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Omaha NE 68102-2247

June 29, 2007  
LIC-07-0060

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555-0001

- References:
1. Docket No. 50-285
  2. Letter from E. J. Butcher (NRC) to R. L. Andrews (OPPD) dated July 3, 1985, "Exemption Requests for the Fort Calhoun Station, Unit No. 1, 10 CFR Part 50 Appendix R, Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979," (NRC-85-0200)
  3. Letter from K. M. Kennedy (NRC) to R. T. Ridenoure (OPPD), "Fort Calhoun Station – NRC Integrated Inspection Report 05000285/2004003," dated August 11, 2004 (NRC-04-0103)
  4. Letter from L. J. Smith (NRC) to R. T. Ridenoure (OPPD), "Fort Calhoun Station - Inspection Report 05000285/2005008," dated November 30, 2005 (NRC Triennial Fire Protection Inspection at Fort Calhoun Station (NRC-05-0141))

**SUBJECT: Request for Exemption from Requirements of 10 CFR 50, Appendix R, Section III.G.1.b. for Fire Area 31 at the Fort Calhoun Station**

The Omaha Public Power District (OPPD) requests an exemption, pursuant to 10 CFR 50.12 and 10 CFR 50.48, from the requirements of Appendix R, Section III.G.1.b., which requires that additional fire protection features be provided for the raw water pump and valve cables at the Fort Calhoun Station (FCS). The NRC has previously approved an exemption for the existing cable configuration at the auxiliary building pull boxes and at the intake structure building per Reference 2. However, the cables between these locations are not discussed in that exemption. This exemption request, provided as Attachment 1, will address the non-cited violation finding 05000285/2004003 identified in References 3 and 4. No regulatory commitments are being made in this letter.

If you should have further questions, please contact Mr. Thomas C. Matthews at (402) 533-6938.

Sincerely,

H. J. Faulhaber  
Division Manager  
Nuclear Engineering

HJF/DLL/dll

- Attachments:
1. Fire Area 31, Intake Structure Exemption Request
  2. Layout of Duct Bank and Manholes

## **Fire Area 31 Intake Structure: Outside Pull Boxes, Manhole Vaults and Cable Duct Bank**

### A. Description

The Fort Calhoun Station (FCS) intake structure provides river water to various safety and non-safety related components throughout the plant. The building is separate from the main body of the plant and is located on the river bank to the east of the turbine building. Major components located in the intake structure building are three (3) circulating water pumps, four (4) raw water pumps, and two (2) fire pumps.

The redundant raw water pumps, necessary for cold shutdown functions only, are located in a common fire area in the intake structure building, Fire Area 31.

The cables for the raw water pumps are routed from the auxiliary building through outside cable pull boxes, into an underground cable duct bank (including two manhole vaults) where the cables are accessible in cable trays, and into the intake structure. In the duct bank, the cables are routed in individual cable tubes. In one of the manhole vaults (Manhole #5), the cables are in open cable trays separated into Trains A and B by a 6-inch concrete wall. This concrete wall is not a rated fire barrier, but only has one small penetration at the base of the wall that consists of a 3-inch by 5-inch rectangular opening for water drainage to the vault sump and open 4-inch conduit sleeves in the vault partition wall. The other manhole vault (Manhole #31) houses cables in individual conduit sections. There is no fire detection or suppression capability in the cable duct bank or the manhole vaults. There are no ignition sources in the cable duct bank or manhole vaults, with the exception of a self-ignited cable fire. The voltages of the subject cables are 4160 and 480 volt alternating current (VAC). See Attachment 2 for a layout of the duct bank, manholes, and plant structure arrangement.

### B. Exemption Request

The Omaha Public Power District (OPPD) requests an exemption, pursuant to 10 CFR 50.12 and 10 CFR 50.48, from the requirements of Section III.G.1.b. of Appendix R.

OPPD currently has an approved exemption for the cable configuration at the auxiliary building pull boxes and at the intake structure building (Reference 1). However, the cables between these locations are not discussed in that exemption.

This exemption request is to specifically address the cables in the duct bank and manhole vaults that are routed between the pull boxes and the intake structure. The raw water system is credited to support cold shutdown functions for post-fire safe shutdown analysis.

OPPD has performed a fire hazards evaluation on the cable routing, cable configuration and installation. The duct bank is direct-buried below grade and is constructed of concrete and individual cable sleeve sections. The manhole vaults are concrete construction containing no ignition sources or combustible materials other than the cables and cable insulation. The manhole vaults are not occupied and are only accessed through solid cast-iron manhole covers. OPPD has determined that there is no credible threat from a fire, occurring in the area of the cable duct bank or manhole vaults, which would disable all trains of raw water and prevent the safe shutdown of the plant.

Based on the above, OPPD requests an exemption from the requirements of 10 CFR Part 50, Appendix R, Section III.G.1.b., which requires that additional fire protection features be provided for the raw water pump and valve cables at FCS.

Reference:

1. Letter from E. J. Butcher (NRC) to R. L. Andrews (OPPD) dated July 3, 1985, "Exemption Requests for the Fort Calhoun Station, Unit No. 1, 10 CFR Part 50 Appendix R, Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979" (NRC-85-0200)

Layout - Duct Bank and Manholes

