

RI - DNMS Licensee Event Report Disposition

Licensee: National Inst of Standards & Tecndogy
 Event Description: CFR 10: Other unspec Reqm:

License No: Sm-362 Docket No: 07000398 MLER-RI: 2009-013
 Event Date: 5/12/09 Report Date: 6/18/09 HQ Ops Event #: 45070
(30-day report) (5/15/2009)

1. REPORTING REQUIREMENT

<input type="checkbox"/> 10 CFR 20.1906 Package Contamination <input type="checkbox"/> 10 CFR 20.2201 Theft or Loss <input type="checkbox"/> 10 CFR 20.2203 30 Day Report <input checked="" type="checkbox"/> Other <u>10 CFR 31.5(c)(5)</u>	<input type="checkbox"/> 10 CFR 30.50 Report <input type="checkbox"/> 10 CFR 35.3045 Medical Event <input type="checkbox"/> License Condition
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2. REGION I RESPONSE

<input type="checkbox"/> Immediate Site Inspection <input type="checkbox"/> Special Inspection <input type="checkbox"/> Telephone Inquiry <input type="checkbox"/> Preliminary Notification/Report <input checked="" type="checkbox"/> Information Entered in RI Log <input type="checkbox"/> Report Referred To: _____	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Inspector/Date</td> <td style="width: 50%; border: 1px solid black;"></td> </tr> <tr> <td>Inspector/Date</td> <td style="border: 1px solid black;"></td> </tr> <tr> <td>Inspector/Date</td> <td style="border: 1px solid black;"></td> </tr> <tr> <td><input type="checkbox"/> Daily Report</td> <td></td> </tr> <tr> <td><input checked="" type="checkbox"/> Review at Next Inspection</td> <td></td> </tr> </table> <p style="text-align: center;"><u>9/2010</u></p>	Inspector/Date		Inspector/Date		Inspector/Date		<input type="checkbox"/> Daily Report		<input checked="" type="checkbox"/> Review at Next Inspection	
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3. REPORT EVALUATION

<input checked="" type="checkbox"/> Description of Event <input checked="" type="checkbox"/> Levels of RAM Involved <input checked="" type="checkbox"/> Cause of Event	<input checked="" type="checkbox"/> Corrective Actions <input type="checkbox"/> Calculations Adequate <input type="checkbox"/> Additional Information Requested from Licensee
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4. MANAGEMENT DIRECTIVE 8.3 EVALUATION

N/A

<input type="checkbox"/> Release w/Exposure > Limits <input type="checkbox"/> Repeated Inadequate Control <input type="checkbox"/> Exposure 5x Limits <input type="checkbox"/> Potential Fatality <input type="checkbox"/> If any of the above are involved: <input type="checkbox"/> Considered Need for IIT Decision/Made By/Date: _____	<input type="checkbox"/> Deliberate Misuse w/Exposure > Limits <input type="checkbox"/> Pkging Failure > 10 rads/hr or Contamination > 1000x Limits <input type="checkbox"/> Large# Indivs w/Exp > Limits or Medical Deterministic Effects <input type="checkbox"/> Unique Circumstances or Safeguards Concerns <input type="checkbox"/> Considered Need for AIT
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5. MANAGEMENT DIRECTIVE 8.10 EVALUATION (additional evaluation for medical events only)

N/A

<input type="checkbox"/> Timeliness - Inspection Meets Requirements (5 days for overdose / 10 days for underdose) <input type="checkbox"/> Medical Consultant Used-Name of Consultant/Date of Report: _____ <input type="checkbox"/> Medical Consultant Determined Event Directly Contributed to Fatality <input type="checkbox"/> Device Failure with Possible Adverse Generic Implications <input type="checkbox"/> HQ or Contractor Support Required to Evaluate Consequences
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6. SPECIAL INSTRUCTIONS OR COMMENTS

Review at next inspection (i.e., ~9/10)

Non-Public Inspector Signature: Stavros R. Constantine Date: 8/10/2009
 Public-SUNSI REVIEW COMPLETE Branch Chief Initials: [Signature] Date: 8/10/09
 Location of File: G:\Reference\Blank Forms\LER FORM.wpd Rev. 02/25/05

3 is currently in Mode 3.

"This results in a condition that resulted in an actuation of the Reactor Protection System which is reportable under 10 CFR 50.72(b)(2)(iv)(B).

"The valid actuation of the Auxiliary Feedwater System is reportable under 10 CFR 50.72(b)(3)(iv)(A)."

All rods inserted during the trip. There were no relief or safety valves that lifted during the transient. The electrical grid is stable and is in the normal shutdown electrical lineup. The plant is being maintained at normal operating temperature and pressure using steam dumps to condenser to remove decay heat. Unit 2 was not affected by the trip.

