



**Northeast
Nuclear Energy**

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December 21, 2000
B-18297

The Northeast Utilities System

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555-0001

Subject: Millstone Nuclear Power Station, Unit No. 1, Docket No. 50-245
Summary of December 19, 2000 Conference Call

On December 19, 2000, representatives of the NRC Staff and Northeast Nuclear Energy Company (NNECO) had a conference call to discuss the current status of the ongoing investigation to resolve the fuel pin accountability issue reported to the NRC on December 14, 2000. The attached provides a summary of the information discussed in the subject conference call.

Please direct any questions regarding this summary to Mr. Bryan Ford at (860) 437-5895.

There are no regulatory commitments contained within this letter.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

L. J. Olivier,
Senior Vice President and Chief Nuclear Officer

Attachment: Summary of Information Provided on December 19, 2000

cc: H. J. Miller, Region I Administrator
J. B. Hickman, NRC Senior Project Manager, Millstone Unit No. 1
T. J. Jackson, NRC Region 1

Director
Bureau of Air Management
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Department of Environmental Protection
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Attachment 1 to B18297

Millstone Nuclear Power Station, Unit 1

Summary of December 19, 2000 Conference Call

Summary of Information Provided on 12/19/00

On December 19, 2000, representatives of the NRC Staff and NNECO had a conference call to discuss the current status of the ongoing investigation to resolve the fuel pin accountability issue reported to the NRC on December 14, 2000. The following provides a summary of the information discussed in the conference call. The investigation of this issue is ongoing; therefore, the information provided is preliminary and may change as additional information is identified.

A. Overview

1. The issue was identified while performing a records reconciliation effort as preparation for a possible Independent Spent Fuel Storage Installation.
2. Condition Report was written on November 16, 2000 documenting that the location of 2 irradiated fuel pins from fuel assembly MS-557 may not be properly reflected in the Special Nuclear Material (SNM) records.
3. A team was established and an investigation initiated to determine the location of the fuel pins.
4. On December 11, 2000, an independent review team was formed to evaluate actions taken to date and provide recommendations on future activities.
5. On December 14, 2000, formal notification pursuant to the requirements of 10CFR20.2201(a)(ii) and 10CFR50.72 (b)(2)(vi) was made to the NRC. Concurrently, the State of Connecticut was notified.

B. Historical Timeline

1. October 1972 - MS 557 was disassembled for inspection.
2. May 1974 - MS 557 reassembled. Two fuel pins were not returned to the assembly.
3. May 1979 - Engineer notes fuel pins in canister in the northwest corner of the Spent Fuel Pool (SFP), and contacts the fuel vendor. Vendor responds that the fuel pins are from MS 557. Reactor Engineer begins tracking these two pins on an inventory card in the Fuel Card Index.
4. April 1980 - Fuel pins are noted on the SFP map as located in storage canister in the northwest corner of the SFP.
5. September 1980 - Fuel pins and canister were no longer on SFP inventory map. Current reviews identified no record of disposition for these two fuel pins on an inventory card in the Fuel Card Index.
6. 1985 - 1988 - Major shipments of miscellaneous irradiated components from the SFP occurred.
7. July 1988 - Detailed inventory of SFP during re-rack project does not list fuel storage canister or fuel pins.
8. November 2000 - Spent Fuel Records reconciliation effort notes location of 2 fuel pins not properly reflected in SNM records.

C. Actions Taken to Locate Two Fuel Pins

1. A visual inspection of MS 557 indicates that it contains a dummy spacer capture rod and empty hole in one tie rod location. These observations are consistent with expectations and the known facts about the fuel assembly.
2. Canister SRP 2D and fuel assembly MS 508 have been visually inspected.
3. A visual inspection of selected spent fuel pool locations was made with special camera equipment.
4. A project investigation team was established.
5. A review of selected vendor and licensee fuel records has been performed.
6. A review of fuel shipment records has been performed. Results indicate that the fuel pins were not shipped to another facility as nuclear fuel.
7. Personnel interviews were conducted.
8. An assessment of the contact radiation levels of the 2 fuel pins was performed.

D. Ongoing or Planned Actions

1. Continue records retrieval and review of relevant documentation (e.g., vendor fuel reconstitution records, SFP maps, control room logs, radiation work permits, and material transfer forms, waste shipment records).
2. Perform additional visual SFP inspections.
3. Conduct and document additional personnel interviews.
4. Establish a long-term project team in early January.
5. Continue with ongoing communications and notifications to licensed facilities, including Barnwell and Hanford licensed facilities.

E. Initial Assessment of Impact on Public Health and Safety

1. An assessment of the contact radiation levels of the 2 fuel pins was performed. Contact radiation levels are estimated to have been on the order of 8000R/hr in the early 1980's and approximately 1000R/hr currently. With these radiation levels, the only way these fuel pins could realistically have been removed from the pool is in a shielded cask.
2. If a shielded cask shipment occurred, it was shipped to a licensed facility. The only facilities considered credible for these pins to have been shipped to are the licensed radioactive waste disposal sites in Washington state or South Carolina.
3. Due to the controls in place at these licensed facilities, there is no undue threat to the public health and safety resulting from the possible shipment of these fuel pins to these facilities.

F. Independent Review Team Initial Assessment

1. No information or data suggests that there is an undue risk to the health and safety of the public or plant workers.
2. The probability that the fuel pins are in the SFP is equal to if not greater than the probability that they were shipped to another licensed facility.
3. Increased documentation of actions and the basis for future conclusions is needed.
4. A long term team is needed to support the investigation.

G. Conference Call Attendees:

NRC Region 1

Ron Bellamy
Frank Costello
Tony Dimitriadis
Todd Jackson
George Pangburn

NRC NRR

John Hickman
Stu Richards

NNECO

Frank Rothen
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Dave Smith
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Dan Meekhoff
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Independent Team

Hugh Thompson