



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 1000
ARLINGTON, TEXAS 76011

PDR
LPDR
TIC
NSIC
CENTRAL FILES

Docket No. 50-298

March 16, 1981

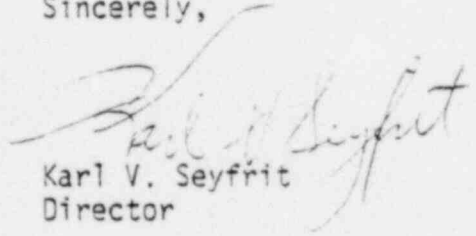
Nebraska Public Power District
ATTN: J. M. Pilant, Director
Licensing & Quality Assurance
Post Office Box 499
Columbus, Nebraska 68601



Gentlemen:

This IE Information Notice is provided as an early notification of a possibly significant matter. It is expected that recipients will review the information for possible applicability to their facility. No specific action or response is requested at this time. If further NRC evaluations so indicate, an IE Circular or Bulletin will be issued to recommend or request specific licensee actions. If you have questions regarding this matter, please contact the Director of the appropriate NRC Regional Office.

Sincerely,


Karl V. Seyfrit
Director

Enclosures:

1. IE Information Notice No. 81-07
2. List of Recently Issued
IE Information Notices

cc: L. C. Lessor, Superintendent
Cooper Nuclear Station
Post Office Box 98
Brownville, Nebraska 68321

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Accession No.:
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IN 81-07

UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT
WASHINGTON, D.C. 20555

IE Information Notice No. 81-07
March 16, 1981
Page 1 of 2

POTENTIAL PROBLEM WITH WATER-SOLUBLE PURGE
DAM MATERIALS USED DURING INERT GAS WELDING

Description of Circumstances:

Recent experiences with water-soluble purge dam materials at several nuclear construction sites have shown the need to develop welding procedures that address the potential for thermally decomposing the purge dam material during inert gas welding or post-weld heat treatment operations. Specifically, polyvinyl alcohol film manufactured by Chris-Craft Industries was the purge dam material used at these construction sites. The decomposition of this purge dam material at elevated temperatures causes the material to lose its solubility in water. As a result, the purge dam material cannot be completely dissolved during subsequent piping system flushing and cleaning operations. The failure of this material to completely dissolve could cause significant problems during reactor plant operation.

Specimens of polyvinyl alcohol film were recently obtained from the Mono-Sol Division of Chris-Craft Industries and tested at Franklin Research Center (FRC) to determine, among other things, the threshold temperature at which the material becomes insoluble in water. The results of this test program indicate that (1) the solubility of the purge dam material in water rapidly approaches zero if the material is heated and held at temperatures in excess of 300°F; (2) the purge dam material hardens and becomes difficult to break if subject to temperatures in the range of 300°F to 400°F, and becomes brittle if heated to 450°F; and (3) purge dam material heated above its threshold temperature is not soluble in commonly used laboratory solvents. The independent testing laboratory (FRC) therefore concludes that the Mono-Sol polyvinyl alcohol film will not dissolve during aqueous flushing of the system if the material has been heated to temperatures in excess of 300°F.

Recommended Actions for Holders of Operating Licenses and Construction Permits:

It is recommended that all welding operations involving polyvinyl alcohol purge dam materials be governed by procedures that require the material to be located in areas that are sufficiently removed from heat so that the temperature of the material does not reach 300°F.

IN 81-07
March 16, 1981
Page 2 of 2

No written response to this information notice is required. If you require additional information with regard to this subject, please contact the appropriate NRC Regional Office.

IE Information Notice No. 81-07
March 16, 1981

LISTING OF RECENTLY ISSUED
IE INFORMATION NOTICES

Information Notice No.	Subject	Date Issued	Issued To
80-44	Actuation of ECCS in the Recirculation Mode While in Hot Shutdown	12/16/80	All power reactor facilities with an Operating License (OL) or Construction Permit (CP)
80-45	Potential Failure of BWR Backup Manual Scram Capability	12/17/80	All pressurized water reactor facilities with an Operating License (OL) Construction Permit (CP)
81-01	Possible Failures of General Electric Type HFA Relays	1/16/81	All power reactor facilities with an Operating License (OL) Construction Permit (CP)
81-02	Transportation of Radiography Devices	1/23/81	All Radiography licensees
81-03	Checklist for Licensees Making Notifications of Significant Events in Accordance with 10 CFR Part 50.72	2/12/81	All power reactor facilities with an Operating License (OL) and Near-term Applicants
81-04	Cracking in Main Steam Lines	2/27/81	All power reactor facilities with an Operating License (OL) or Construction Permit (CP)
81-06	Failure of ITE Model K-600 Circuit Breaker	3/11/81	All power reactor facilities with an Operating License (OL) or Construction Permit (CP)
81-05	Degraded DC System at Palisades	3/13/81	All power reactor facilities with an Operating License (OL) or Construction Permit (CP)

Enclosure