The petitioner is required by Wisconsin Administrative Code NR 102.05 to control the thermal component of its discharge to Lake Michigan such that by July 1, 1979 the thermal discharge shall not raise the temperature of the receiving water more than 3° F above the existing natural temperature at the edge of a mixing zone nor raise the temperature at the edge of the mixing zone above the maximum temperature limits as set out in the Administrative Code. The thermal mixing zone is as defined in Wisconsin Administrative Code NR 102.05.

In addition to the foregoing thermal discharge and mixing requirements the petitioner is required by Section 147.04, Wisconsin Statutes, and Wisconsin Administrative Code NR 290.11 to control the thermal component of its discharge such that by July 1, 1981 there shall be no discharge of heat from the main condensers except blowdown from recirculated cooling water systems provided that the temperature of the blowdown does not exceed at any time the lowest temperature of the recirculated cooling water prior to the addition of the makeup water.

The petitioner requests that the thermal component of its discharge be exempted from the thermal mixing zone requirements of NR 102.05 and further that it be subjected to the following alternative effluent limitations in lieu of that required by Wisconsin Administrative Code NR 290.11:

"The thermal discharge from the plant shall not have a flow rate of more than 450,000 gallons per minute nor have a temperature increase between the intake and discharge of more than 30° F." Order Number EX-76-141 Page 2

The petitioner submitted a demonstration pursuant to Wisconsin Administrative Cole NR 209.03(2)(a) and 102.06 in support of the petition.

Public hearing was held August 10, 1976 at Kewaunee, Wisconsin before Examiner Maurice H. Van Susteren.

APPEARANCES:

IN SUPPORT:

Wisconsin Public Service Corporation, by

Allen W. Williams, Jr., Attorney Milwaukee

AS INTEREST MAY APPEAR:

Brown County Conservation Alliance, by

Kenneth Euers, President

· Green Bay

The Lake Michigan Federation, by

Thomas D. Eisele, Deputy Director Chicago, Illinois

Department of Natural Resources Division of Environmental Standards, by

> Robert J. Mussallen, Attorney Madison

CDM/Limnetics, by

Daniel F. Buss, Program Manager - Point Beach Nuclear Plant Milwaukee

Bill Rudolph, President Milwaukee

Wisconsin Electric Power Company, by

Charles H. Wahtola Milwaukee

FINDINGS OF FACT

1. The Kewaunee Nuclear Power Plant, Town of Carlton, Kewaunee County operated by the Wisconsin Public Service Corporation has a pressurized water reactor licensed at 1650 M Wt and a turbine generator of 540 M We. The unit began full commercial operation in 1974 and reached full power in August 1974. 2. The plant uses a once through cooling system with a normal flow rate of 413,000 gpm with a design maximum rise in temperature of 11.1° C. The intake structure is located approximately 1600 feet offshore and cooling water is discharged from a shoreline outfall structure.

3. Lake currents at the plant parallel the shore in the direction N NE - NE and S SW - SW with speeds nost frequently in the range of 0.10-0.24 fps. The direction of net displacement of water past the plant for the period April-December 1973 and June to October 1974 was northward. Maximum and maximum mean temperatures of the lake near the plant in 1973-1974 occurred in August with maximum ranges occurring in August 1973 and July 1974. Stratification develops in the shallow nearshore area but breaks down easily.

4. The discharge zone for the plant thermal plume encompasses an area of approximately 985.3 acres at the surface and 94.5 acres at the bottom. The surface area is in excess of the 71.74 acres of the Department standard for the plant. The thermal plume discharge velocity affects an area of the lake bottom about 250 feet wide extending 400 feet from the outfall. There is a 55% to 90% reduction in excess temperature within 50 to 75 minutes travel time from the outfall.

5. The chemical quality of the water in the plant vicinity is representative of general lake conditions with no change in the major anions and cations. Water quality generally within and immediately outside the thermal plume is essentially the same considering dissolved oxygen, nitrogen species, orthophosphate and soluble silica concentrations. Alkalinity and pH were virtually constant but turbidities and suspended solids changed in relation to weather conditions. Bacteria levels, oxygen demands and trace metal values show little if any differences between preoperational and operational periods.

6. The Department chose 30 species of fish as representative important species and posed 18 questions as part of the demonstration. The list embraces fish considered to have other values such as commercial, community integrity, sport, forage and changing status.

Alewife, rainbow smalt, yellow perch, lake trout, lake chub, longnose dace, white sucker, longnose sucker and slimy sculpin are the rajor constituents of the local fishery comprising 98% of the total catch. Annual catches and general distribution of major species are unrelated to the thermal discharge of the plant.

The life history of the representative important species was studied to include general occurrence in Lake Michigan, seasonal migrations, seasonal abundance near the plant, spawning, growth and food habits.

Species believed to spawn successfully in areas near the plant are alewife, rainbow smelt, lake chub, longnose dace and slimy sculpin. Peak abundances of alewife, smelt, trout and white sucker appear to correspond to their respective spawning seasons but no spawning habitat was identified for the various species. The area affected by the plant's thermal discharge is not an important spawning location for any species. The area has, however, developed an extensive seasonal salmonid fishery at the plant outfall.

The thermal discharge has had no appreciable influence on the local fishery. No major changes in species composition, seasonal abundance or spatial distribution of the representative important species has occurred since the plant began operating. The outfall, however, has attracted certain species namely, the carp. Attraction to the thermal discharge is in response to the higher temperatures but fish also avoid the discharge when temperatures become too high. The discharge at the outfall has only a negligible effect on the normal seasonal migrations of fish. No fish kills have occurred since the plant began operation.

The discharge of waste heat from the plant has caused no harm to the representative species in the discharge zone and has no effect on the representative species immediately outside the discharge zone.

7. Densities and seasonal distributions of macroinvertebrates have not changed by operation of the plant and the thermal discharge has had no effect on the macroinvertebrate community within the discharge zone.

8. The phytoplankton community has remained essentially unchanged from preoperational to operational periods. The plant operation has caused no harm to the phytoplankton community inside and outside the discharge zone.

9. The operation of the plant had no effect on zooplankton either inside or outside the discharge zone.

10. Periphytic algae collected in both preoperation and operation phases show little if any change in locations outside the discharge zone. Standing crop variations show a consistent seasonal trend. The larger standing crops, however, are found on either side of the discharge canal. The canal riprap erosion control walls provide a favorable substrate for algal colonization.

11. No macrophytes were observed in the vicinity of the plant in either the preoperational or operational phases.

12. An immediate primary benefit of plant operation is the development of an extensive salmonid fishery in the immediate discharge area.

13. The Department finds that no appreciable harm has resulted from the thermal component of the discharge, taking into account the interaction of such component with other pollutants and the additive effect of other thermal discharges, to a balanced, indigenous community of shellfish, fish and wildlife in and on the receiving water of Lake Nichigan. 14. The thermal mixing zone requirements of Wisconsin Administrative Code NR 102 are more stringent than necessary to assure a balanced indigenous community of shellfish, fish and wildlife in Lake Michigan.

15. Discharge limitations of 450,000 gallons per minute and a temperature increase between intake and discharge of 30° F or less will assure the protection and propagation of balanced indigenous communities of fish, shellfish and wildlife in the vicinity of the Kewaunee Nuclear Power Plant in Lake Michigan.

CONCLUSION OF LAW

The Department of Natural Resources has the authority and power under Chapter 147, Wisconsin Statutes, and Wisconsin Administrative Code Chapters NR 102 and 209 and in accordance with the foregoing findings of fact to issue an order imposing alternative effluent limitations and to exempt the thermal component of the petitioners discharge from existing thermal mixing zone requirements of Wisconsin Administrative Code NR 102.05.

