

- (4) Pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use in amounts as required any byproduct, source, or special nuclear material without restriction to chemical or physical form for sample analysis or instrument calibration or when associated with radioactive apparatus or components;
 - (5) Pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by operation of the facility.
3. This renewed license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter 1: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Section 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

A. Maximum Power Level

Omaha Public Power District is authorized to operate the Fort Calhoun Station, Unit 1, at steady state reactor core power levels not in excess of 1500 megawatts thermal (rated power).

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 24, are hereby incorporated in the license. Omaha Public Power District shall operate the facility in accordance with the Technical Specifications.

C. Security and Safeguards Contingency Plans

The Omaha Public Power District shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the *Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822)* and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The plans, which contain Safeguards Information protected under 10 CFR 73.21, are entitled: "Fort Calhoun Station Security Plan, Training And Qualification Plan, Safeguards Contingency Plan" submitted by letter dated October 18, 2004.

TECHNICAL SPECIFICATIONS

4.0 DESIGN FEATURES

4.1 Site

The site for Fort Calhoun Station Unit No. 1 is in Washington County, Nebraska, on the west bank of the Missouri River and approximately nineteen miles north, northwest of the city of Omaha, Nebraska. The exclusion area, as defined in 10 CFR Part 100, Section 100.3(a), consists of approximately 1242 acres. The exclusion area boundary extent includes approximately 660 acres in Washington County, Nebraska, owned by the Omaha Public Power District (OPPD), and 582 acres in Harrison County, Iowa, on the east bank of the river directly opposite the facility, on which the District retains perpetual easement rights. The minimum exclusion area boundary point is located approximately at the 187.0 degree radial from the outer wall of the containment building and at a distance of 910 meters.

4.2 Reactor Core

4.2.1 Fuel Assemblies

The reactor shall contain 133 fuel assemblies. Each assembly shall consist of a matrix of Zircaloy, ZIRLO[®], or M5 clad fuel rods with an initial composition of natural or slightly enriched uranium dioxide (UO₂) as fuel material. Limited substitutions of zirconium alloy or stainless steel filler rods for fuel rods, in accordance with approved applications of fuel rod configurations, may be used. Fuel assemblies shall be limited to those fuel designs that have been analyzed with applicable NRC staff approved codes and methods and shown by tests or analyses to comply with all fuel safety design bases. A limited number of lead test assemblies that have not completed representative testing may be placed in nonlimiting core regions.

4.2.2 Control Element Assemblies

The reactor core shall contain 49 control element assemblies (CEAs). The control material shall be silver indium cadmium, boron carbide, or hafnium metal as approved by the NRC.

4.3 Fuel Storage

4.3.1 Criticality

4.3.1.1 The spent fuel storage racks are designed and shall be maintained with:

- a. Fuel assemblies having a maximum U-235 enrichment of 4.5 weight percent,
- b. $k_{eff} \leq 0.95$ if fully flooded with unborated water, which includes an allowance for uncertainties as described in Section 9.5 of the USAR,

TECHNICAL SPECIFICATIONS

5.0 ADMINISTRATIVE CONTROLS

5.9 Reporting Requirements (Continued)

1. OPPD-NA-8301, "Reload Core Analysis Methodology Overview" approved version as specified in the COLR.
 2. OPPD-NA-8302, "Neutronics Design Methods and Verification", approved version as specified in the COLR.
 3. OPPD-NA-8303, "Transient and Accident Methods and Verification", approved version as specified in the COLR.
 4. WCAP-12610-P-A, "VANTAGE + Fuel Assembly Report," April 1995 (Westinghouse Proprietary) as approved in the Safety Evaluation by the Office of Nuclear Reactor Regulation Related to Amendment No. 178 to Facility Operating License No. DPR-40, Omaha Public Power District, Fort Calhoun Station Unit No. 1, Docket No. 50-285, dated October 25, 1996.
 5. XN-75-32(P)(A) Supplements 1, 2, 3, & 4, "Computational Procedure for Evaluating Fuel Rod Bowing," approved version as specified in the COLR.
 6. XN-NF-82-06(P)(A) and Supplements 2, 4, and 5, "Qualification of Exxon Nuclear Fuel for Extended Burnup," approved version as specified in the COLR.
 7. XN-NF-85-92(P)(A), "Exxon Nuclear Uranium Dioxide/Gadolinia Irradiation Examination and Thermal Conductivity Results," approved version as specified in the COLR.
 8. ANF-88-133(P)(A) and Supplement 1, "Qualification of Advanced Nuclear Fuels PWR Design Methodology for Rod Burnups of 62 GWd/MTU," approved version as specified in the COLR.
 9. EMF-92-116(P)(A), "Generic Mechanical Design Criteria for PWR Fuel Designs," approved version as specified in the COLR.
 10. BAW-10240(P)(A), "Incorporation of M5TM Properties in Framatome ANP Approved Methods," Framatome ANP, Inc., approved version as specified in the COLR.
- c. The core operating limits shall be determined so that all applicable limits (e.g., fuel thermal mechanical limits, core thermal hydraulics limits, Emergency Core Cooling System (ECCS) limits, nuclear limits such as shutdown margin (SDM), transient analysis limits, and accident analysis limits) of the safety analysis are met.
- d. The COLR, including any mid-cycle revisions or supplements, shall be provided upon issuance for each reload cycle to the NRC.