MAY 11 1976

Docket No. 50-298

Nebraska Public Power District
ATTN: Mr. J. M. Pilant, Director
Licensing and Quality Assurance
Post Office Box 499
Columbus, Nebraska 68601

Gentlemen:

In response to your request dated January 8, 1976, the Commission has issued the enclosed Amendment No. 22 to Facility License No. DPR-46 for the Cooper Nuclear Station.

This amendment consists of changes to the Appendix B Technical Specifications relating to environmental monitoring at river miles 528 and 526 in the Missouri River. Some modifications of your proposed deletion of sampling at river mile 528 were considered necessary. The modifications were discussed with your staff and are described below.

We have evaluated the potential for environmental impact of the operation in accordance with the enclosed amendment. Thermal plume surveys and biological studies have shown that river mile 526 lies downstream of the zone of moderate thermal influence. We have, therefore, concluded that the sampling station at river mile 526 may be eliminated. Although biological studies show no measurable thermal impact at river mile 528, river mile 528 may, at times, lie within the zone of moderate thermal influence. Therefore, possible long-term effects on certain aquatic biota at this location cannot be discounted. In excess of two to three years of analysis may be required to detect changes in aquatic macroinvertebrate and periphyton populations. Furthermore, elimination of laboratory chemistry samples at river mile 528 would remove the only source of data downstream of the Cooper Nuclear Station. On this basis, the amendment requires continued samples for Physical Measurements and Field Chemistry, Laboratory Chemistry, Aquatic Macroinvertebrates, and Periphyton at river mile 528.

MAY 11 1976

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level, and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and pursuant to 10 CFR § 51.5(d)(4) that an environmental statement, negative declaration or environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

The amendment applies only to the environmental sampling locations, and it does not involve significant new safety information of a type not considered by a previous Commission safety review of the facility. It does not involve a significant increase in the probability or consequences of an accident, does not involve a significant decrease in a safety margin, and therefore does not involve a significant hazards consideration. We also have concluded that there is reasonable assurance that the health and safety of the public will not be endangered by this action.

A copy of the related Federal Register Notice is also enclosed.

Sincerely,

Original Signed by:
Dennis L. Ziemann

Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

Enclosures:
1. Amendment No. 22 to DPR-46
2. Federal Register Notice

cc w/enclosures:
See next page

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Form AEC-318 (Rev. 9-53) AECM 0240 ☆ U. S. GOVERNMENT PRINTING OFFICE: 1974-526-166

MAY 11 1976

cc w/enclosures:
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Auburn Public Library
118 - 15th Street
Auburn, Nebraska 68305

Mr. William Siebert, Commissioner
Nemaha County Board of Commissioners
Nebraska County Courtroom
Auburn, Nebraska 68305

cc w/enclosures and cy of NPPD's
filing dtd. 1/8/76:
Mr. D. Drain, Director
Department of Environmental Control
Executive Building, 2nd Floor
Lincoln, Nebraska 68509

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

NEBRASKA PUBLIC POWER DISTRICT

DOCKET NO. 50-298

COOPER NUCLEAR STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 22
License No. DPR-46

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by the Nebraska Public Power District (the licensee) dated January 8, 1976, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. An environmental statement or negative declaration need not be prepared in connection with the issuance of this amendment.

2. Accordingly, the license is amended by a change to the Technical Specifications as indicated in the attachment to this license amendment.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION
Original signed by
Dennis L. Ziemann

Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: MAY 11 1976

ATTACHMENT TO LICENSE AMENDMENT NO. 22

FACILITY OPERATING LICENSE NO. DPR-46

DOCKET NO. 50-298

Replace existing pages 31, 32, 33, 36 and 40 of the Appendix B portion of the Technical Specifications with the attached revised pages bearing the same numbers. Changed areas on the revised pages are reflected by marginal lines.