ORDER

THE DEPARTMENT, THEREFORE, ORDERS:

1. The petition of Wisconsin Public Service Corporation for the imposition of alternative effluent limitations and exemption from thermal mixing zone requirements for the Kewaunee Nuclear Power Plant be, and the same is hereby granted.

2. The petitioner is exempted from the thermal mixing zone requirements of Wisconsin Administrative Code NR 102.05 and is subjected to the following alternative effluent limitations in lieu of that required by Wisconsin Administrative Code NR 290.11:

The thermal discharge from the plant shall not have a flow rate of more than 450,000 gallons per minute nor have a temperature increase between the intake and discharge of more than 30° F.

Dated at Madison, Wisconsin, this 13th day of September, 1976.

STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES For the Secretary

By Maunine N. Can Series

Maurice H. Van Susteren Hearing Examiner

Attachment #2



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Anthony S. Earl Secretary

80X 7921 MADISON, WISCONSIN 53707

IN REPLY REFER TO: ____3430

CERTIFIED MAIL RETURN RECEIPT REQUESTED

Mr. E.R. Mathews Vice President Wisconsin Public Service Corporation **P.O.** Box 1200 Green Bay, WI 54305

> RE: Modification of WPDES Permit No. WI-0001571-2 (Kewaunee): Commenter and the state of the second second

Dear Mr. Mathews:

The request for modification of Wisconsin Pollutant Discharge Elimination System (WPDES) Permit No. WI-0001571 initiated by Wisconsin Department of Natural Resources on June 23, 1980 has been processed in accordance with Section 147.03, Wisconsin Statutes. This modification extends the permit expiration date, and adds fecal coliform and Chlorine limits.

The permit which is attached, replaces the original permit issued on September 28, 1979. Please replace the original permit with this attached modified permit in all copies of the permit which you retain in your records. All discharges from this facility and actions or reports relating thereto shall be in accordance with the terms and conditions of the original permit, as modified.

The WPDES permit program has been approved by the Administrator of the U.S. Environmental Protection Agency pursuant to Section 402(b) of the Federal Water Pollution Control Act Amendments of 1972 (33 U.S.C. Section 1342(b)). The modified permit is accordingly subject to enforcement under Section 147.21 and 147.29, Wisconsin Statutes and Section 309 of the Federal Act (33 U.S.C. Section 1319).

Indrew-C. Damon

Andrew C. Damon Administrator X Division of Enforcement

SEP 3 0 1980

Dated Enclosures Permit

cc: U.S. Environmental Protection Agency Attn: Permits Branch Lake Michigan District

ADDENDUM TO COVER LETTER

Re: Extension of Permit Expiration Dates Beyond June 30, 1981

This nermit continues to contain effluent limitations representing "Best Practicable Control Technology Currently Available" normally referred to as BPT. However, EPA has asked the Department by memorandum of Aug. 29, 1980[•] to establish case-by-case effluent limitations representing Best Conventional or Best Available Control Technology (BCT/BAT) so that any permit issued or extended beyond June 30, 1931 includes such limitations and a compliance schedule to meet the BCT/BAT requirements by no later than July 1, 1984.

Recognizing such an extensive shift in responsibility and the Department's limited staff and resources to accommodate such a task at this late date, many permits will be extended beyond EPA's June 30, 1981 deadline without including BCT/BAT. Instead, all such permits will continue to contain a reoDener clause which allows the Department to modify, or alternatively revoke and reissue permits to include appropriate BCT/BAT effluent limitations when they become available.

