

**NORTHEAST UTILITIES**



THE CONNECTICUT LIGHT AND POWER COMPANY  
WESTERN MASSACHUSETTS ELECTRIC COMPANY  
HILCOKE WATER/WATER COMPANY  
NORTHEAST UTILITIES SERVICE COMPANY  
NORTHEAST UTILITIES FARM AND RIVER COMPANY

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(203) 665-5000

July 10, 1991

Docket No. 50-336  
A09594

Mr. Charles W. Hehl, Director  
Division of Reactor Projects  
U. S. Nuclear Regulatory Commission  
Region I  
475 Allendale Road  
King of Prussia, Pennsylvania 19406

Dear Mr. Hehl:

Millstone Nuclear Power Station, Unit No. 2  
RI-91-A-0064, Item 1

We have reviewed the identified issues concerning activities at Millstone Unit No. 2 (RI-91-A-0064). In a recent telephone conversation between your Mr. Scott Stewart and our Licensing staff on June 26, 1991, we asked for additional time to respond to the issues contained in your letter of May 22, 1991, (File Number RI-91-A-0052). An extension to July 26, 1991, was granted.

The responses to two of the issues in your June 4, 1991, letter (File Number RI-91-A-0064) are related to responses being prepared for the May 22, 1991, letter (RI-91-A-0052). The review of the training issue in Issue 2 of RI-91-A-0064 is similar to Issue 3 of RI-91-A-0052. The PDCE referred to in Issue 3 of RI-91-A-0052 is in the process of being closed out. Additional time is needed to review the close out documentation prior to responding.

We did not specifically request an extension in time to respond to Issues 2 and 3 of RI-91-A-0064 during our telephone conversation on June 26, 1991. We now ask that the extension be granted, however, because of the close relationship to issues that will be addressed in our response to RI-91-A-0052 and the need for more time to permit us to address those issues adequately. The basis for this additional extension was discussed with the NRC Staff on July 10, 1991.

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The following response addresses only Issue 1. As requested in your transmittal letter, our response does not contain any personal privacy, proprietary, or safeguards information. The material contained in this response may be released to the public and placed in the NRC Public Document Room at your discretion. The NRC letter and our response have received controlled and limited distribution on a "need to know" basis during the preparation of this response.

Issue 1:

On March 28, 1991 a QC inspector was called by Generation Construction to perform a final weld inspection of a prefabricated structure for the new steam jet air ejector monitor. The final inspection was part of procedure GWS-006. After the inspection, the QC inspector questioned if a "fit-up" inspection had been completed, as required by procedure. The fabrication and assembly of the structure were non QA, thus as required by GWS-006, the job supervisor performs the "fit-up" inspection. Based on indication that no "fit-up" inspection had been completed, the QC inspector initiated NCR 2-91-035. On April 1, Generation Construction completed the authorized work order and documented that a "fit-up" inspection had been completed; however, it had not been completed. This is the way non QA inspection and documentation are normally accomplished.

Please discuss the validity of the above assertions. Please discuss the need for a "fit-up" inspection and the circumstances surrounding its completion, if required. Please discuss any corrective actions that you have taken or may take in response to any identified problems in procedural compliance or Quality controls. Please discuss if the assertions are indicative of any generic problems.

Response:

This issue involves a non-QA Category I installation of a structural weld for a support. The normal progression of events is that the welder first fits-up the components. A fit-up inspection is then performed by the Job Supervisor to verify correct fit-up, including gap dimension. This is documented on the Inspection Plan. The welder then finishes the weld, using the fit-up information to ensure correct final weld dimensions.

When the QSD inspector was called for the final visual inspection, no objective evidence was available to demonstrate that the fit-up had been performed. The fit-up was, in fact, signed off three days later, by the Job Supervisor.

Follow-up discussions with all personnel involved could neither clearly substantiate nor disprove the performance of the fit-up inspection, since the fit-up signature was dated three days after the request for final weld inspection. Due to the configuration of the support, the fit-up gap could not be adequately reverified. In order to resolve the situation, the conservative position was taken to destroy the support (witnessed by QSD) and rebuild it.

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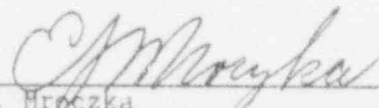
Meetings were held with the departments involved with this work. The responsibilities of each department were reviewed. The need to follow procedure requirements and the requirement of the job supervisor to document actual fit-up inspections on non-QA Category I structural installations at the time of the actual inspection was stressed.

After a review of the circumstances surrounding this event and recent experience with fit-up inspections of other non QA Category I structural welding, we have determined that this event represented a one-time lapse in attention to detail. All personnel involved with this work were aware of the procedure requirements and thought that they were in full compliance with them. Inattention to detail by a failure to document a fit-up inspection at the time that it occurred was the root cause of this event. No further generic problems exist with this portion of our Quality Assurance program and no additional corrective action is appropriate.

After our review and evaluation, we find that this item does not present any indication of a compromise of nuclear safety. We appreciate the opportunity to respond and explain the basis for our actions. Please contact my staff if there are any further questions on any of these matters.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

  
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E. J. Mroczka  
Senior Vice President

cc: W. J. Raymond, