



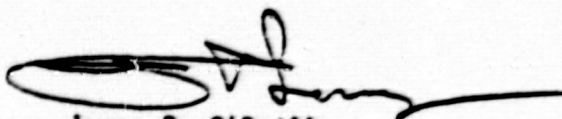
UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
101 MARIETTA ST., N.W., SUITE 3100  
ATLANTA, GEORGIA 30303



Gentlemen:

This Information Notice No. 81-07 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 facilities. 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,

  
James P. O'Reilly  
Director

Enclosures:

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

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

March 16, 1981

IE Information Notice No. 81-07: 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.

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.

Attachment:

Recently issued IE Information Notices

RECENTLY ISSUED  
IE INFORMATION NOTICES

Information Notice No.	Subject	Date of Issue	Issued to
81-06	Failure of ITE Model K-600 Circuit Breaker	3/11/81	All power reactor facilities with an OL or CP
81-05	Degraded DC System at Palisades	3/13/81	All power reactor facilities with an OL or CP
81-04	Cracking in Main Steam Lines	2/27/81	All power reactor facilities with an OL
81-03	Checklist for Licensees Making Notifications of Significant Events in Accordance with 10 CFR 50.72	2/12/81	All power reactor facilities with an OL
81-02	Transportation of Radiography Devices	1/23/81	All Radiography licensees
81-01	Possible Failures of General Electric Type HFA Relays	1/16/81	All power reactor facilities with an OL or CP.
80-45	Potential Failure of BWR Backup Manual Scram Capability	12/17/80	All PWR facilities with an OL or CP
80-44	Actuation of ECCS in the Recirculation Mode While in Hot Shutdown	12/16/80	All PWR facilities with an OL or CP
80-43	Failures of the Continuous Water Level Monitor for the Scram Discharge Volume at Dresden Unit No. 2	12/5/80	All power reactor facilities with an OL or CP
80-42	Effect of Radiation on Hydraulic Snubber Fluid	11/24/80	All power reactor facilities with an OL or CP

OL = Operating Licenses  
CP = Construction Permits



March 16, 1981

AddressesIn Reference To

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|--|--|
| 1. Alabama Power Company<br>Attn: R. P. McDonald<br>Vice President-Nuclear Generation<br>Post Office Box 2641<br>Birmingham, AL 35291                                      | 50-348 Farley Unit 1<br>50-364 Farley Unit 2   |
| 2. Carolina Power and Light Company<br>Attn: J. A. Jones<br>Senior Executive Vice President<br>and Chief Operating Officer<br>411 Fayetteville Street<br>Raleigh, NC 27602 | 50-325 Brunswick Unit 1<br>50-324 Brunswick Unit 2<br>50-400 Harris Unit 1<br>50-401 Harris Unit 2<br>50-402 Harris Unit 3<br>50-403 Harris Unit 4<br>50-261 Robinson Unit 2 |
| 3. Duke Power Company<br>Attn: L. C. Dail, Vice President<br>Design Engineering<br>P. O. Box 33189<br>Charlotte, NC 28242  | 50-491 Cherokee Unit 1<br>50-492 Cherokee Unit 2<br>50-493 Cherokee Unit 3<br>50-488 Perkins Unit 1<br>50-489 Perkins Unit 2<br>50-490 Perkins Unit 3                        |
| 4. Duke Power Company<br>Attn: W. O. Parker, Jr.<br>Vice President, Steam Production<br>P. O. Box 2178<br>Charlotte, NC 28242  | 50-369 McGuire Unit 1<br>50-370 McGuire Unit 2<br>50-269 Oconee Unit 1<br>50-270 Oconee Unit 2<br>50-287 Oconee Unit 3<br>50-413 Catawba Unit 1<br>50-414 Catawba Unit 2     |
| 5. Florida Power and Light Company<br>Attn: R. E. Uhrig, Vice President<br>Advanced Systems and Technology<br>P. O. Box 529100<br>Miami, FL 33152                          | 50-335 St. Lucie Unit 1<br>50-389 St. Lucie Unit 2<br>50-250 Turkey Point Unit 3<br>50-251 Turkey Point Unit 4   |
| 6. Florida Power Corporation<br>Attn: J. A. Hancock, Assistant<br>Vice President Nuclear Operations<br>P. O. Box 14042, Mail Stop C-4<br>St. Petersburg, FL 33733          | 50-302 Crystal River Unit 3  |

Addresses

In Reference To

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|---|--|
| 7. Georgia Power Company<br>Attn: J. H. Miller, Jr.<br>Executive Vice President<br>270 Peachtree Street<br>Atlanta, GA 30303  | 50-321 Hatch Unit 1<br>50-366 Hatch Unit 2<br>50-424 Vogtle Unit 1<br>50-425 Vogtle Unit 2   |
| 8. Mississippi Power and Light Company<br>Attn: N. L. Stampley<br>Vice President of Production<br>P. O. Box 1640<br>Jackson, MS 39205                                       | 50-416 Grand Gulf Unit 1<br>50-417 Grand Gulf Unit 2   |
| 9. Offshore Power Systems<br>Attn: A. R. Collier, President<br>P. O. Box 8000<br>Jacksonville, FL 32211   | 50-437 FNP 1-8   |
| 10. South Carolina Electric and Gas Company<br>Attn: T. C. Nichols, Jr., Vice President<br>Power Production and System<br>Operations<br>P. O. Box 764<br>Columbia, SC 29218 | 50-395 Summer Unit 1   |
| 11. Tennessee Valley Authority<br>Attn: H. G. Parris<br>Manager of Power<br>500A Chestnut Street Tower II<br>Chattanooga, TN 37401  | 50-438 Bellefonte Unit 1<br>50-439 Bellefonte Unit 2<br>50-259 Browns Ferry Unit 1<br>50-260 Browns Ferry Unit 2<br>50-236 Browns Ferry Unit 3<br>50-518 Hartsville Unit 1<br>50-519 Hartsville Unit 2<br>50-520 Hartsville Unit 3<br>50-521 Hartsville Unit 4<br>50-553 Phipps Bend Unit 1<br>50-554 Phipps Bend Unit 2<br>50-327 Sequoyah Unit 1<br>50-328 Sequoyah Unit 2<br>50-390 Watts Bar Unit 1<br>50-391 Watts Bar Unit 2<br>50-566 Yellow Creek Unit 1<br>50-567 Yellow Creek Unit 2 |
| 12. Virginia Electric and Power Company<br>Attn: J. H. Ferguson<br>Executive Vice President-Power<br>P. O. Box 26666<br>Richmond, VA 23261                                  | 50-338 North Anna Unit 1<br>50-339 North Anna Unit 2<br>50-404 North Anna Unit 3<br>50-280 Surry Unit 1<br>50-281 Surry Unit 2   |

Addresses

In Reference To

13. Institute of Nuclear Power Operation  
Attn: R. W. Pack  
Lakeside Complex  
1820 Waterplace  
Atlanta, GA 30339
14. Southern Company Services, Inc.  
ATTN: O. Batum, Manager  
Nuclear Safety & Licensing  
Department  
P. O. Box 2625  
Birmingham, AL 35202
15. Department of Energy  
Clinch River Breeder Reactor  
Plant Project Office  
ATTN: Chief, Quality Improvement  
P. O. Box U  
Oak Ridge, TN 37830
16. EDS, Nuclear, Inc.  
ATTN: E. H. Verdery  
330 Technology Park/Atlanta  
Norcross, GA 30092