> Per the Office of the Administrator Division of Enforcement

andrew C. Damon

Andrew C. Damon, Administrator &

Dated: September 30, 1980

Permit No. WI-0001571-2

PERMIT TO DISCHARGE UNDER THE WISCONSIN POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of Chapter 147, Nisconsin Statutes, WISCONSIN PUBLIC SERVICE CORPORATION (KEWAUNEE NUCLEAR POWER PLANT)

is permitted to discharge from a facility located at The south 1/2 of Section 25 and the north 1/2 of Section 36 Township 22 North,

Range 25 east

TOWN OF CARLTON, KEWAUNEE COUNTY, WISCONSIN

to BOTH LAKE MICHIGAN AND AN UNNAMED CREEK TRIBUTARY OF LAKE MICHIGAN

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

This permit shall become effective on October 1, 1979

This permit to discharge shall expire at midnight, Uecember 31, 1981

Permittee shall not discharge after the date of expiration. If the permittee wishes to continue to discharge after this expiration date he shall file an application for reissuance of his permit in accordance with the requirements of Chapter NR 200, Wisconsin Administrative Code, at least 180 days prior to this expiration date.

State of Wisconsin Department of Natural Resources For the Secretary

Thomas A. Kroehn Administrator Division of Environmental Standards Dated this 38th day of Systember, 1979 Modified: SEP 30 1980

GENERAL CONDITIONS

1. Compliance

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.

2. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact on waters of the State resulting from noncompliance with any effluent limitations specified in this permit, including such special or additional monitoring as may be required by the Department or may be necessary to determine the nature and impact of the noncomplying discharge.

3. Removed Substances

Solids, sludges, filter backwash or other pollutants removed from or resulting from treatment or control of wastewaters or intake waters shall be stored and disposed of in a manner such as to prevent any pollutant from such materials from entering the waters of the State. Land disposal of treatment plant solids and sludges shall be either at a site or operation licensed by the Department under Chapter NR 151, Wisconsin Administrative Code, or in accordance with a sludge disposal plan approved by the Department.

4. Right of Entry

The permittee shall allow authorized representatives of the Department of Natural Resources, and the Administrator of the United States Environmental Protection Agency or his authorized representatives, upon the presentation of credentials:

a. To enter upon the permittee's premises where an effluent source is located or in which any records are required to be kept under the terms and conditions of this permit; and

b. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and to sample any wastewaters.

5. Permit Modification

After notice and opportunity for a hearing as provided in Section 147.03, Wisconsin Statutes, 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;

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- 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 permitted discharge.

6. Toxic Pollutants

Nothing in this permit shall be construed to authorize the discharge of any toxic pollutant or combination of pollutants in amounts or concentrations which exceed any applicable toxic effluent standard or prohibition, including any schedule of compliance specified in any such effluent standard or prohibition, promulgated under Section 147.07(1), Wisconsin Statutes.

If a toxic effluent standard or prohibition, including any schedule of compliance specified in such effluent standard or prohibition, is promulgated under Section 147.07(1), Wisconsin Statutes, for a toxic pollutant or combination of pollutants 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.

7. Civil and Criminal Liability

Except as provided in permit conditions on "Bypassing" (Part I,23) and "Power Failures" (Part I,24), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties under Section 147.21, Wisconsin Statutes, for noncompliance with the terms and conditions of this permit.

8. 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 Federal Water Pollution Control Act (33 U.S.C. Section 1321).

9. State Laws

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 established pursuant to any other applicable State law or regulation.

10. 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 infringement of Federal, State or local laws or regulations.

11. 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.

12. Schedule of Compliance Progress Reports

No later than 14 calendar days following a date identified in any schedule of compliance in Part II, the permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirements.

13. Test Procedures

Test procedures used for the analysis of pollutants shall be those listed in Chapter NR 219, Wisconsin Administrative Code, or an alternate method authorized in Part II.

14. 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(s) who performed the analyses;

- d. The analytical techniques or methods used; and
- e. The results of all required analyses.

15. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified in Chapter NR 219, the results of such monitoring shall be included in the Discharge Monitoring Report Form 3200-28 or 3200-40. Such increased frequency shall also be indicated.

