December 21, 1988

MEMORANDUM FOR: Alan Shropshire, Allegation Coordinator

THRU: William Raymond, SRI Millstone Station

FROM: Peter Habighorst, RI Millstone 2

SUBJECT: UPDATE ALLEGATION CONCERNING MOVATS TESTING AT MILLSTONE 2 (RI-88-A-0124)

The purpose of this memo is to provide additional information concerning an allegation received on December 6 by the Millstone 3 resident inspector. At the receipt of the allegation, the alleger requested an anonymous status, because he felt he would be labelled a an employee "troublemaker." On December 16, I met with the alleger who at that time provided his name and in-plant extention number. In discussions with the alleger he provided additional information surrounding his initial concerns; i) the licensee generated 12 authorized work orders for Motor-Operated Valves that had no calculated engineering thrust valves as step 5.2 of T87-2-25 procedur dictates; ii) licensee's engineering department throughout the 2/88 refuel outage and after were calculating thrust valves and, iii) the cause for no thrust valves was due to MOVAT's scheduling. The inspector requested the alleger provide a list of the 12 MOV's with n calculated thrust valves.

On December 20, the inspector discussed the MOVAT's test program with a licensee engineering supervisor. The engineering supervisor discussed the 12 MOV's subjected to full-flow delta P testing in response to Bulletin 85-03. No MOVATS signature testing was complete or requested per the bulletin response and the bulletin. The supervisor outline signature test program for MOV's as being;

i) Engineering calculation of thrust valves;
ii) Place thrust valves for a particular MOV in T-87-2-25 procedure;
iii) Production Test implement procedure T-87-2-25 (MOVATS) to acquire base-line data and adjustments in torque settings.

F/05

In conclusion, a discrepancy between the alleger and the engineering supervisor on how the program should work and what was actually done. Further inspector review of ALARA, bulletin follow-up, and alleger concerns is planned concerning MOVATS testing.

Sincerely,

Peter J. Habighorst

Pete Habighorst

# ALLEGATION PANEL DECISIONS

SITE: MILLSTONE 3

ALLEGATION NO.: RI-89-A-0018

DATE: 5/1/89 (Mtg. (1) 2 3 4 5)

PRIORITY: High (Medium) Low

SAFETY SIGNIFICANCE: Yes No (Unknown)

CONCURRENCE TO CLOSEOUT: DD BC SC

CONFIDENTIALITY GRANTED: Yes (No)

PANEL ATTENDEES:

Chairman - S. COLLINS

Branch Chief - (Acting) J. DURR

Section Chief - E. McCABE

S. BARR, REACTOR ENGINEER

M. PERKINS, OAC

ACTION:

1) AOC TO CONTACT ALLEGER AND GET ISSUES. RECONVENE PANEL AFTER CONTACT (ECD 5/30/89).

2)

3)

4)

5)

6)

F/36

# ALLEGATION PANEL DECISIONS

SITE: Millstone 1

ALLEGATION NO.: RI-89-A-0027

DATE: 3/7/89 (Mtg. 1 2 3 4 5)

PRIORITY: High Medium (Low)

SAFETY SIGNIFICANCE: Yes No (Unknown)

CONCURRENCE TO CLOSEOUT: DD (BC) SC

CONFIDENTIALITY GRANTED: Yes (No)

PANEL ATTENDEES:

Chairman - S. Collins

Branch Chief - L. Bettenhausen

Section Chief - ~~B. Boger~~ R. Matakas

ACTION:

1) This allegation will be referred to NRR (OAC to OAC). Ref: IR 50-245-89-02 (issued 3/8/89).

