



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406

MAY 26 1989

Docket No. 50-336
File RI-88-A-0124

[REDACTED]

Dear [REDACTED]

The purpose of this letter is to inform you of our findings related to your allegation concerning motor-operated valve testing and related radiation exposure at Millstone Nuclear Power Station, Unit 2.

Please find enclosed a copy of the relevant parts of NRC Inspection Report 50-336/88-28, documenting a resident inspection of Millstone Unit 2. Section 8.1 of the report addresses the NRC inspection and review of your allegations and concludes your procedure adherence and unnecessary radiation exposure concerns were substantiated.

This allegation has been closed based upon there being low safety significance. Our inspectors will consider these matters in planning their ongoing inspections of related facility activities, and plan to follow completion of licensee corrective actions during routine inspection. Should your desire to be specifically informed of that completion, please contact me or the resident inspectors' office.

You also expressed concern about the potential for repercussions from licensee management for identifying concerns to the NRC. Inspector follow-up with you has identified no such repercussions. Nonetheless, I am enclosing a copy of the Department of Labor (DOL) regulations for filing a complaint for redress of discrimination for identifying concerns to the NRC. In such cases, only the DOL can order individual redress. Please note that the DOL regulations specify that discrimination complaints be submitted within 30 days of the alleged discrimination.

The NRC has the responsibility for taking appropriate action against licensees in discrimination cases, and we maintain contact with the DOL on these matters. However, we would also appreciate being notified about any discrimination you perceive.

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MAY 26 1989

Thank you for identifying this matter to the NRC. Please contact me if you have any additional information or questions.

Sincerely,

Ede C. McCabe, Jr.
Ede C. McCabe, Jr., Chief
Reactor Projects Section 1B
Division of Reactor Projects
Tel: (215) 337-5231

Enclosures: As Stated

cc w/encl (w/o DOL Information):
D. Holody, RI

bcc w/encl (w/o DOL Information):
M. Perkins
S. Barr
W. Raymond
RI FRPS Section Chief

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-336/88-28

Docket No. 50-336

License No. DPR-65

Licensee: Northeast Nuclear Energy Company
P.O. Box 270
Hartford, CT 06101-0270

Facility Name: Millstone Nuclear Power Station, Unit 2

Inspection At: Waterford, Connecticut

Dates: November 24, 1988 to January 10, 1989

Reporting
Inspector: P. J. Habighorst, Resident Inspector

Inspectors: S. Barber, Resident Inspector, Millstone 3
P. J. Habighorst, Resident Inspector, Millstone 2
W. J. Raymond, Senior Resident Inspector, Millstone
T. A. Rebelowski, Senior Reactor Engineer, DRS

Approved by: *E. C. McCabe, Jr.*
E. C. McCabe, Chief, Reactor Projects Section 1B

2/6/89
Date

Inspection Summary: 11/24/88 + 1/10/89 (Report 50-336/88-28)

Areas Inspected: Routine resident inspection (187 regular hours, 14 backshift hours) of plant operations, surveillance, maintenance, previously identified items, review of Plant Incident Reports (PIRs), security events, allegations, periodic reports, and committee activities.

Results: No unsafe conditions, violations, or deviations were identified. Further resident follow-up is warranted in commitments to NRC Generic Letter 88-17, 10 CFR 21 reporting, maintenance repairs on Auxiliary Feedwater Discharges valves, and Motor-Operated Valve Analysis and Test System (MOVATS) program enhancements. Attached to this report is the licensee's reference documentation for a November 19, 1988 presentation to the NRC on facility initiatives. The presentation included Millstone 2 program enhancements, and results of the licensee's Safety System Functional Inspection (SSFI).

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Pre-outage maintenance such as tank inspection, pump overhaul, retubing of RBCCW heat exchangers should improve the outage maintenance workload.

The new maintenance facility has enhanced the Unit 2 program by providing increased space, new shop tools, snubber and storage areas.

8.0 Allegation Followup (92720/92701)

8.1 RI-88-A-0124: Motor Operated Valve Analysis and Test System (MOVATS)

On December 6, an individual called the inspector's office to report the following:

- i) Procedural violation of SP 87-2-25, Procedure for Testing Limitorque Motor-Operated Valves (MOVVs) using MOVATS.
- ii) Lack of radiation exposure control for numerous, repetitive MOVATS tests on MOVVs.
- iii) Potential repercussions from licensee management when information is brought to the NRC.