16. Records Retention

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed and calibration and maintenance of instrumentation and recordings from continuous monitoring instrumentation shall be retained for a minimum of three (3) years, or longer if requested by the Department of Natural Resources.

17. Construction of Onshore or Offshore Structures

This permit does not authorize or approve the construction of any onshore or offshore physical structure of facilities or the undertaking of any work in any navigable waters.

18. Confidential Information

Except for data determined to be confidential under Section 147.08(2)(c), Wisconsin Statutes, all monitoring reports required by this permit shall be available for public inspection at the headquarters of U.S. EPA Region V and the Department of Natural Resources. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in Section 147.21, Wisconsin Statutes.

19. Transfer of Control of Operation

In the event of a transfer of control of operation of the facility from which the permitted discharges emanate to a person not named on page one (1) of this permit, the permittee prior to such transfer shall notify his successor by letter that this permit is not transferable and that prior to any discharge after such transfer, a new WPDES permit must be obtained. A copy of this letter shall be forwarded to the Department of Natural Resources, WPDES Permit Section, Box 7921, Madison, Wisconsin 53707.

Part I. Page 4 of B

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20. Change in Discharge

Any anticipated facility expansions, production increases or process modifications which will result in new, different, or increased discharges of pollutants must be reported in accordance with Chapter NR 200, Wisconsin Administrative Code, by submission of a new WPOES application or, if such changes will not exceed the effluent limitations specified in this permit, ----by notice to the Department of Natural Resources of such changes. Following such notice, the permit may be modified to specify and limit any pollutants not previously limited.

21. Noncompliance Notification

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, he shall provide the Department of Natural Resources in writing within five (5) days of becoming aware of such condition, with the following information.

- a. A description of the discharge and cause of noncompliance; and
- b. An identification of the period of noncompliance, including exact dates and times; or, if continuing, the anticipated time the noncompliance is expected to continue, and a description of the steps being taken to reduce, eliminate and prevent recurrence of the noncompliance.

22. Facilities Operation

The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

23. Bypassing

. Any diversion from or bypass of facilities necessary to maintain compliance with the terms and conditions of this permit is prohibited, except (i) an inadvertent bypass lasting no longer than one hour and resulting from equipment damage or temporary power interruption, or (ii) an unavoidable bypass necessary to prevent loss of life or severe property damage. or (iii) a bypass of excessive storm drainage or runoff which would damage any facilities necessary for compliance with the effluent limitations and prohibitions of this permit. In the event of occurrence of a bypass described by (ii) or (iii) the permittee shall immediately notify the Department District Office by telephone of such occurrence. In addition, the permittee shall notify the Department of Natural Resources, WPDES Permit Section and the Administrator of the U.S. EPA - Region V in writing of each such diversion or bypass by letter within 72 hours.

24. Power Failures

In order to maintain compliance with the effluent limitations and prohibitions of this permit in the event of the reduction, loss, or failure of one or more of the primary sources of power to the wastewater control facilities, the permittee shall either:

- a. Provide an alternative power source sufficient to operate the wastewater treatment or control facilities if required by the Schedule of Compliance contained in Part II, or,
- b. If there is no such requirement, halt, reduce or otherwise control production and/or all discharges from the facility.

25. Definition Terms

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(i) For those terms used in Parts I and II which are defined in Section 147.015, Wisconsin Statutes, the meanings of that Section shall apply.

(ii) As used in Daily Effluent Limitations, Part II:

