



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 137 TO FACILITY OPERATING LICENSE NO. DPR-40

OMAHA PUBLIC POWER DISTRICT  
FORT CALHOUN STATION, UNIT NO. 1

DOCKET NO. 50-285

1.0 INTRODUCTION

By letter dated December 19, 1990, Omaha Public Power District (OPPD) submitted a request for changes to the Fort Calhoun Station, Unit No. 1 Technical Specifications (TS) 2.9.1, 3.12.1, and Tables 3-3 and 3-12 concerning liquid and gaseous effluents. The requested changes would allow operation of the Radioactive Waste Processing Building.

2.0 DISCUSSION

The licensee's proposed changes to the Fort Calhoun Station's TSs are to provide for an additional gaseous exhaust stack created by the new Laboratory and Radioactive Waste Processing Building, and to differentiate between this new exhaust stack and the Auxiliary Building Exhaust Stack. Also the TS changes add three new monitors for gaseous, particulate and iodine activity. These changes are as follows:

2.1 Specification 2.9.1 and 3.12.1 and Gaseous Effluents

The current specification does not include provisions for the new Laboratory and Radioactive Waste Processing Building exhaust stack and three new monitors for gaseous, particulate and iodine releases. Table 3-3, p. 3-13, adds the new monitors (RM-041, 042, 043) to existing plant effluent monitors.

To differentiate the new exhaust stack from the existing stack, the title of the existing stack was changed to "The Auxiliary Building Exhaust Stack." The design of the new building calls for a dedicated ventilation discharge. This discharge point will be monitored and will be used for exhaust of the laboratory point section of the new chemical and radiation protection locker facility addition as well.

In addition changes were made to include the new monitors with the existing stack monitors for grab sample provisions, functional tests, calibration, and flow rate calibration and testing. The grab sample provisions require daily samples be taken and analyzed. This is consistent with the present specification concerning condenser air ejector discharge. Changes to Table 3-12, p. 3-74, are made to include the new discharge point for radioactive gaseous waste sampling and analysis.

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To ensure that an accidental release from the building is within the allowable range, a calculation was performed to determine the dose at the exclusion area boundary due to iodine releases from the liquid Radwaste processing equipment. Radioactive sources used in the calculation were I-131, I-132, I-133, I-134 and I-135. Concentration values used were from Updated Safety Analysis Report Section 11, "Radioactive Waste and Radiation Protection and Monitoring," Table 11.1-13, "Fission and Corrosion Product Activity in Waste Treatment System at 70°F". The calculation assumed a 70 gpm flow rate from the waste treatment system to the filtration and ion-exchange equipment in the Radioactive Waste Processing Building. Based on the above assumptions, the maximum equilibrium radioiodine inventory was calculated. In the event of an ion-exchange equipment rupture it was assumed that 10% of the iodine collected on the resin bed will be released to the water. It was further conservatively assumed that 10% of the iodine in the water becomes airborne. These assumptions are in accordance with Standard Review Plan criteria contained in Section 15.6.5 Appendix B. Based on the licensee's analysis the new release point is not expected to significantly increase the doses calculated for the routine gaseous effluent release.

The 0-2 hour thyroid dose at the site boundary was determined to be 3.8 rem, or approximately 1% of the 10 CFR Part 100 limits. Thus these results remain within a small fraction of the bounds of 10 CFR Part 100.

## 2.2 Specifications 2.9.1(2)e(i), 2.9.1(2)e(ii), and 2.9.1(2)f Administrative Changes

These specifications have been renumbered to 2.9.1(2)e, 2.9.1(2)f and 2.9.1(2)g respectively. In the present specifications, Specification 2.9.1(2)e(i) concerns monitoring releases from the gas decay tank or containment while Specification 2.9.1(2)e(ii) concerns monitoring the condenser air ejector discharge. This renumber provides separate specifications for monitoring releases from the different sources. The bases to this specification were revised to reflect this renumbering.

The word "analysed" in specification 2.9.1(2)d is misspelled and is being corrected to "analyzed." Also, in the Basis section the word "calculational" is being changed to "calculation."

## 2.3 Findings

For the reasons discussed above, the staff finds that the requested changes to Fort Calhoun Unit 1 Technical Specifications are acceptable.

## 3.0 STATE CONSULATION

In accordance with the Commission's regulations, the Nebraska State official was notified of the proposed issuance of the amendment. The State official had no comment.

#### 4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes in surveillance requirements. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposures. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding (56 FR 2551). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

#### 5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

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Date: March 7, 1991