AUG 2 8 1991

Docket No. 50-245

Mr. E. J. Mroczka
Senior Vice President - Nuclear
Engineering and Operations
Northeast Nuclear Energy Company
P.O. Box 270
Hartford, Connecticut 06141-0270

Dear Mr. Mroczka:

Subject: Millstone Unit 1 Inspection 91-03

This refers to your letter dated June 28, 1991, in response to our letter dated May 21, 1991.

In your letter, you indicated that two Nuclear Engineering and Operations performance task groups have been formed to address personnel performance issues as well as operability, reportability, and communications issues. The NRC considers the establishment of those task groups to be an important step towards determining underlying root causes of performance inadequacies. We will meet with you in the near term to discuss the status of your Task Group's efforts. Also, your Station's Performance Enhancement Program will be reviewed as part of continued inspections.

With respect to the second violation for personnel errors associated with the conductivity transient on April 7, 1991, the NRC agrees with your conclusion that the shift supervisor's action of not immediately scramming the reactor was an appropriate and intelligent judgment under the circumstances; however, the violation remains unchanged. Further, the fidelity between Technical Specification, off-normal procedures and engineering considerations should be examined and reviewed if needed, so that operators are given appropriate flexibility to exercise such judgment within the context of existing procedures.

Your cooperation with us is appreciated.

Sincerely,

Gene Kelly for

Edward C. Wenzinger, Chief
Projects Branch No. 4
Division of Reactor Projects

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cc:
W. D. Romberg, Vice President, Nuclear Operations
D. O. Nordquist, Director of Quality Services
R. M. Kacich, Manager, Generation Facilities Licensing
S. E. Scace, Station Director, Millstone
H. F. Haynes, Nuclear Unit Director, Millstone Unit 1

cc w/cy of Licensee's Response Letter:
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Public Document Room (PDR)
Local Public Document Room (LPDR)
Nuclear Safety Information Center (NSIC)
NRC Resident Inspector
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Region I Docket Room (w/concurrences)
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D. Jaffe, PM, NRR

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R. M. Kacich, Manager, Generation Facilities Licensing
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H. F. Haynes, Nuclear Unit Director, Millstone Unit 1
Gerald Garfield, Esquire (w/cy of Licensee's Response Letter)
Public Document Room (PDR) (w/cy of Licensee's Response Letter)
Local Public Document Room (LPDR) (w/cy of Licensee's Response Letter)
Nuclear Safety Information Center (NSIC) (w/cy of Licensee's Response Letter)
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RI:DRP	RI:DRP	RI:DRP	RI:DRP
D. DEMPSEY	W. RAYMOND	E. KELLY	E. WENZINGER
8/23/91		8/27	8/28

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NORTHEAST UTILITIES

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June 28, 1991

Docket No. 50-245
A09586

Re: 10CFR2.201

Mr. Thomas T. Martin
Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Dear Mr. Martin:

Millstone Nuclear Power Station, Unit No. 1
Response to Notice of Violation
Inspection Report No. 50-245/91-03

In a letter dated May 21, 1991,(1) the NRC transmitted the results of their routine safety inspection conducted at Millstone Unit No. 1 from February 17, 1991 through April 8, 1991. In its letter the Staff identified two Severity Level IV violations and one Severity Level V violation and requested that Northeast Nuclear Energy Company (NNECO) respond to the Notice of Violation within 30 days of the date of the letter. On June 19, 1991, during a telephone conversation with Region I personnel, NNECO requested and received an extension until June 28, 1991, in order to allow adequate time for preparation of the response submittal. Accordingly, pursuant to the provisions of 10CFR2.201, NNECO hereby provides its response to the subject Notice of Violation in Attachment 1.

NNECO acknowledges that the events described in Inspection Report No. 50-245/91-03 required corrective actions, which are described in Attachment 1, and further believes that the corrective actions noted therein will be successful in preventing recurrence of similar types of events.

However, with respect to the delay in scramming the reactor noted in the second violation, NNECO wishes to emphasize that the actions taken by the shift supervisor were considered to be appropriate and conservative under the

(1) E. C. Wenzinger letter to E. J. Mroczka, "Millstone Unit 1 Inspection 91-03," dated May 21, 1991.