The licensee notified the New York Public Service Commission and the NRC Resident Inspector.

TOP

Other Nuclear Material	Event Number: 45070
Rep Org: NATIONAL INST OF STANDARDS & TECH Licensee: NATIONAL INST OF STANDARDS & TECH Region: 1 City: GAITHERSBURG State: MD County: MONTGOMERY License #: SNM-362 Agreement: Y Docket: NRC Notified By: TIM MENGERS HQ OPS Officer: HOWIE CROUCH	Notification Date: 05/15/2009 Notification Time: 09:38 [ET] Event Date: 05/12/2009 Event Time: [EDT] Last Update Date: 05/15/2009
Emergency Class: NON EMERGENCY 10 CFR Section: OTHER UNSPEC REQ MNT	Person (Organization): DANIEL HOLODY (R1DO) ANGELA MCINTOSH (FSME)

Event Text

EXTERNAL CONTAMINATION FOUND ON MODIFIED SEALED SOURCE

The following information was obtained from the licensee via facsimile:

"One of the research projects at NIST involves research and testing of different types of bomb detection instruments. One of the experiments required that the source be removed from one of the instruments. Prior to January 2008, Researcher 1 spoke to the RSO for Smiths Detection in Canada. They discussed the possibility of removing the 15 mCi Ni-63 source from their instrument, an IonScan 400b, sealed source device number ND-0163-D-1014-G. The Smiths RSO approved this and sent schematics to assist with the project. Researcher 1 then started planning the project with NIST Health Physics review. It was decided that Health Physics would monitor this project to confirm that there was no unanticipated exposure or contamination resulting from the operation. On January 31, 2008, Researcher 1 began the process for source removal. Work was performed in a hood, in a controlled laboratory space, with a health physicist monitoring the operation. The process of source removal was based on the manufacturer schematics. These schematics were general and not a specific instruction for source removal. No information was available at the time that clearly defined the source encapsulation barrier. After a ceramic cap was removed, the side of the source holder was wiped and contamination was detected. It is believed that the wipe may have touched some of the nickel foil. Upon observing the way the source was placed in the ceramic in addition to the contamination detected, it was decided that it was not possible to safely modify the device in the intended manner. The ceramic head was reattached and reinserted into the box. External swipes were verified to be clean. It was decided to leave the source this way while it was determined if there was anything more they could do to meet the intended research results. It is believed that the sealed source containment was breached in the experiment thereby negating the manufacturer's sealed source certificate. In doing this, it became an unsealed source. The reassembly restored containment. The device was placed into secured storage.

"On May 12, 2009 wipes were taken of the external portion of the ceramic head and confirmed contamination of 72 nCi. A wipe was taken at the manufacturers recommended typical sealed source leak check location and was clean. The source box was collected for disposal. The hood, all items in the hood, and the floor were checked for potential

contamination. They were verified to be clean.

"It is unclear whether this constitutes a reportable sealed source leakage situation with respect to 10CFR31.5c, since this occurred during an intended and controlled effort to modify the source configuration. The levels of unsealed source activity are within the limits prescribed in our license, SNM-362."

TOP

Power Reactor	Event Number: 45071
Facility: HATCH Region: 2 State: GA Unit: [1] [] [] RX Type: [1] GE-4,[2] GE-4 NRC Notified By: EDWEN URQUHART HQ OPS Officer: BILL HUFFMAN	Notification Date: 05/15/2009 Notification Time: 10:13 [ET] Event Date: 05/15/2009 Event Time: 05:19 [EDT] Last Update Date: 05/15/2009
Emergency Class: NON EMERGENCY 10 CFR Section: 50.72(b)(3)(iv)(A) - VALID SPECIF SYS ACTUATION	Person (Organization): JAY HENSON (R2DO)

Unit	SCRAM Code	RX CRIT	Initial PWR	Initial RX Mode	Current PWR	Current RX Mode
1	N	N	0	Cold Shutdown	0	Cold Shutdown

Event Text

<p>GROUP 1 ISOLATION OF ALL MAIN STEAM VALVES WHILE PERFORMING A SPECIAL PROCEDURE</p> <p>"At 0519 on 5/15/09, a Group 1 isolation signal was received which resulted in all eight Main Steam Isolation Valves closing. The signal was received based upon a valid main condenser low vacuum signal coincident with reactor mode switch placed in RUN position. The isolation was an unanticipated result of a special purpose procedure which was being performed as a functional test for maintenance work that had been performed on intermediate range nuclear instrumentation. The procedure had installed jumpers to bypass the Group 1 isolation for Mode Switch in Run, but did not account for low condenser vacuum isolation. The low condenser vacuum switches were in the bypass position, but this logic does not prevent Group 1 isolation in the Run mode. The Group 1 isolation was completed successfully with all MSIVs and small bore valves closing as designed. MSIV closure with Mode Switch in Run position also caused a RPS actuation / full scram. The reactor was subcritical and all control rods were already fully inserted as the reactor was being maintained in Cold Shutdown."</p> <p>The licensee has notified the NRC Resident Inspector.</p>