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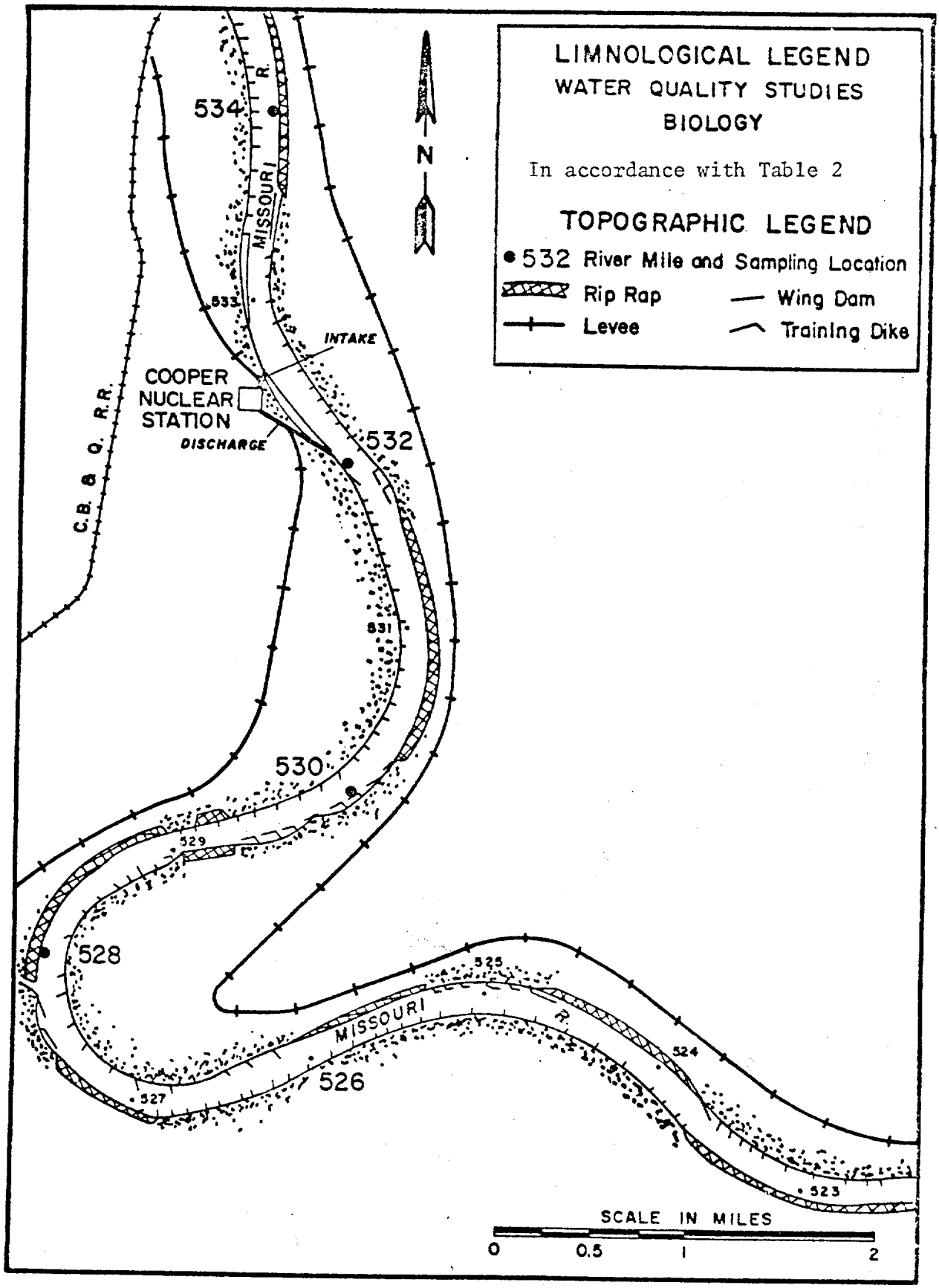