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given circumstances. Due to the existing plant conditions during the reactor water conductivity increase, the shift supervisor chose not to immediately scram the reactor at 2.0 micromhos, but rather to confirm the indicated conductivity as explained in Licensee Event Report 91-007-00. Additionally, NNECO has determined that the delay in scramming the reactor was due not only to the decision to confirm the indicated conductivity, but can also be attributed to the difference in requirements between Technical Specification 3.6.C.2 and Off-Normal Procedure (ONP) 515C. The ONP required a manual scram at 2.0 micromhos, whereas plant technical specifications allow up to 48 hours of full-power operation under the above-mentioned conditions. The shift supervisor chose to confirm the indicated conductivity because he was aware of the history and basis of the conservative requirements of the procedure. Therefore, he confirmed that there was no influent causing the indicated conductivity and that the reactor water cleanup system had recently isolated which could have released some debris. Knowing that technical specifications allow operation in this condition and the plant was at a very low power level (approximately .001 percent power), he confirmed conditions before taking action to scram. Therefore, NNECO believes that the shift supervisor's actions in this situation represent sound judgment and are not indicative of deliberate procedural noncompliance, but rather an intelligent decision based on technical specification requirements, plant conditions, history of plant response in the given situation, and collective data.

After careful review of the Appendix J exemption issue noted in the third violation, NNECO has concluded that the most prudent and conservative course of action will be to fully comply with existing Appendix J requirements with respect to air lock testing. Therefore, NNECO will discontinue the use of a low-pressure (10 psig) test and will not be forwarding to the NRC our back-to-back 10-psig and 43-psig test results. We also plan to request that the Staff rescind the May 10, 1985 exemption related to 10 psig airlock testing. This request will be formally made as part of the license amendment request to incorporate post-shutdown air lock test requirements into the technical specifications.

If you have any questions regarding the information contained in this letter, please contact us.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

FOR: E. J. Mroczka
Senior Vice President

BY: C. F. Sears
Vice President

cc: See Page 3

cc: D. H. Jaffe, NRC Project Manager, Millstone Unit Nos. 1 and 3
W. J. Raymond, Senior Resident Inspector, Millstone Unit Nos. 1, 2, and 3

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

Docket No. 50-245
A09586

Attachment 1

Millstone Nuclear Power Station, Unit No. 1

Response to Notice of Violation
Inspection Report No. 50-245/91-03

June 1991

Millstone Nuclear Power Station, Unit No. 1
Response to Notice of Violation
Inspection Report No. 50-245/91-03

A. Description of Violation

"10 CFR Part 50.72(b)(2)(ii) requires, in part, that licensees shall notify the NRC within four hours of the occurrence of any event that results in an automatic actuation of any Engineered Safety Feature. 10 CFR Part 50.72(b)(1)(i)(A) requires that licensees shall notify the NRC within one hour of the occurrence of the initiation of any nuclear plant shutdown required by the plant's technical specifications. 10 CFR Part 50.72(c)(1)(iii) requires that licensees shall report immediately the termination of an Emergency Class.

"Contrary to the above, on April 7, 1991, at 6:10 p.m., an automatic Group IV primary containment isolation, an engineered safety feature, occurred which was not reported to the NRC within four hours. On March 10, 1991, at 6:43 a.m., a plant shutdown required by plant technical specifications was initiated which was not reported to the NRC within one hour. This shutdown was classified as an unusual event emergency class. The licensee terminated the unusual event on March 10, 1991, at 4:15 p.m. but did not notify the NRC of the termination until March 11, 1991, at 6:50 a.m."

"This is a Severity Level V Violation (Supplement I)."

1. Root Cause

The details associated with the initiation of the April 7, 1991 automatic Group IV primary containment isolation were documented in Licensee Event Report (LER) 91-008-00 submitted on May 7, 1991, and the March 10, 1991 plant shutdown required by technical specifications was documented in LER 91-005-00 submitted on April 9, 1991.

On April 7, 1991, the automatic Group IV primary containment isolation occurrence was not properly reported because the shift supervisor on duty believed that the condition was not reportable since the reactor coolant temperature was less than 330°F and the isolation condenser was therefore not required to be operable per plant technical specifications. However, this rationalization was incorrect as any engineered safety feature actuation is reportable per the requirements of 10CFR50.72 unless the equipment was properly removed from service.

On March 10, 1991, a plant shutdown commenced pursuant to Technical Specification 3.7.A.7 following a determination that the drywell personnel air lock surveillance test had failed to meet the

acceptance criteria. At this time, the shift supervisor failed to properly report the unusual event to the Staff within the required 1 hour from event initiation. Upon termination of the event, NNECO failed to promptly notify the Staff of the unusual event termination.