- (1) "Average" means the arithmetic mean of daily monitoring test results obtained during a calendar month for the given parameter; that is the total of such daily results, in pounds per day, milligrams per liter, or other appropriate unit divided by the number of days for which results are totaled. For example, if a facility operates or discharges and monitors 30 days during a month the daily average is the sum of daily values in pounds per day, milligrams per liter, or other appropriate unit divided by 30 for each parameter but if one day's result is missing for any parameter the divisor in that case is 29.
- (2) "Maximum" means the highest daily monitoring test result, in pounds per day, milligrams per liter, or other appropriate unit during the calendar month for the given parameter.
- (3) "Minimum" means the lowest daily monitoring test result, in the appropriate unit, during the calendar month for the given parameter.
- (4) The "average" for fecal coliform bacteria shall be the geometric mean of the samples collected in a reporting period.
- (5) "Monthly Average" means the arithmetic mean of daily monitoring test results obtained during a calendar month for the given parameter; that is the total of such daily results, in pounds per day, milligrams per liter, or other appropriate unit divided by the number of days for which results are totaled. For example, if a facility operates or discharges and monitors 30 days during a month the daily average is the sum of daily values in pounds per day, milligrams per liter, or other appropriate unit divided by 30 for each parameter, but if one day's result is missing for any parameter the divisor in that is 29.
- (6) "Weekly Average" means the arithmetic mean of daily monitoring test results obtained during a calendar week for the given parameter; that is the total of such daily results, in pounds per day, milligrams per liter, or other appropriate unit divided by the number of days for which results are totaled. For example, if a facility operates or discharges and monitors 7 days during a week the daily average is the sum of daily values in pounds per day, milligrams per liter, or other appropriate unit divided by 7 for each parameter, but if one day's result is missing for any parameter the divisor in that case is 6.

Part II, Page 1 of 7 Wisconsin Permit No. WI-0001571-2 Modified: SEP 3 0 1980

- A. Effluent Limitations and Monitoring Requirements
 - (1) During the period beginning on October 1, 1979 and lasting until December 31, 1981 the permittee is authorized to discharge from outfall serial number 001.
 - (2) This discharge shall be limited and monitored by the permittee as specified below.
 - (a) There shall be no discharge of floating solids or visible foam in other than trace amounts.
 - (b) Samples taken in compliance with the monitoring requirements specified below shall be taken at the following location: Outfall 001.

· · · · · · · · · · · · · · · · · · ·		· DA	ILY EF	FLUENT L	IMITATIONS			MC	NITORING I	RÉQUIREMENTS
	Quantity	-kg/day (1b	s/day)	Other L	imitations	(Specify	/ Units)		Sample	Sample
EFFLUENT CHARACTERISTIC	Average	Maximu	m	Minimum	Avera	age	Maximum		Frequency	_Туре
Flow - M ³ /Day (MGD) Temperature Intake Temperature pH*	61 63 67 63	20 27 29 29	•	- 6.0			9.0		Daily Daily Daily Weekly	Continuous Continuous Continuous Grab

*The effluent limitations & monitoring requirements shall not become effective until July 1, 1980.

"This permit may be modified, or, alternatively revoked and reissued, to comply with any applicable effluent limitation issued pursuant to the order of the United States District Court for the District of Columbia issued on June 8, 1976, in <u>Natural Resources Defense Council, Inc. et. al. v. Russell E. Train</u>, 8 ERC 2120 (D.D.C. 1976), if the effluent limitation so issued: (1) is different in conditions or more stringent than any effluent limitation in the permit; or (2) controls any pollutant not limited in the permit."

Part II, Page 2 of 7 Wisconsin Permit No. WI-0001571-2 Modified: SEP 3 0 1980

- B. Effluent Limitations and Monitoring Requirements
 - (1) During the period beginning on October 1, 1979 and lasting until December 31,1981 the permittee is authorized to discharge the boiler blowdown (sampling point 101) in outfall serial number 001.
 - (2) This discharge shall be limited and monitored by the permittee as specified below.
 - (a) There shall be no discharge of floating solids or visible foam in other than trace amounts.
 - (b) Samples taken in compliance with the monitoring requirements specified below shall be taken at the following locations: at the boiler blowdown before mixing with other wastewaters in outfall serial number 001.

