

ENCLOSURE I

AMENDMENTS TO APPENDIX B TECHNICAL SPECIFICATIONS
FOR OCONEE NUCLEAR STATION AND EVALUATION

INTRODUCTION

By letters dated May 13, 1976 and September 1, 1976 the Duke Power Company requested amendments to the Oconee Nuclear Station non-radiological environmental technical specifications (Appendix B). The first proposal requested that the upper limit for pH of water discharged from the station be increased from 8.5 to 9.0. The second proposal requested that the method of control of station chemical effluents be changed from the chemical inventory program to a chemical concentration monitoring program. The changes of both proposals involve Section 1.2 and Table 1.2-1.

DISCUSSION AND EVALUATION

I. pH of discharge water:

In a letter from Duke Power Company dated September 29, 1976 the licensee described the results of a model they developed to predict the size of the area that would be affected by these high pH discharges. Their results indicate that for the worst case of mixing the alkalinity of the effluent discharge would be dispersed to 8.4 mg/l as CaCO₃ equivalent after 250 feet of mixing with the Keowee receiving waters. For the average case, the effluent alkalinity would be dispersed to 8.5 mg/l as CaCO₃ equivalent after 30 feet of mixing. The average background alkalinity of the Keowee River is 7.5 mg/l as CaCO₃ equivalent. As the size of the areas

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required for dispersion to a level close to background levels is small in comparison to the thousands of acres of receiving water available in Lake Keowee and Hartwell reservoir, we judge that this change is insignificant and within levels previously analyzed.

In a letter dated December 2, 1976 the licensee submitted their dilution model. We have reviewed it and agree with the approach and its results.

II. Chemicals usage:

In the Oconee Final Environmental Statement dated March 1972, the staff described the expected chemical usage at the station. The staff adopted the expected levels as limiting conditions for operation in the present technical specifications. The FES originally presented these levels, however, for the purpose of providing background information with the recommendation that the discharge concentrations of these chemicals be monitored once the plant becomes operational to ascertain what the actual levels will be. This monitoring has been done and is reported in the semi-annual reports; no effects on the environment have been detected. Because it was not expected in the FES that the effect of these chemical releases would be detrimental to the environment and as no detrimental effects have been observed as a result of them, it is no longer necessary to keep them in the technical specifications as limiting conditions for operation. The chemicals which are deleted from the technical specification by this amendment are lithium hydroxide, sodium hydroxide, sulphuric acid, floor cleaning detergent and laundry detergent. Specifications on boron, hydrazine and pH are retained. The environmental impact

of these chemicals and parameters was discussed in Section Vc-2a of the FES, and recommendations were made for their inclusion as limiting conditions for operation in the technical specifications.

Conclusion

The changes made in this amendment are consistent with the recommendations made in the FES and the specifications are consistent with those of the NPDES permit. We conclude that the amendment does not authorize a significant change in effluents or in the impact on the environment and that a Negative Declaration is appropriate.

1.2 CHEMICAL DISCHARGE LIMITS

Objective

To insure that all chemical releases from the station are controlled so as to be nontoxic to aquatic organisms and non-deleterious to downstream water quality in Hartwell Reservoir.

Applicability

Applies to release of chemical effluents from the station.

Specification

- A. Limits for certain chemical wastes and pH of water released from the Waste Water Treatment System and the Low Level Radwaste System shall not exceed the concentrations indicated in Table 1.2-1, "Limits on Certain Chemicals and pH of Water Released from Oconee Nuclear Station."
- B. Chlorine or other chemical biocides will not be used for condenser cleaning.

Monitoring

The concentration of the chemicals and pH of water allowed to be released from the station under this specification shall be monitored as specified in Table 1.2-1.

Action Requirements

In the event any of the above specified limits are exceeded, a report shall be made within 24 hours by telephone to the Director of the Regional Regulatory Operations Office, followed by a written report within one week to the Director of the Regional Inspection and Enforcement Office (cc to Director of Nuclear Reactor Regulation).

The written report and to the extent possible, the preliminary telephone report, will: (a) describe, analyze and evaluate the occurrence, including extent and magnitude of the impact, (b) describe the cause of the occurrence, and (c) indicate the corrective action (including any significant changes made in procedure) taken to preclude repetition of the occurrence and to prevent similar occurrences involving similar components or systems.

Bases

Operation within the chemical monitoring and effluent limits specified in Table 1.2-1 will assure that concentrations of chemical effluents are maintained at levels that will provide adequate protection of aquatic and downstream water quality, and will assure that the water quality is not degraded beyond that described in the FES.

TABLE 1.2-1

LIMITS AND MONITORING REQUIREMENTS ON CERTAIN CHEMICALS AND pH OF
WATER RELEASED FROM OCONEE NUCLEAR STATION

Type Monitoring	Waste Water Treatment System ^a		Low Level Rad Waste System ^b	
	Frequency	Limit	Frequency	Limit
pH	Daily	6.0 - 9.0		
Hydrazine	Daily	0.7 ppm	Prior to Release	0.1 ppm
Boron			Prior to Release	1.0 ppm

^aMonitored at point of release to Hartwell Reservoir.

^bConcentrations are measured prior to point of discharge. Limits apply on downstream incremental increases in concentration in the Hartwell Reservoir following dilution in the Keowee tailrace.