In these two instances the root cause for improper notification of the above-mentioned occurrences can be attributed to failure of the shift supervisor on duty to properly execute reporting requirements.

2. Corrective Steps Taken and Results Achieved

In the occurrences identified above, the individuals involved have been counseled by Operations Department management with respect to prompt, conservative reporting and general attention to detail. Additionally, the Unit Director has issued a memorandum to all Millstone Unit No. 1 staff personnel responsible for the reporting of plant events. The memorandum reemphasized Northeast Nuclear Energy Company (NNECO) management's expectations regarding prompt and conservative reporting of plant events. The memorandum also required all recipients to review 10CFR50.72 and 73 as well as station reporting procedures, the Emergency Plan Implementing Procedures, and supporting documents.

3. Corrective Steps to Prevent Future Violations

NNECO recognized the need for enforced awareness of the reporting requirements, and developed a reportability training module and schedule. To date, reportability training has recently been completed for corporate personnel and NNECO technical staff and management. The reportability training for all shift supervisors and licensed operators is currently scheduled for presentation in July and August of this year. Additionally, as discussed during recent meetings with the Staff, two Nuclear Engineering and Operations (NE&O) performance task groups have been formed to address personnel performance issues as well as operability, reportability, and communications issues. Specifically, the charter of the performance task group is to critique NE&O performance since January 1, 1990, to determine underlying root causes of any performance inadequacies. Its goal is to propose management measures to enhance performance. The charter of the operability, reportability, and communications task group is to develop and implement changes to NE&O procedures and any other related guidance documents to improve NU's performance in these areas.

4. Date When Full Compliance Will Be Achieved

As discussed in Section 2, NNECO's initial corrective actions were implemented immediately. NNECO currently plans to complete

reportability training by August 28, 1991. The task groups described above are expected to provide recommendations to senior management by September 1991.

B. Description of Violation

"Plant technical specification 6.8.1.c, Procedures, requires, in part, that written procedures shall be implemented covering surveillance activities of safety related equipment. Surveillance procedure SP-661.3, Manual Initiation of Standby Liquid Control [SBLC] System Into Recirculation Path, step 6.9 requires a system flush to be performed in accordance with procedure SP-661.2, Manual Initiation of Standby Liquid Control System Into Reactor Vessel. SP-661.2 step 4.1.2 requires as a prerequisite to performance of the test that SP-661.3 be completed. SP-661.2 step 6.19.5 requires the standby liquid control system test tank to be drained via valve 1-SL-12. Off-normal procedure [ONP] OP-515C, High Conductivity Reactor Water, step 1.1.1 requires the reactor to be scrammed immediately when conductivity of the reactor water cleanup system exceeds 2.0 micromhos.

"Contrary to the above, on April 7, 1991, step 6.9 of SP-661.2 was not performed when required by the procedure. Prerequisite 4.1.2 of SP-661.2 was not satisfied prior to performance of the procedure. The standby liquid control system test tank was not drained via valve 1-SL-12 as required by SP-661.2 step 6.17.5. Finally, the reactor was not scrammed immediately when reactor water cleanup system conductivity exceeded 2.0 micromhos."

"This is a Severity Level IV Violation (Supplement I)."

1. Root Cause

As noted in LER 91-007-00 dated May 7, 1991, the root cause of the manual reactor protection system trip was a high conductivity condition in the reactor vessel caused by the injection of a diluted sodium pentaborate solution into the reactor vessel while performing Surveillance Procedure 661.2 (SP-661.2). As noted in the LER, NNECO determined that these circumstances were created when the Operations personnel performing the SBLC surveillances failed to properly perform Step 6.19.5 of SP-661.2.

Additionally, NNECO has identified both an inadequate turnover of system status and the lack of clarity in the surveillance procedures as contributing causes.

With respect to the manual reactor scram, the underlying root cause of the delay was the decision of the shift supervisor to exercise judgment in implementing requirements associated with ONP 515C and the technical specifications.

2. Corrective Steps Taken and Results Achieved

The Operations Department management and the Unit Director promptly met with the individuals involved in the three SBLC surveillances. The two control operators responsible for the performance of the surveillances have been counselled with regards to procedure compliance and attention to detail. Additionally, the Operations Manager presented a memorandum discussing ACP-QA-3.02E, "Procedural Compliance," to all Operations personnel. This presentation emphasized management's expectations of procedural compliance.

An independent third-party review of the event was conducted by the Human Performance Evaluation System. The review verified that the identified root cause and corrective actions for this event are appropriate.

The corporate Nuclear Materials and Chemistry organization was tasked with evaluating whether the potential for reactor core internal corrosion damage could have existed due to the conductivity transient. The analysis concluded that no corrosion damage resulted from this event and no further evaluations are necessary.

3. Corrective Steps to Prevent Future Violations

The subject SBLC surveillances and ONP 515C will be reviewed for possible revision focusing on human factors considerations and consistency with technical specifications. It is expected that the three SBLC surveillance procedures will be combined into one comprehensive procedure.

A self-verification program has been prepared for implementation to enhance operator performance with a focus on self-checking prior to action. NNECO will also be evaluating appropriate measures to enhance communications associated with shift turnover.

The Millstone Station has also embarked on a station performance enhancement program designed to improve and enhance station employee performance. Additionally, as mentioned in Section A.3 above, an NE&O performance task group has been initiated.

4. Date When Full Compliance Will Be Achieved

As discussed in Section 2, NNECO's initial corrective actions were implemented immediately. With respect to the procedure changes described in Section 3, the review and initiation of appropriate revisions will be complete by September 30, 1991 if deemed appropriate. As stated above, a self-verification program was developed for the Operations Department with implementation of this program currently scheduled to be completed by September 30, 1991. The communications enhancement evaluation is expected to be complete by

September 30, 1991. With respect to the Millstone Station Performance Enhancement Program, the first phases to the program were recently initiated and will be ongoing through the end of 1991.

C. Description of Violation

"10 CFR Part 50, Appendix J, Primary Reactor Containment Leakage Testing for Water-Cooled Reactors, as modified by a licensee exemption granted by the NRC on May 10, 1985, requires that following an opening when primary containment integrity is not required, and prior to entering an operating condition in which primary containment integrity is required, the drywell personnel air lock must be tested at 10 psig. Plant technical specification 3.7.A.3, Containment Systems, requires, in part, that primary containment integrity shall be maintained at all times when the reactor is critical or when the reactor water temperature is above 212 degrees F and fuel is in the reactor vessel.

"Contrary, [sic] to the above, on March 8, 1991, and at least on nine other occasions since December 21, 1985, the 10 psig local leak rate test of the drywell personnel air lock was not performed prior to operating the plant in a condition in which primary containment integrity was required."

"This is a Severity Level IV Violation (Supplement I)."

1. Root Cause

The root cause of this event is NNECO's improper interpretation of requirements, which led to the practice of performing air lock testing within 72 hours of reactor start-up, if no modifications or corrective maintenance were performed on the air lock. This improper interpretation of the requirements caused the air lock testing procedural guidance to be inadequate. In addition, upon receipt of the May 10, 1985, Appendix J exemption, the appropriate changes to operating and surveillance procedures and technical specifications were not implemented, resulting in the lack of procedural guidance necessary to adequately comply with the requirements of Appendix J. Without the proper technical specifications or procedural guidance in place with respect to the 10CFR50 Appendix J exemption, NNECO failed to meet the requirement to perform a 10-psig local leak-rate test prior to entering a condition in which primary containment integrity was required.

2. Corrective Steps Taken and Results Achieved

The requirements associated with Appendix J and the May 10, 1985, Appendix J exemption were reviewed with the appropriate engineering and operations personnel to ensure a clear understanding of both the intent and basis of the requirements.

3. Corrective Steps to Prevent Future Violations

Future compliance with the requirements of 10 CFR Part 50 Appendix J will be ensured by revising the applicable operations and surveillance procedures to test the air lock at design pressure (43 psig) prior to entering a mode in which primary containment integrity is required if the air lock was opened during the period when primary containment integrity was not required by technical specifications.

Additionally, a license amendment request has been initiated and will be submitted to incorporate the criteria for meeting the requirements of 10CFR50 Appendix J as stated above.

NNECO shall review past license exemptions in order to verify that this was an isolated case.

4. Date When Full Compliance Will Be Achieved

As discussed in Section 2 above, NNECO's initial corrective actions were implemented immediately. NNECO will incorporate the necessary procedure changes prior to plant start-up from the current refueling outage. The technical specification change will be submitted as a routine licensing ction. The review of past license exemptions will be complete by August 31, 1991.