On the first concern, the alleged reportedly was told by his supervision to perform MOVATS testing on twelve MOVVs in apparent non-compliance with SP 87-2-25 Step 5.3. This step states that the required target thrust range must be obtained before testing (if applicable) and recorded. The alleged reportedly was told by his supervision to test the MOVVs without the target thrust range. The inspector reviewed SP 87-2-25 Section 6.10, which discusses initial thrust measuring device (TMD)/load cell calibration to obtain thrust at as-found torque switch settings. Step 6.10.7 discusses the determination of the total thrust and the control switch trip thrust corresponding to the as-found open and close torque switch settings.

The inspector reviewed the safety significance of adherence to steps in SP 87-2-25. In review of Production Management Maintenance System (PMMS) under MOVATS, the alleged twelve affected MOVVs were 2-SI-616, 2-SI-617, 2-SI-626, 2-SI-627, 2-SI-636, 2-SI-637, 2-SI-646, 2-SI-647, 2-SI-654, 2-SI-656 and 2-SI-655, all located in the high pressure safety injection (HPSI) discharge headers. The licensee's June 27, 1988 response to NRC Bulletin 85-03, "Motor-Operated Valve Common Mode Failure," stated that the twelve valves were tested under full differential pressure by stroking in the direction which represents the safety-related function against full pressure.

All the HPSI discharge valves operated successfully against full differential pressure, except for 2-SI-655 (cross-tie valve between the "swing" HPSI "B" pump and the "A" header). The licensee's June 27, 1988 response

to NRC Bulletin 85-03 details the failure of 2-SI-655 to stroke and contains an operability justification. The justification was based on: i) the normal valve lineup position for 2-SI-655 is open; and ii) if 2-SI-655 had to be opened and failed to open, securing the "B" HPSI pump would remove the differential pressure and allow the valve to open. The full flow differential pressure tests were conducted per in-service test T-87-38, "Safety Injection Valve Stroke Test Under Accident Condition Pressure," during the February 1988 refuel outage.

The inspector reviewed the licensee's response to NRC Bulletin 85-03. In the response, the licensee described the program to determine and evaluate torque switch settings for motor-operated valves selected to be tested with MOVATS. The program is as follows: (1) Vendor (Limitorque) calculations provide theoretical stem thrust for maximum operating differential pressure; (2) calculated thrust is compared with measured thrust to ensure valve operation against the design differential pressure; and (3) evaluation of torque switch accuracy regarding minimum delivered thrust vs. factory specified torque setpoint. The inspector concluded that the twelve HPSI valves were tested per Bulletin 85-03, and determination of "as-left" switch settings complied with the response to the bulletin. However, the licensee's controlling procedure SP-87-2-25 to determine "as-found" and "as-left" thrust values was not descriptive in regards to a required theoretical thrust value determination (Appendix K) prior to testing. The inspector will follow licensee corrective actions.

The inspector reviewed revisions 7, 8, and 9 to SP 87-2-25 to determine the time interval for the inclusion of Appendix K sheets for the twelve HPSI valves. The PDRC approvals for the respective revisions were on March 24, 1988, June 15, 1988 and November 23, 1988. In all cases, the HPSI valves were repaired under a maintenance work order and/or MOVATS tested to determine "as-found" thrust values prior to application of the theoretical thrust value (Appendix K). The inspector concluded that no theoretical thrust was calculated until "as-found" values were determined, and that the alleged failure to perform MOVATS testing in accordance with SP 87-2-25 was therefore substantiated. The inspector questioned the allegor if the "as-found" thrust values were applied to determine a theoretical thrust. The allegor did not believe this occurred because "as-found" thrust values by MOVATS differed from theoretical calculated values. No inability of the valves to perform as required was identified, and the absence of safety significance resulted in no violation citation being issued by the NRC. The procedural non-adherence will be considered during the next Millstone 2 SALP (Systematic Assessment of Licensee Performance).