FIGURE 1. SAMPLING LOCATIONS IN THE VICINITY OF THE COOPER NUCLEAR STATION

Table 2. Field sampling schedule for operational monitoring program at Cooper Nuclear Station

	Location					
	RM 534	Intake	Discharge	RM 532	RM 530	RM 528
Physical Measurements and Field Chemistry (monthly)[a]	X	X	X	X	X	X
Laboratory Chemistry (monthly)[a]	X	X	X			X
Zooplankton Survival (monthly)[a]		X	X	X[d]		
Phytoplankton Viability (monthly)[a]	X	X	X	X		
Phytoplankton Cell Counts and Identification (monthly May-November)	X			X	X	
Zooplankton Identification (monthly May-November)	X			X	X	
Periphyton (monthly June-November)	X			X	X	X
Aquatic Macroinvertebrates (June, August, October)	X			X	X	X
Field Chemistry and Nutrient Analyses (monthly May-November)	X			X	X	
Fish Study[b] (monthly May-November)	X			X	X	
Fish Larvae[c] (twice each month May, June, July)		X	X	X		
Fish Impingement (monthly)[a]		X				

a Sampling restricted to intake and discharge locations during the winter months.
b Sampling conducted at Nebraska and Missouri shoreline at each location.
c Sampling conducted at two locations in the vicinity of the intake and RM 532.
d Sampling conducted 7500 ft. downstream of the discharge canal.

Specification

A. Water Quality Studies

Duplicate water quality samples for laboratory analyses (Table 3) will be collected monthly (May-November) from four locations: RM534, in the immediate area of the intake, in the discharge canal and at RM528. Sampling will be restricted to the intake, discharge, and when possible RM 528 during the remainder of the year. Physical measurements (Table 4) and field analyses including dissolved oxygen, pH, total alkalinity, and turbidity will be performed at six locations: RM 534, intake, discharge, RM 532, RM 530, and RM 528. Field chemistry and nutrient analyses (Table 5) will also be performed at the appropriate locations as shown in Table 2.

Instrumentation and analytical methods shall be equivalent to instrumentation and methods for physical measurements as listed in Table 4 and analytical methods, references, preservation techniques and detection limits as presented in Table 6.

B. Biological Studies

1. Phytoplankton

Duplicate samples for phytoplankton analyses will be collected monthly (May-November) near the surface with a Kemmerer sampler at RM 534, 532 and 530. Analyses will consist of cell counts to determine abundance and diversity of species.

2. Zooplankton

Duplicate samples for zooplankton analyses will be collected monthly (May-November) with a Miller plankton sampler equipped with a #10 (153 μ mesh) plankton net at RM 534, 532 and 530. Analyses will be made to determine abundance and seasonal occurrence of zooplankton species.

3. Floating artificial substrates for periphyton (attached algae) will be anchored at suitable locations near RM 534, 532, 530, and 528 to permit colonization of attached algae. A Ryan temperature recorder will be fastened near each substrate to provide a continuous record of water temperature. Monthly

Table 5. Field chemistry and nutrient analyses associated with biological sampling at RM 534, 532 and 530.

1. Water temperature	7. Nitrate
2. Dissolved oxygen	8. Nitrate
3. pH	9. Soluble orthophosphate
4. Total alkalinity	10. Total phosphorus
5. Turbidity	11. Silica
6. Ammonia	

(June-November) samples of periphyton will be collected. Analyses will be made to determine the relative abundance of species present. Biomass (ash-free weight) of the perophytic community will also be determined.

4. Aquatic Macroinvertebrates and Benthic Organisms

The macroinvertebrate component of the "aufwuchs" community will be sampled at four locations (RM 534, 532, 530 and 528) beginning in May using multiple plate substrates similar to those originally described by Hester and Dendy (1962) and modified by Fullner (1971). These samples will be collected at two month intervals (June, August, and October) and identified to the lowest positive taxonomic category, usually genus or species. The total number of taxa and diversity will also be determined. Triplicate benthos samples will be collected concurrently using a Ponar dredge behind wing dams near the same five locations. Bottom sediment samples from these locations will be analyzed for total organic carbon. Sediment types will be visually determined.

Field Chemistry and nutrient analyses (Table 5) will be conducted as shown in Table 2.

5. Fisheries Study

Sampling for fish population and life history studies will be conducted near RM 534, 532 and 530. Samples will be collected from both the Nebraska and Missouri shorelines in the vicinity of each river mile location.

Fish will be sampled monthly (May-November) using the following techniques:

a. Electroshocking

A boat-mounted electroshocker is the most effective tool for collection of fish in the shallow water areas. Each fish that is collected will be measured and weighed; scales will be taken from selected individuals, and certain individuals will be fin-clipped and returned to the river. This will allow for the return of most fish to the river alive; however, it will be necessary to sacrifice some fish for stomach analysis and gonadal inspection. All fish collected will be examined for the occurrence of external parasites and diseases.

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-298

NEBRASKA PUBLIC POWER DISTRICT

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY LICENSE

Notice is hereby given that the U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 22 to Facility Operating License No. DPR-46, issued to the Nebraska Public Power District (the licensee), which revised Technical Specifications for operation of the Cooper Nuclear Station (the facility) located in Nemaha County, Nebraska. The amendment is effective as of its date of issuance.

This amendment revises the Environmental portion of the Technical Specifications for the facility to eliminate the monthly river sampling requirements at river mile 526, and certain unnecessary monthly river samples for May through November at river mile 528.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

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The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental statement, negative declaration or environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

For further details with respect to this action, see (1) the application for amendment dated January 8, 1976, and (2) Amendment No. 22 to License No. DPR-46. Both of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. and at the Auburn Public Library, 118 - 15th Street, Auburn, Nebraska 68305. A copy of item (2) may be obtained upon request addressed to the United States Nuclear Regulatory Commission, Washington, D. C. 20555, Attention; Director, Division of Operating Reactors.

Dated at Bethesda, Maryland, this MAY 17 1976

FOR THE NUCLEAR REGULATORY COMMISSION

Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

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DATE ➤						

DETERMINATION OF PROPOSED LICENSING AMENDMENT

Licensee: Nebraska Public Power District (NPPD)

Request for: Cooper Nuclear Station Appendix B Technical Specification revisions to discontinue river sampling requirements at river miles 528 and 526.

Request Date: January 8, 1976

Proposed Noticing Action:
( ) Pre-notice Recommended
(x) Post-notice Recommended
( ) Determination delayed pending completion of Safety Evaluation

Basis for Decision: The request would not involve a significant increase in the probability or consequences of an accident nor a significant decrease in a safety margin. The proposed change is limited strictly to non-radiological monitoring. Therefore the request does not involve a significant hazards consideration.

Proposed NEPA Action:
( ) EIS Required
( ) Negative Declaration (ND) and Environmental Impact Appraisal (EIA) Required
(X) No EIS, ND or EIA Required
( ) Determination delayed pending completion of EIA

Basis for Decision: The proposed change would have no significant impact on the environment because it would delete sample stations which have been determined to be unnecessary. The purpose of sample stations 526 and 528, as well as 534, 532, 530, and circulating water intake and discharge stations, is to evaluate the impact of thermal effluents from CNS on the aquatic ecosystem of the Missouri River. The station locations were chosen based on the size of the thermal plume as predicted in the Final Environmental

Statement. Based on the predicted plume, sample stations 526 and 528 would have been in a zone of moderate thermal influence. Actual thermal plume size has proven to be smaller than predicted, and since river samples have shown a lack of measurable impact at stations 526 and 528, NPPD has requested to discontinue these stations.

Noticing Concurrences:

		DATE
1.	M. H. Fletcher	12 APR 76
2.	D. L. Ziemann	4/13/76
3.	K. R. Goller KRG	4/14/76
4.	OELD STRIDROW	4/27/76