



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
611 RYAN PLAZA DRIVE, SUITE 1000  
ARLINGTON, TEXAS 76012

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June 6, 1979

Docket No. 50-285

Omaha Public Power District  
ATTN: T. E. Short,  
Assistant General Manager  
1623 Harney Street  
Omaha, Nebraska 68102

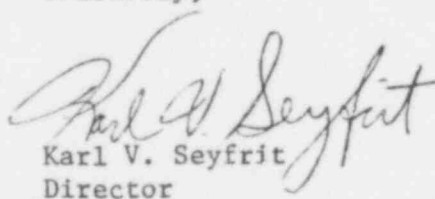
Gentlemen:

Enclosed is supplement IE Bulletin 79-01A. It requires action by you with regard to power reactor facilities with an operating license except for the 11 SEP plants which are listed in Enclosure 3.

This Bulletin is also being sent for information to the 11 SEP plants and all power reactor facilities with a construction permit. No action or written response is required for construction permit facilities or the 11 SEP plants.

Should you have questions regarding this Bulletin or the actions required of you, please contact this office.

Sincerely,

  
Karl V. Seyfrit  
Director

Enclosures:

1. IE Bulletin No. 79-01A
2. List of IE Bulletins  
Issued in the Last  
12 Months
3. List of SEP Plants (11)

cc: R. L. Andrews, Manager  
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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
OFFICE OF INSPECTION AND ENFORCEMENT  
WASHINGTON, D.C. 20555

IE Bulletin No. 79-01A  
Date: June 6, 1979  
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SUPPLEMENT NO. 79-01A TO IE BULLETIN 79-01 - ENVIRONMENTAL QUALIFICATION OF CLASS 1E EQUIPMENT (DEFICIENCIES IN THE ENVIRONMENTAL QUALIFICATION OF ASCO SOLENOID VALVES)

Description of Circumstances:

Recently, a noncompliance report under 10 CFR Part 21 was received by the NRC from the Henry Pratt Company, manufacturer of butterfly valves which are installed in the primary containment at the Three Mile Island Unit 2 Nuclear Station. These butterfly valves are used for purge and exhaust purposes and are required to operate during accident conditions. The report discusses the use of an unqualified solenoid valve for a safety-related valve function which requires operation under accident conditions. The solenoid valve in question is Catalogue No. HT-8331A45, manufactured by the Automatic Switch Company (ASCO) of Florham Park, New Jersey. This pilot valve is used to pilot control the pneumatic valve actuators which are installed on the containment ventilation butterfly valves at this facility.

The deficiency in these solenoid valves identified in the Part 21 Report concerns the parts made of acetal plastic material. The acetal disc holder assembly and bottom plug in the pilot valve assembly are stated by ASCO to have a maximum service limit of 400,000 Rad integrated dosage and 200 degrees F temperature. According to ASCO, exposure of these acetal plastic parts to specified maximum environmental conditions may render the solenoid pilot valve inoperable which would cause the associated butterfly valve to malfunction.

Further investigation at ASCO by the NRC staff has revealed that the valve seals in most ASCO solenoid valves contain Buna "N" elastomer material, which reportedly has a maximum service limit of 7,000,000 Rad integrated dosage and 180 degrees F temperature. The investigation further revealed that ASCO has available a line of qualified solenoid operated pilot valves (ASCO Catalogue No. NP-1) which have no plastic parts, utilize ethylene propylene or viton elastomers and have a continuously energized operating life of four years, under normal ambient conditions up to 140 degrees F. According to the manufacturer, at the end of this period, the coil, manual operator (optional feature) and all resilient parts must be replaced. Preventive maintenance instructions are specified in the installation instructions. Installation instructions are provided to the purchaser with each valve.

The final items of concern identified in the Part 21 Report are the application of Class "A," "B," or "F," accident environment. In this regard,

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