

JUNE 21 1978

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Docket No. 50-298

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

Gentlemen:

The Commission has issued the enclosed Amendment No. 47 to Facility Operating License No. DPR-46 for the Cooper Nuclear Station (CNS). This amendment is in response to your requests dated December 9, 1977 and January 27, 1978.

The amendment involves changes to the Appendix B Technical Specifications to delete biological studies associated with zooplankton and phytoplankton.

Since this amendment applies only to environmental sampling requirements, this amendment 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 have also concluded that there is reasonable assurance that the health and safety of the public will not be endangered by this action and such action will not be inimical to the common defense and security.

A copy of the related Environmental Impact Appraisal and combined Notice of Issuance and Negative Declaration are also enclosed.

Sincerely,

Original signed by

Thomas A. Ippolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Enclosures:

1. Amendment No. 47 to DPR-46
2. Environmental Impact Appraisal
3. Notice and Negative Declaration

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

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Sincerely,

George Lear, Chief
Operating Reactors Branch #3
Division of Operating Reactors

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Nebraska Public Power District - 2 -

cc w/enclosures:

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Columbus, Nebraska 68601

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Cooper Nuclear Station
ATTN: Mr. L. Lessor
Station Superintendent
P. O. Box 98
Brownville, Nebraska 68321

Auburn Public Library
118 - 15th Street
Auburn, Nebraska 68305

Director
Nebraska Dept. of Environmental Control
P. O. Box 94877, State House Station
Lincoln, Nebraska 68509

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

Chief, Energy Systems Analyses
Branch (AW-459)
Office of Radiation Programs
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401 M Street, S. W.
Washington, D. C. 20460

U. S. Environmental Protection Agency
Region VII
ATTN: EIS COORDINATOR
1735 Baltimore Avenue
Kansas City, Missouri 64108



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. 47
License No. DPR-46

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The applications for amendment by Nebraska Public Power District dated December 9, 1977 and January 27, 1978, comply 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. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.


2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C(2) of Facility License No. DPR-46 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 47, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

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

FOR THE NUCLEAR REGULATORY COMMISSION


Thomas A. Ippolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: June 21, 1978

ATTACHMENT TO LICENSE AMENDMENT NO. 47

FACILITY OPERATING LICENSE NO. DPR-46

DOCKET NO. 50-298

Replace the following pages of the Technical Specifications contained in Appendix B of the above indicated license with the attached pages. Changed areas on the revised pages are reflected by a marginal line.

Remove

33
42
43
44

Insert

33
42
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44

Specification

A. Water Quality Studies

Duplicate water quality samples for laboratory analyses (Table 3) will be collected monthly (May-November) from four locations: RM 534, in the immediate area of the intake, in the discharge canal and at RM 528. 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. 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

1. Samplings shall be performed for a one hour period twice per month. The sampling day should be chosen on a random basis except as specified below. Sampling periods should be separated by at least one week except as required by 4.1.1.2.B.4 below.
2. Sampling during the months of July, August and September shall be performed during hours of darkness.
3. A record of each sampling period including date, time and analysis of impinged fish (by species and number of fish of each species) shall be maintained.
4. If the number of fish collected during any sampling period exceeds 90, sampling frequency shall be increased to every other day, until two consecutive samples each result in no more than 90 fish.
5. Fish impingement data shall be reported in the Annual Environmental Operating Report.

C. Bases

The monitoring requirements are established to provide assurance that the fin fish impinged on the traveling screens will be maintained at an acceptably low level.

The greatest impingement of fin fish has been demonstrated to occur during the summer period during hours of darkness.

Peak impingement rates normally occur for periods of only a few days, therefore, 4.1.1.2.B.4 has been established to assure that if impingement does become large the magnitude and duration of the peak will be established.

The reporting conditions are based on impingement and entrapment data for the period October 1974 through August 1976. This is the period of commercial operation of the station following completion of the intake structure guidewall.

The studies performed from October 1, 1974 through August 1976 show no adverse effects due to the operation of the intake structure. The specified limitations are based on the values of impingement and entrapment rates observed during these studies.

