



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

ENVIRONMENTAL IMPACT APPRAISAL BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 61 TO FACILITY OPERATING LICENSE NO. DPR-57

GEORGIA POWER COMPANY
OGLETHORPE ELECTRIC MEMBERSHIP CORPORATION
MUNICIPAL ELECTRIC ASSOCIATION OF GEORGIA
CITY OF DALTON, GEORGIA

EDWIN I. HATCH NUCLEAR PLANT UNIT NO. 1

DOCKET NO. 50-321

Description of Proposed Action

By letter dated June 7, 1978 Georgia Power Company (licensee) requested an amendment to revise the Environmental Technical Specifications (ETS) appended to Operating License DPR-57 for the Edwin I. Hatch Nuclear Plant Unit No. 1 (HNP-1). The proposed change would delete the existing Appendix B to DPR-57 and adopt the ETS approved for Hatch Unit 2 (HNP-2) which were issued by the Commission on June 13, 1978 as part of Operating License NPF-5. This action would negate and/or supercede the licensee's requests dated September 10, 1976, November 2 and 10, 1977.

Environmental Impact of Proposed Action

A. Radiological ETS

The Limiting Conditions for Operation for radiological effluent releases and the radiological monitoring program for HNP-2 were developed based on a review of HNP-1 operating data and on current regulatory practices regarding environmental impact of release of radioactive materials at a nuclear site. The only change to the HNP-1 release limits by conversion to HNP-2 ETS is a decrease in the release rate limits for gaseous radioiodine and airborne particulates. This reduction resulted from the staff's review of the impact of Unit 2 operations and specifically from a reevaluation of critical sectors and critical pathways for all radioiodines and radioactive material in particulate form with half lives greater than 8 days, considering site meteorology for release. Thus, the adoption of HNP-2 radiological ETS for HNP-1 is an administrative change implementing a previously reviewed and approved action. This is addressed in greater detail in Section 5.5 of the HNP-2 FES (NUREG-0417).

B. Non-radiological ETS

The proposed change to the non-radiological ETS for HNP-1 would delete the water quality LCO's and special studies and substitute by reference only the National Pollutant Discharge Elimination System (NPDES) permit

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requirements. The following summarizes the changes that would be made by adopting the HNP-2, and the staff's evaluation thereof:

1. Maximum Discharge Temperature

There is no difference between the LCO and the NPDES limits on maximum discharge temperature. The currently approved LCO restricts the discharge temperature to a maximum of 97°F or 5°F above ambient at the edge of the 500 ft. mixing zone. However, if the 97°F limit is more restrictive, the 5°F limit governs. In addition, if the service water is bypassed directly to the river (and not through the cooling tower), the rise in temperature shall not exceed 20°F above the intake temperature. Corrective actions are to be taken within 3 hours to bring operation within compliance of these specifications. Monitoring to assure compliance with this specification is continuous at the intake and discharge and recorded hourly at the fixed station at the edge of the mixing zone.

The basis for the thermal specifications is that these temperatures were reviewed in the FES for Units 1 and 2 and found acceptable. The 97°F was chosen because it was believed to be correlated with the 5°F limit at the edge of the mixing zone and is convenient to measure at the discharge. A special study was required to confirm this prediction. The NPDES permit provisions for temperature are a maximum of 90°F or 5°F above the intake temperature. Both limits apply at the edge of the mixing zone which is defined as 500 ft. downstream of the discharge pipe at a depth of 3 feet. Temperature measurements are to be made once a week between 9:00 AM and 3:00 PM.

The principal difference between the NPDES thermal restrictions and the currently approved ETS are the various points that will be monitored to demonstrate compliance. In addition, the monitoring requirement in the permit is reduced compared to that of the current ETS. Thus, the proposed amendment would not revise discharge limits and accordingly, would have no environmental impact.

2. Chlorine

The LCO for chlorine restricts the discharge of total residual chlorine (TRC) to a maximum concentration of 0.5 mg/l and an average concentration of 0.2 mg/l. All chlorine releases are restricted to no more than 2 hours/day. Monitoring for TRC is at the discharge during chlorination. The chlorine in the service water is checked monthly. Thus, the proposed amendment would not revise discharge limits and accordingly, would have no environmental impact.

The basis for the chlorine specification indicates these levels were reviewed in FES for Unit Nos. 1 and 2 and found acceptable.

However, the bases states that these levels are tentative subject to a special study on the minimization of chlorine usage to obtain condenser cleanliness.

The NPDES permit restrictions for chlorine are a maximum concentration of free available chlorine of 0.5 mg/l and an average of 0.2 mg/l. Sampling is required once per week during chlorination periods.

The major difference between the permit and the current specification is that the permit limits are on free available chlorine while the specification limits are on total residual chlorine. Monitoring frequency in the permit is also reduced from that in the specification.

The staff's evaluation of this change is contained in Sections 5.3.4 and 5.3.5 of the HNP-2 FES. As stated therein, "... the conclusion of the FES-CP that there will be no impact due to chlorine discharge remains valid."

3. pH

The LCO limits the pH of the discharge water to between 6.0 to 9.0. Monitoring the pH control is continuous at the intake and discharge. The bases for this limit are that it was reviewed in the FES and found acceptable.

The NPDES permit requirements for pH are 6.0 to 9.0 which are the same as in the LCO. However, the permit requires monitoring at a frequency of twice per month while monitoring in the ETS is continuous at the intake and discharge.

In view of the foregoing, the amendment would not revise the limits of pH discharged and thus would have no environmental impact.

4. Other Chemicals that Affect Water Quality

This LCO limits the discharge concentrations of 13 chemicals to the river. In addition, maximum annual usage weights are placed on 5 chemical compounds. Monitoring for all discharge chemicals is monthly at the intake and discharge.

The FES did not identify a significant impact which would result from the use of chemicals. The specification was included to assure that operation would be consistent with the FES review. More recent policy as incorporated in the Unit 2 ETS assures that changes in operating procedures are subjected to environmental review but does not constrain operation unnecessarily where no impact has been identified. Thus, there are no provisions in the NPDES permit to cover the same chemicals that are contained in the current specifications.

Since the current specification was not based on identification of a significant impact, and since the proposed amendment would assure that changes in procedures would be subjected to environmental review, deletion of this LCO will have no environmental impact.

5. Thermal Plume Verification

The objective of this special study in the current ETS is to verify the thermal plume model used in the FES. Surveys were to continue until an NPDES permit is issued and at that time thermal monitoring is to continue according to the permit requirements. Detailed specifications are provided on how the survey is to be conducted. Results from this special study are available in the annual operating reports up to June 1977. After June 1977 thermal monitoring was conducted according to the permit.

The NPDES permit does not contain any provisions for thermal plume monitoring. The only temperature monitoring in the permit is that for compliance with the mixing zone which is conducted only at weekly intervals. Since the thermal plume verification study has been completed deletion of this specification will have no environmental impact.

C. Special Study on Residual Chlorine

The purpose of this special study is to determine the minimum concentration of chlorine required to maintain cooling tower cleanliness. Specific requirements are listed for this study with a final report due 60 days after completion. The final report was submitted in the annual report for the year 1977.

The NPDES permit contains a general statement that the licensee study ways of minimizing the use of chlorine. Annual reports to the State of Georgia are required. Thus, the revised specifications are an augmentation of the current specifications and have no environmental impact.

D. Summary

The technical differences between the Unit No. 1 ETS and the NPDES permit requirements are described above. In converting the Unit No. 1 ETS to those of Unit No. 2 the LCOs will be changed to NPDES permit requirements and reports of violations to the permit will be submitted to NRC rather than having immediate corrective action to limiting conditions of operation as are in the current ETS for Unit No. 1. In addition, the ETS for Unit No. 2 do not contain the details of the monitoring programs. These procedures are contained in a separate procedures document to be managed by the licensee.

The preparation of the Unit No. 2 ETS was conducted according to the new staff practice of writing ETS as described in Commission Paper (SECY-77-450). The new Unit No. 2 ETS are being applied to the Unit

No. 1 ETS since the ETS for Unit No. 2 were written for ultimate use by both units. The staff concludes that the Unit No. 1 ETS can be replaced by the Unit No. 2 ETS because: The operating reports for Hatch Unit No. 1 were reviewed in preparing the Unit No. 2 ETS; the basis for the Unit No. 2 specifications is contained in Section 6 of the Hatch FES for Unit No. 2 (NUREG-0417) which we have previously approved; and the Unit No. 2 FES addresses the combined environmental impacts from both units.

Conclusion and Basis for Negative Declaration

On the basis of the foregoing, it is concluded that there will be no environmental impact attributable to the proposed action other than has already been predicted and described in the Commission's FES for Hatch Nuclear Plant Unit No. 2. Having made this conclusion, the Commission has further concluded that no environmental impact statement for the proposed action need be prepared and that a negative declaration to this effect is appropriate.

Dated: November 16, 1978