· · · · ·	DAILY EFFLUENT LIMITATIONS	· •	MONITORING REQUIREMENTS
EFFLUENT CHARACTERISTIC	Quantity-kg/day (lbs/day) Other Limitations (Average Maximum Minimum Average	Specify Units) e Maximum	Sample Sample Frequency Type
Flow - (MGD) Total Suspended Solids Total Iron "Total Copper Oil & Grease	30 mg/	71 100 mg/1 1.0 mg/1 1.0 mg/1 71 20 mg/1	Weekly Total Daily Weekly Grab Weekly Grab Weekly Grab Weekly Grab

Part II, Page 3 of 7 Wisconsin Permit No. WI-0001571-2 Modified: SEP 30 1980

- C. Effluent Limitations and Monitoring Requirements
 - During the period beginning on October 1, 1979 and lasting until December 31, 1981 the permittee is authorized to discharge floor drains (sampling point 201), and the demineralizer wastes and zeolite softener wastes (sampling point 301) in outfall serial number 001.
 - (2) Each of these discharges shall be individually limited and monitored by the permittee as specified below, and individually reported in accordance with Part II, G, except a limitation under "Quantity" applies to the total for each characteristic of the individual discharges.
 - (a) There shall be no discharge of floating soldis or visible foam in other than trace amounts.
 - (b) Samples taken in compliance with the monitoring requirements specified below shall be taken
 - at the following locations: at both the turbine room sump pump and the waste neutralization tank before mixing with the condenser cooling waters in outfall 001.

		DAILY EF	FLUENT LIMI	TATIONS		MONITORING RE	QUIREMENTS
	<u>Quantity-kg</u>	'day (lbs/day)	<u>Other Limi</u>	tations (Spec	ify Units)	Sample.	Sample
EFFLUENT CHARACTERISTIC	Average	Maximum	<u>Minimum</u>	Average	Maximum	Frequency	Туре
Flow - M ³ /Day (MGD) Total Suspended Solids Oil and Grease		5	a a	30 mg/1 15 mg/1	100 mg/1 20 mg/1	Weekly Weekly Weekly	Total Daily Grab Grab

Part II, Page 4 of 7 Wisconsin Permit No. WI-0001571-2 Modified: SEP 30 1980

- p. Effluent Limitations and Monitoring Requirements
 - (1) During the period beginning on October 1, 1979 and lasting until December 31, 1981 the permittee is authorized to discharge from outfall serial number 002.
 - (2) This discharge shall be limited and monitored by the permittee as specified below.
 - (a) There shall be no discharge of floating solids or visible foam in other than trace amounts.
 - (b) Samples taken in compliance with the monitoring requirements specified below shall be taken the following location: Outfall 002.

•	•	DAILY EF	2 C	MONITORING REQUIREMENTS			
· · · · · · · · · · · · · · · · · · ·	Quantity-kg/da	y (lbs/day)	Other Limita	tions (Speci	fy Units)	Sample	Sample
EFFLUENT CHARACTERISTIC	<u>Average M</u>	aximum	Minimum	Average	Maximum	Frequency	Туре
Flow - M ³ /Day (MGD)		•	-			Monthly When Discharging	Estimated

Part II, Page 5 of 7 Wisconsin Permit No. WI-0001571-2 Modified: SEP 3 0 1990

- E. Effluent Limitations and Monitoring Requirements
 - (1) During the period beginning on October 1, 1979 and lasting until December 31, 1981 the permittee is authorized to discharge from outfall serial number 003.
 - (2) This discharge shall be limited and monitored by the permittee as specified below.
 - (a) There shall be no discharge of floating solids or visible foam in other than trace amounts.
 - (b) Samples taken in compliance with the monitoring requirements specified below shall be taken at the following location: Outfall 003

		DAILY E	FFLUENT LIMIT	ATIONS	۰.	MONITORING	REQUIREMENTS
EFFLUENT CHARACTERISTIC	Quantity-kg Average	/day (lbs/day Maximum	/) Other Limita <u>Average</u> (1)	Average (2)	f <u>y Units)</u> <u>Maximum</u>	Sample Frequency	Sample Type
Flow - M ³ /Day (MGD) BOD ₅ (3) Total Suspended Solids (3) Total Residual Chlorine Fecal Coliforms (organisms/	- /100 m1) -	60 60 60	30 mg/1 30 mg/1	45 mg/1 45 mg/1	5_mg/1	3xWeekly 3xWeekly 3xWeekly 3xWeekly Weekly	Total Daily 24 hr. composit 24 hr. composit Grab Grab

(1) The fimitations in this column are "monthly average" limitations.