TOP

Power Reactor	Event Number: 45072
Facility: CLINTON Region: 3 State: IL Unit: [1] [] [] RX Type: [1] GE-6 NRC Notified By: RICHARD KISS HQ OPS Officer: JOE O'HARA	Notification Date: 05/15/2009 Notification Time: 21:37 [ET] Event Date: 05/15/2009 Event Time: 19:42 [CDT] Last Update Date: 05/15/2009
Emergency Class: NON EMERGENCY 10 CFR Section: 50.72(b)(3)(xiii) - LOSS COMM/ASMT/RESPONSE	Person (Organization): MICHAEL KUNOWSKI (R3DO)

Unit	SCRAM Code	RX CRIT	Initial PWR	Initial RX Mode	Current PWR	Current RX Mode

Toukatly, Kelly

From: Courtemanche, Steven
Sent: Thursday, July 30, 2009 1:46 PM
To: Toukatly, Kelly
Subject: Need for an LER folder

The following document was received by RI and placed into ADAMS. I was trying to complete an NMED record and found the document. It is a Licensee Event Report concerning a leaking sealed source and what describes the licensee's actions. It can be found at ML091761002.

Thank you for your attention to this matter.

From : Tim Mengers
NIST Health Physics - License # SNM -362
(301) 975- 5800
Attn: Mr. Steven Courtemanche US NRC
Date: June 18, 2009

This report is intended to satisfy the 30 day follow up written response requirement following a report of a leaking sealed source pursuant to 10CFR31.5. The original discussions with the NRC operation center intended to clarify whether this incident constituted a reportable event occurred May 14, 2009 with a follow up fax on May 15, 2009. At that time the NIST RSO, Timothy Mengers, and NIST HP, Janna Shupe discussed the issue with Christian Einberg and Angela McIntosh of the US NRC. Per follow up instructions from Steve Courtemanche on May 20, 2009, it was concluded that this would be considered a reportable situation. The following is an account of the incident and a statement of follow up actions.

One of the research projects at NIST involves research and testing of different types of bomb detection instruments. One of the experiments required that the source be removed from one of the instruments. Prior to January 2008, Researcher 1 spoke to the RSO for Smiths Detection in Canada. They discussed the possibility of removing the 15 mCi Ni63 source from their instrument, an IonScan 400b. The Smiths RSO approved this and sent schematics to assist with the project. Researcher 1 then started planning the project with NIST Health Physics review. It was decided that Health Physics would monitor this project to confirm that there was no unanticipated exposure or contamination resulting from the operation. On January 31, 2008, Researcher 1, began the process for source removal. Work was performed in a hood, in a controlled laboratory space, with a health physicist monitoring the operation. The process of source removal was based on the manufacturer schematics. These schematics were general and not a specific instruction for source removal. No information was available at the time that clearly defined the source encapsulation barrier. After a ceramic cap was removed, the side of the source holder was wiped and contamination was detected. It is believed that the wipe may have touched some of the nickel foil. Upon observing the way the source was placed in the ceramic in addition to the contamination detected, it was decided that it was not possible to safely modify the device in the intended manner. The ceramic head was reattached and reinserted into the box. External swipes were verified to be clean. It was decided to leave the source this way while it was determined if there was anything more they could do to meet the intended research results. It is believed that the sealed source containment was breached in the experiment thereby negating the manufacture's sealed source certificate. In doing this, it became an unsealed source. The reassembly restored containment. The device was placed into secured storage.

On May 12, 2009 wipes were taken of the external portion of the ceramic head and confirmed contamination of 72 nCi. A wipe was taken at the manufactures recommended typical sealed source leak check location and was clean. The source box was collected for disposal. The hood, all items in the hood, and the floor were checked for potential contamination. They were verified to be clean.

It is believed that the action of smearing the ceramic head made contact with the nickel foil and thereby caused the contamination. All contamination was confined within the instrument as shown by confirmatory smears.

This operation was conducted with full consultation and approval of the manufacturer, and it was conducted under monitoring and controlled laboratory conditions commensurate with our licensed operations. However the monitored leakage of the source indicates the desired modification of the device could not be achieved safely. This contamination incident will not happen again because the experiment will not be repeated.