4.1.1.3 Delete

INTENTIONALLY BLANK

4.1.1.4 11-Agency Study

An 11-agency group, coordinated by the Nebraska Game and Parks Commission, has been formed to evaluate postoperational effects of both the Cooper and Ft. Calhoun Stations. The agencies are:

- Bureau of Sport Fisheries and Wildlife
- Iowa Conservation Commission
- Kansas Forestry, Fish and Game Commission
- Nebraska Department of Environmental Control
- Nebraska Game and Parks Commission
- Nebraska Public Power District



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

ENVIRONMENTAL IMPACT APPRAISAL BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 47 TO LICENSE NO. DPR-46

NEBRASKA PUBLIC POWER DISTRICT

COOPER NUCLEAR STATION

DOCKET NO. 50-298

Description of Proposed Action

By letters dated December 9, 1977 and January 27, 1978, the Nebraska Public Power District requested that the Environmental Technical Specifications for Cooper Nuclear Station be revised to delete biological studies associated with zooplankton and phytoplankton, respectively. Monitoring in these areas has been conducted at Cooper Station since 1972. Both entrainment and baseline studies have been made on the zooplanktonic and phytoplanktonic populations. This appraisal addresses both of these requests. The data that were collected prior to 1974 provided baseline data on organism abundance for comparison with data collected after the Cooper Nuclear Station became operational. The operational studies subsequent to 1974 permit the evaluation of effects of operation on these populations.

Evaluation

Zooplankton:

The Final Environmental Statement (FES) stated that zooplankton would be entrained and killed by the power station. Fish stomach analyses indicated that zooplankton were an important food base for several species of fishes in the river; however, the FES concluded that the effect of the plant on the total crop of zooplankton in the river should be indiscernible.

The zooplankton studies indicate that a generally uniform pattern of seasonal zooplankton abundance exists from one year to the next and that the zooplankton population near Cooper Station is characteristic of reservoirs rather than rivers. This is primarily because of flow from Lake Francis Case and Lewis and Clark Lake which are upstream of the plant. These reservoir species, discharged into the river, undergo increased mortality and decreased abundance as they travel the 250 miles from Lewis and Clark Lake to Cooper Station. Our review

of the data indicates that operation of the station has no significant effect on abundance and species composition of zooplankton in the river. The few significant differences among different stations are attributed to natural variations as zooplankton densities and species composition were generally similar between locations upstream and downstream of the station indicating no significant effect due to station operation. We concur with the licensee's findings that the plant is not causing significant impact on these populations and, therefore, conclude that deleting these studies is appropriate.

Phytoplankton:

The FES did not indicate much concern for phytoplankton because they have a high thermal tolerance and because the plant uses a small fraction of the river water and concluded that any effects that result from entrainment of phytoplankton will be insignificant.

The results of these studies indicate that Lewis and Clark Lake has a significant effect on the species composition of the river, and that there are no consistent patterns in total phytoplankton abundance. Five sampling stations located upstream and downstream of the plant indicate a low degree of thermal influence on phytoplankton due to plant operation.

We have reviewed the licensee's basis for their request and the data they have presented supporting it. We concur with their findings that the plant is not causing significant impact on these populations and, therefore, conclude that these studies may be deleted.

Conclusion and Basis for Negative Declaration

On the basis of the foregoing analysis, the staff concludes that there will be no environmental impact attributable to the proposed action. The changes assessed are to the environmental monitoring programs and do not involve any change in plant design or operation or involve an increase of effluent types or quantities. The impact of the overall plant has been predicted and described in the Commission's FES for Cooper Nuclear Station. On this basis and in accordance with CFR Title 10, Part 51.5, the staff concludes that no environmental impact statement for the proposed action need be prepared and a negative declaration to this effect is appropriate.

Dated: June 21, 1978

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NO. 50-298NEBRASKA PUBLIC POWER DISTRICTNOTICE OF ISSUANCE OF AMENDMENT TO FACILITY
OPERATING LICENSEAND
NEGATIVE DECLARATION

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 47 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.

The amendment involves changes to the Appendix B Technical Specifications to delete biological studies associated with zooplankton and phytoplankton.

The applications for the amendment comply 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.

The Commission has prepared an environmental impact appraisal relating to the action and has concluded that an environmental impact statement for


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this particular action is not warranted because there will be no significant environmental impact attributable to the action other than that which has already been predicted and described in the Commission's Final Environmental Statement for the facility.

For further details with respect to this action, see (1) the applications for amendment dated December 9, 1977 and January 27, 1978, (2) Amendment No. 47 to License No. DPR-46, and (3) the Commission's related Environmental Impact Appraisal. All 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 items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland, this 21 day of June 1978.

FOR THE NUCLEAR REGULATORY COMMISSION


Thomas A. Ippolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors