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IEC 81-09

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

July 10, 1981

IE Circular No. 81-09: CONTAINMENT EFFLUENT WATER THAT BYPASSES RADIOACTIVITY MONITOR

Description of Circumstances:

At Indian Point Units 2 and 3 and at H. B. Robinson Unit 2, licensee reviews of service water systems have identified unmonitored effluent paths from containment. Although containment cooler water effluent is monitored, containment cooler fan motor cooling water bypasses the monitors by joining the containment cooler water effluent downstream of the radiation monitoring equipment. This represents a potential unmonitored release path if the containment is at design pressure due to a design basis accident (DBA) and if leaks are present in the fan motor cooler system. Similar designs may exist at other plants. Appropriate monitoring of direct discharges (from containment to the environment following a DBA) having the potential to exceed the limits specified in 10 CFR Part 20 is required.

Recommended Actions:

1. All water system effluents that are not automatically isolated by a high-containment-pressure containment isolation signal and that flow directly to the environment from containment should be reviewed to determine whether or not a pathway exists for "significant" unmonitored discharge. A "significant" discharge, for purposes of this circular, is a discharge where projected concentrations in unrestricted areas are likely to exceed the concentrations listed in 10 CFR Part 20, Appendix B, Table II, column 2, with the containment at design pressure due to a design basis accident and with maximum credible leakage, such as a single completely severed cooler tube, assumed to be present in the water system inside containment. You may take credit for design pressure in the water system being higher than containment design pressure only for cases where neither single failures, nor operation in degraded modes as permitted by Technical Specifications under a limiting condition of operation (LCO), are likely to result in operation of the water system at water pressures lower than the containment design pressure.

2. All water system effluents that are not automatically isolated by a high-containment-pressure containment isolation signal and that flow directly to the environment from containment should be reviewed to determine whether or not any "significant" radioactive discharge can be isolated once it is detected. The review should include evaluation of the capability of the system to be isolated without interruption of any safety-related functions. Isolation of the system's inlet as well as its discharge may be required

to prevent radioactive discharge through the inlet piping to the inlet piping of a parallel system and/or to the environment.

3. Corrective actions to install detection and isolation methods that provide performance consistent with Technical Specification requirements should be initiated for any "significant" unmonitored and/or unisolable discharge pathways.

Although no written response to this circular is requested, a report and corrective actions may be required by applicable Technical Specifications in the event an unmonitored and/or unisolable effluent pathway is identified. If you desire additional information regarding this matter, please contact the appropriate IE Regional Office.

Attachment:
Recently Issued IE Circulars

Attachment
IEC 81-09
July 10, 1981

RECENTLY ISSUED
IE CIRCULARS

Circular No.	Subject	Date of Issue	Issued to
81-10	Steam Voiding in the Reactor Coolant System During Decay Heat Removal Cooldown	7/2/81	All power reactor facilities with an OL or CP
81-08	Foundation Materials	5/29/81	All power reactor facilities with an OL or CP
81-07	Control of Radiactiviely Contaminated Material	5/14/81	All power reactor facilities with an OL or CP
81-06	Potential Deficiency Affecting Certain Foxboro 20 to 50 Milliampere Transmitters	4/14/81	All power reactor facilities with an OL or CP
81-05	Self-Aligning Rod End Bushings for Pipe Supports	3/31/81	All power reactor facilities with an OL or CP
81-04	The Role of Shift Technical Advisors and Importance of Reporting Operational Events	4/30/81	All power reactor facilities with an OL or near-term OL
81-03	Inoperable Seismic Monitoring Instrumentation	3/2/81	All power reactor facilities with an OL or CP
81-02	Performance of NRC-Licensed Individuals While on Duty	2/9/81	All power reactor facilities (research & test) with an OL or CP
81-01	Design Problems Involving Indicating Pushbutton Switches Manufactured by Honeywell Incorporated	1/23/81	All power reactor facilities with an OL or CP
80-25	Case Histories of Radiography Events	12/5/80	All radiography licensees

OL = Operating Licenses
CP = Construction Permit