2)

3)

4)

5)

6)

F127

MAR 0 8 1989

Docket/License: 50-245/DPR-21

Northeast Nuclear Energy Company
ATTN: Mr. Edward J. Mroczka
Senior Vice President - Nuclear
Engineering and Operations Group
P.O. Box 270
Hartford, Connecticut 06101-0270

Gentlemen:

Subject: Resident Inspection 50-245/89-02 (1/10/89 to 2/13/89)

The enclosed report documents the results of the above subject inspection of Millstone 1. The results have been discussed with Mr. J. Stetz of your staff. No violations were identified and no reply to this letter is required.

Detail 6 of the enclosed report discusses application of the NRC General Design Criteria and the Millstone 1 Systematic Evaluation Program to the Reactor Building to torus vacuum breaker butterfly valves. Additional NRC review of this matter will consider your response to NRC Generic Letter 88-14.

Your cooperation with us is appreciated.

Sincerely,

ORIGINAL SIGNED BY
LEE H. BETTENHAUSEN

Lee H. Bettenhausen, Chief
Projects Branch No. 1
Division of Reactor Projects

Enclosure: NRC Region I Inspection Report 50-245/89-02

F/28

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U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-245/89-02

Docket No. 50-245 License No. DPR-21

Licensee: Northeast Nuclear Energy Company

Facility: Millstone Nuclear Power Station, Unit 1

Inspection At: Waterford, Connecticut

Dates: January 10 through February 13, 1989

Inspectors: William Raymond, Senior Resident Inspector
Lynn Kolonauski, Resident Inspector, MP-1 (Reporting Inspector)
Peter Habighorst, Resident Inspector, MP-2
Scott Barber, Resident Inspector, MP-3

Approved by: Elbe C. McCabe Jr. 3/6/89
E. C. McCabe, Chief, Reactor Projects Section 1B Date

Inspection Summary: Inspection from January 10 to February 13, 1989 (Report No. 50-245/89-02)

Areas Inspected: Previously identified items, plant operations, physical security, licensee response to a 10 CFR Part 21 report involving Limitorque motor-operators, post-accident operability of the reactor building to torus vacuum breaker butterfly valves (1-AC-3A and 3B), environmental qualification of Reactor Water Cleanup isolation valves 1-CU-2 and 3, status of the Revision 2 emergency operating procedures, maintenance and surveillance, licensee event reports and committee activities.

Results: The inspection identified no unsafe plant conditions. The inspection involved 177 inspection hours (with 20 backshift hours, including 11 deep backshift hours). Further follow-up is planned for: (i) the deficiencies identified during walkdown of the standby liquid control system (Detail 4.3), (ii) issues related to 1-AC-3A and 3B (Detail 6.0), and (iii) environmental qualification (Detail 7.0).

4pp.

7.0 Environmental Qualification of Reactor Water Cleanup Isolation Valves 1-CU-2 and 3

Millstone 1 had been operating under an environmental qualification exemption for the Teledyne actuators for the inboard and outboard reactor water cleanup (RWCU) suction isolation valves (1-CU-2 and 3, respectively) as granted by the NRC in a June 8, 1987 letter. On January 31, at 1:35 p.m., the licensee determined that the RWCU isolation function was not assured following a small break loss of coolant accident (LOCA) in that the motor operators for 1-CU-2 and 3 might be disabled due to the harsh environment induced by the break prior to their receipt of the only RWCU system isolation signal which was low-low reactor vessel water level. The licensee made an ENS (Emergency Notification System) call per 10 CFR 50.72 (b)(2)(iii) at 2:00 p.m. and isolated the RWCU system after establishing a continuous reactor water conductivity monitoring method via the recirculation system at 2:50 p.m.

On February 1, the licensee implemented plant design change (PDCR) 1-8-89 to add the 2 psig high drywell pressure signal to the RWCU isolation function (i.e., primary containment group 5, which closed 1-CU-2, 2A, 5 and 28). This ensures that 1-CU-2 will close to maintain RWCU isolation for the full range of breaks inside containment. To ensure RWCU isolation for breaks outside containment, the licensee also modified operating procedures to require operators to manually isolate 1-CU-3 via the control room panel 903 handswitch upon receipt of the associated high area temperature alarm.