The allegor's second concern was poor control of radiation exposure when conducting repetitive MOVATS testing. The inspector contacted the Millstone 2 As-Low-As-Reasonably-Achievable (ALARA) radiation coordinator and reviewed exposure records for MOVATS testing in 1988. The allegor appears on Radiation Work Permits on 19 out of 25 valves tested with

MOVAT equipment, with an approximate exposure of 1.34 rem for the year. Total man-rem for MOVATS activities for Millstone 2 was 3.84 man-rem. The inspector reviewed the ALARA tracking system for MOVATS testing in response to NRC Bulletin 85-03 for the Millstone station. Millstone 1 accumulated 4.2 man-rem for testing and repair of 9 MOVs, and Millstone 3 accumulated 3.9 man-rem for 33 MOVs. No conclusive evidence was obtained from these results because of differences in plant life, design, types of motor-operator, and relative configuration. The inspector discussed exposures with the Unit 2 ALARA coordinator, who acknowledged the need to consider prolonged single-worker activities in order to reduce individual risk. No above limit exposures were identified, but the allegor's belief that better ALARA controls should be applied was confirmed, substantiating this aspect of the allegation. The ALARA control adequacy will be considered by the NRC during the next Millstone 2 SALP. Also, licensee actions on this matter will be followed during future routine inspections.

The third item presented by the allegor was potential licensee management repercussions when information was provided to the NRC. The inspector discussed with the allegor if any activities were impacted by management repercussions. The allegor's perception was that no management repercussion had taken place. No such repercussions have been identified by other NRC inspections and allegation review. No further NRC action on this item is planned.

In conclusion, the allegor's procedure adherence and ALARA concerns were substantiated, with no equipment performance or operability degradation identified. The inspector's findings were discussed with the allegor. No further concerns were identified. This allegation is closed, but will be considered during the next SALP and during routine review of facility activities.

9.0 Fuel Receipt and Inspection (60710)

On December 20, the inspector observed licensee fuel inspection and receipt of activities two fuel assemblies, M-18 and M-41, from container serial number 6134. Activities witnessed were: visual inspection; fuel movement from the shipping container to the new fuel inspection machine; movement from the inspection machine to the temporary new fuel vault; Quality Control (QC) inspection; involvement of maintenance personnel; and health physics involvement. New fuel inspection is covered under AWC M2-88-12678 and licensee procedure OP-2210A, "New Fuel Assembly/CEA Receipt." The licensee, at the time of observation, was inspecting the last 12 of 60 fuel assemblies. In discussions with the licensee, the inspector discovered that two fuel assemblies, M-40 and M-60, had spacer grid discrepancies. The vendor will correct the discrepancies on site using licensee AWOs. The inspector will follow licensee actions on the spacer grid discrepancies.

ALLEGATION RECEIPT REPORT

ALLEGOR INFORMATION -

Name: [redacted]
Phone: [redacted]
Allegor's S&W AT TIME
Employer: STARTED IN [redacted]

Address: [redacted]
City/State/Zip: [redacted]
Position/
Title: FIELD QC LEVEL II AT TIME
Materials License No. _____

- 1. If applicable, was the IDI policy explained to the allegor? YES ___ ND ___ N/A ___
2. Has a Confidentiality Agreement been signed or should one be sent to confirm the oral granting of Confidentiality? YES ___ ND ___
LEFT MILL-3 IN 11/85; KNEW SINCE 1986 THAT REPORTS WERE CLOSED.

SITE: MILLSTONE 3 DOCKET NO.: 50-423

Number of Concerns: 2

Brief Description of Each Allegation/Concern - Concern was raised due to his reading of newspaper articles and NRC information relative to fraudulent bolting material/flanges and refurbished circuit breakers. Worked as document reviewer for NSSS; [redacted] Westinghouse PTT followed weld material created by Westinghouse; CMIR did not meet chemistry requirements of ASME.
-- S/G weld material not ASME; reports closed out by subsequent worker - [redacted]
-- Westinghouse valves contained fasteners without material test reports.

Monitoring type C reports by [redacted] remained open

Type of Regulated Activity: X (a) Reactor (d) Safeguards
(b) Vendor (e) Other:
(c) Materials (Specify)

Functional Area(s): X (a) Operations (e) Emergency Preparedness
(b) Construction (f) Onsite Health & Safety
(c) Safeguards (g) Offsite Health & Safety
(d) Transportation (h) Other:

Date/Time Received: 1/30/89 / 1450 EST

Employee Receiving Allegation: L. H. Bettenhausen

Handwritten number 0133