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RHLTR: #02-0039

U. S. Nuclear Regulatory Commission  
Region III  
801 Warrenville Road  
Lisle, IL 60532-4351

ATTN: Regional Administrator

Dresden Nuclear Power Station Units 2 and 3  
Facility Operating License Nos. DPR-19 and DPR-25  
Docket Nos. 50-237 and 50-249

SUBJECT: Offsite Dose Calculation Manual (ODCM) Required Action Not Met During Units 2 and 3 Main Chimney Particulate, Iodine, and Noble Gas Sampling System Inoperability

This report is being submitted in accordance with Section 12.2.B.1.5 and Table 12.2-3, Actions 22 and 26 of the Dresden Nuclear Power Station (DNPS) Offsite Dose Calculation Manual (ODCM) that requires a 30-day report to be submitted if the operability requirements and associated action requirements cannot be satisfied. Two specific events occurred during the calibration of the Units 2 and 3 main chimney system particulate, iodine, and noble gas monitor (SPING). The events caused DNPS to exceed the twenty-one day operability requirement for both mid range and high range noble gas detectors specified in ODCM Table 12.2-3, Action 26 for the SPING and also to lose the continuous main chimney effluent monitoring, as specified in ODCM Table 12.2-3, Actions 22 and 26.

The following section outlines the sequence of events concerning system inoperabilities and the loss of continuous effluent monitoring.

- April 15, 2002: SPING removed from service and General Electric (GE) monitor (back-up main chimney monitor) placed into service for continuous main chimney effluent monitoring. SPING calibration started.
- April 15 –  
May 3, 2002: The calibration normally takes 9 days to complete. However, during the calibration, several component failures occurred. Two of the components needed to complete repairs were not available onsite which prolonged the repair and subsequent calibration.
- May 3, 2002: At approximately 22:30, SPING calibration complete. SPING placed into service and main chimney effluent monitoring system restored to normal operating configuration.

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- May 3, 2002: At approximately 23:30, control room personnel observed an upward trend on the control room recorder for the SPING. The GE monitor is operable and indicates normal readings. SPING display and control room terminal indicate normal readings.
- May 3 - 4, 2002: 23:30 to 01:30, the SPING control room recorder continued to show an increased upward trend, eventually exceeding the preset threshold for high range noble gas monitoring. By design, an automatic initiation of the post accident high range noble gas monitor occurred and interrupted low and mid range noble gas monitoring. Operating department personnel were still completing an operability review for the post accident high range noble gas monitor. As a result, this monitor was not administratively operable at this time.
- May 4, 2002: At 01:31 to 02:57, personnel were dispatched to reestablish main chimney effluent monitoring via the GE monitor. During this time period, no main chimney effluent monitoring occurred.
- May 4, 2002: SPING manufacturer contacted for assistance in determining the cause of the erroneous upward trend and SPING malfunction. At 15:22 to 15:59, the SPING and GE monitor were reconfigured to facilitate maintenance troubleshooting activities. During this reconfiguration no main chimney effluent monitoring occurred.
- May 6, 2002: SPING exceeds the 21-day mid range and high range noble gas channel operability requirement.
- May 7, 2002: Vendor representative arrives at DNPS for assistance in maintenance troubleshooting activities.
- May 13, 2002: SPING calibration and maintenance activities complete. SPING placed into service. To facilitate placing the SPING into service, the SPING and GE monitor were momentarily secured. During this system reconfiguration no main chimney effluent monitoring occurred.

Maintenance troubleshooting activities with the vendor representative were successful in determining the cause of the erroneous increase in count rate. A failed detector input/output board and control relay within the control circuitry was identified as the cause. No additional failures have been experienced following these repairs.

Due to Units 2 and 3 main chimney SPING and GE monitor system configuration, and the ODCM requirements, the interruption of continuous effluent monitoring for a brief period is unavoidable. Main chimney effluent monitoring occurs with a single sample pump on either system operating. Securing the sample pump on these systems results in the interruption of sample flow, which is not permitted by current ODCM action requirements except for required surveillances.

The preceding events have been captured in the DNPS corrective actions program and are being evaluated accordingly. Corrective actions to prevent recurrence include identification and inventory of components prone to frequent failure. In addition, the ODCM action requirements will be revised to address brief interruptions in continuous effluent monitoring for maintenance activities.

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During system reconfigurations on May 4, 2002 and May 13, 2002, no other station effluent monitors were in an alarm condition. The absence of alarm provides assurance that no ODCM release rate limits were exceeded during these periods. The condition did not compromise the health and safety of plant personnel or the public.

Should you have any questions please contact Mr. B. Rybak at (815) 416-2800.

Respectfully,

A handwritten signature in black ink, appearing to read 'R. J. Hovey', with a horizontal line extending to the right.

R. J. Hovey  
Site Vice President  
Dresden Nuclear Power Station

cc: NRC Senior Resident Inspector, Dresden Nuclear Power Station