The inspector observed the installation and testing of the RWCU control logic modification. Two General Electric HFA normally energized control relays and wiring changes were installed to provide the revised control scheme. A spare contact from each of the existing high drywell pressure relays was used to develop the isolation signal for the new RWCU isolation relays. The new isolation logic incorporates a one-out-of-two-taken-twice scheme to deenergize the RWCU system isolation relays. The PDCR was approved by the plant operations review committee (PORC) prior to its implementation.

The licensee considers the new HFA relays to be seismically qualified per IEEE Standard 344. PDCR 1-8-89 required the new relays and conduit to be seismically mounted. The inspector reviewed automated work orders (AWOs) M1-89-945 and 964 used in implementing the modification, and identified no inadequacies. The inspector noted an adequate level of quality control (QC) coverage and proper implementation of the QC verification plan documented on Station Form (SF) 207, which included visual inspections of the relay mounting and terminal connections and verification that the fire barriers breached during installation were resealed with fire resistant silicone foam. The inspector also verified that the required fire watches were present during fire barrier breaches: the electricians who were installing the modification were fire-watch qualified.

A half-scram occurred at 1:55 a.m. on February 2 during testing verification of the modification wiring. The inspector observed as the operators implemented their normal alarm response actions, bypassing average power range

monitor (APRM) Channel 3 in response to its high alarm. The operators observed that APRM Channel 3 indicated 100% and had no high local power range monitor (LPRM) high indications; its trip would not reset so the half scram would not reset. The licensee later discovered that Production Test personnel had slightly moved a wire bundle to relay 590-125A during jumper removal and APRM setdown to 90% had occurred. The APRM setdown was bypassed, the half-scram was reset, and APRM Channel 3 was returned to service. The licensee determined that relay 590-125A was faulty and repaired it by 8:32 a.m.

The inspector observed as the licensee implemented the modification retest plan including the as-built verification, continuity checks, and preoperational testing per PORC-approved test procedure T-89-1-2. The inspector noted the thoroughness of post-installation testing, and noted no inadequacies in the test procedures, performance, or results. The inspector verified that the modification met the testing acceptance criteria prior to the RWCU system's return to service.

Plant operators received training on the modification through reviewing the Night Order log book. The inspector verified that the Operations Critical drawings were modified to reflect the modification.

The RWCU system was filled and vented prior to its return to service by 4:55 a.m. on February 2. Reactor water conductivity had exceeded 1.0 umho/cm at 1:30 a.m., placing Millstone 1 in TS LCO 3.6.C.3.b, but was reduced below 1.0 umho/cm by 6:40 a.m.

The inspector reviewed the PDCR documentation for the design reviews and integrated safety evaluation ISE/MP1-89-018 and identified no inadequacies. The inspector agreed with the licensee's determination that an unreviewed safety question did not exist. The licensee plans to replace both motor-operators with environmentally qualified ones during the April 1898 refueling outage.

Several questions remain unresolved after review of the event:

(1) The licensee stated in their October 15, 1985 exemption request letter that 1-CU-2 and 3 were exempt because, if a break occurred inside the containment, the outboard valve would isolate the RWCU system and vice versa. The licensee's recent actions related to 1-CU-2 and 3 were predicated on the fact that this arrangement is not single failure-proof. The inspectors questioned whether there are other non-single-failure proof exemptions in the June 8, 1987 NRC letter.

(2) The licensee's exemption request identified that the RWCU system isolated on either low-low vessel level or high flow in the RWCU system. The licensee confirmed that the Millstone 1 RWCU system has never had high flow as an isolation signal. The NRC:NRR reviewer involved in the exemption request for 1-CU-2 and 3 confirmed that he did consider the isolation on high flow in his decision to support the exemption for 1-CU-2 and 3.