(2) The limitations in this column are "weekly average" limitations.

(3) In addition to the limitations shown, the permittee shall achieve a minimum of 85 percent removal on a monthly average of the amount of pollutant in the raw wastewater to the sewage treatment plant. Monitoring for the pollutant in the raw wastewater shall be of the same frequency and sample type as that for the pollutant in the effluent.

Part II, Page 6 of 7 Wisconsin Permit No. WI-0001571-2

F. OTHER SPECIAL CONDITIONS

1. Transformer Fluids

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

2. Intake Screen Discharges

There shall be no discharge of floating or submerged debris from intake screen washing operations.

Part II, Page 7 of 7 Wisconsin Permit No. WI-0001571-2

G. OTHER SPECIAL CONDITIONS

1. Reporting

a. Monitoring reports and reports required by Sections 12, 20, 21 and 23 of Part I of this permit shall be signed;

(1) for a corporation by a principal executive officer of at least the level of Vice President or his duly authorized representative having overall responsibility for the operation of the facility for which this permit is issued,

(2) for a partnership by a general partner, and

(3) for a sole proprietorship by the proprietor, except that

(4) in the case of reports required by Sections 21 and 23, the individual required to sign in accordance with this subsection may authorize another individual to sign such reports in his absence.

b. Monitoring results obtained during the previous month shall be summarized and reported on Discharge Monitoring Report Forms postmarked no later than the 15th day of the month following the completed reporting period. The first report is due on November 15, 1979. Duplicate signed copies of these reports shall be submitted to the:

> Wisconsin Department of Natural Resources Lake Michigan District Division of Environmental Protection (Permits) 812 South Fisk Street, P.O. Box 3600 Green Bay, Wisconsin 54303

c. Duplicate signed copies of all other reports required herein shall be submitted to the:

Wisconsin Department of Natural Resources WPDES Permit Section Post Office Box 7921 Madison, Wisconsin 53707

Attachment #



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Anthony S. Earl-Secretary

BOX 7921 MADISON, WISCONSIN 53707

August 24, 1977

IN REPLY REFER TO: 3200

Mr. E. W. James, Senior Vice President Wisconsin Public Service Corporation Box 1200 54305 Green Bay, Wisconsin

Dear Mr. James:

Based upon our review of your Cooling Water Intake Structure Final Report for the Kewaunee Nuclear Power Plant, we have determined the location and operation of this intake structure to have minimal environmental impact. Therefore, it is the Department's determination that no modifications of your cooling water intake structure or operations be required for compliance with Section 147.02(6), Wisconsin Statutes.

The Department has based their conclusion upon the following factors:

1. Although Alewife entrainment was high, they are extremely abundant in Lake Michigan and are considered a nuisance species:

2. Trout impingement equaled only 10.8% of the total number harvested at the power plant by sport fisherman. Alewife and smelt together comprised 92.1% of the total species impinged. Their environmental and economic value makes the loss of the total number entrapped insignificant.

If you have comments or questions about this determination, please feel free to contact Mr. Lee Liebenstein of the Water Quality Evaluation Section at (608) 265-8117.

Sincerely. Division of Environmental Standards

Thomas A. Kroehn Administrator

cc: Lee Liebenstein- WQE Robert Chiesa - IWW - Fish Management James Addis James Huntoon - EI U.S. - EPA - Region V Lake Michigan District Permit File