(3) The licensee stated that the errors in the exemption request described in (1) were noted during licensee reviews for removing the 1-CU-2 and 3 operators from the master EEQ list. The inspectors questioned whether the licensee's method for exemption request preparation is less rigorous and thorough than his method for review of the EEQ master list. This is suggested by the exemption request inaccuracies, as evidenced by the discussions in (1) and (2) above. The inspector requested the licensee provide for NRC review a description of the process/criteria used by engineering personnel to remove items from the EEQ master list.

The inspectors will follow the licensee's resolution of these questions in a future inspection (UNR 50-245/89-02-03).

8.0 Revision 2 Emergency Operating Procedures

In June 1988, NRC inspection (Report 50-245/88-200) identified weaknesses in the Millstone 1 Revision 2 Emergency Operating Procedures (EOPs). The inspection found the EOPs to have poor usability, largely due to inadequate implementation of the Writer's Guide and not using the revised validation and verification (V&V) procedures to perform a complete review of the EOPs and the operating procedures referenced in the EOPs. The licensee responded to the inspection findings in letters dated July 29, 1988 and October 28, 1988. The inspector reviewed the letters and verified implementation of those commitments related to the Revision 2 EOPs by procedure review or plant walkdown, as appropriate. The findings are listed below with references to the associated section of Inspection Report 50-245/88-200.

Findings Related to Usability of the Revision 2 EOPs

-- (3.3.1) The EOP revisions made effective on October 15, 1988 have been reviewed using current V&V procedures. Also, Millstone 1 operators walked down all EOP actions contained in normal operating procedures (OPs).

- (3.1.3) At the time of the EOP team inspection, the licensee made interim changes to the EOPs by attaching the change to the front of the EOP. Because the change was only denoted at the applicable EOP step and not written out there, this increased the difficulty of using the EOPs. The inspector verified that the current EOPs have no outstanding interim changes. The licensee plans to write all future interim changes into the Revision 2 EOPs at the applicable procedure step. The inspector will verify that the licensee's administrative procedures are revised to reflect the new method during routine inspection.

-- (3.1.4) The inspector verified that an additional copy of the EOPs for use by personnel other than the Shift Supervisor (SS) was provided in the control room.

3-23-89

OAC:HQ called OAC:RI and requested that L. Bettenhausen contact Pat Baranowsky (492-1156) to resolve a difference regarding who <u>should</u> have the lead on this issue.

3-1-89

The OAC:HQ ~~called~~ told the OAC:RI that CI:HQ has been inquiring about this case and wants to know where the referral is or if they should self-initiate.

4/4 Baranowsky: mis statement put on paper willing to restate case in writing if necessary

F/29

ALLEGATION PANEL DECISIONS

SITE: MILLSTONE 1

ALLEGATION NO.: RI-89-A-0027

DATE: 4/24/89 (Mtg. 1 (2) 3 4 5)

PRIORITY: High (Medium) Low

SAFETY SIGNIFICANCE: Yes No (Unknown)

CONCURRENCE TO CLOSEOUT: DD (BC) SC

CONFIDENTIALITY GRANTED: Yes (No)

PANEL ATTENDEES:

Chairman - S. COLLINS

Branch Chief (ACTING) - J. JURR

Section Chief -

FORMER BR CHIEF - L. BETTENHAUSEN

C. HATE, OI:RI

M. PERRAS, OAC

ACTION:

1) IR 50-245/89-02 ISSUED 3/8/89 WITH CONCERN AS UNRESOLVED ITEM.

2) ADC TO SEND LTR TO LICENSEE REQUESTING RESPONSE TO UNRESOLVED ITEM (ECD 5/25/89).

3) OI:RI TO REVIEW BACKGROUND INFO.

4) RI TO REVIEW LICENSEE RESPONSE & RECONVENE PANEL TO DETERMINE IF OI INVOLVEMENT IS NEEDED.

5)

6)

F/30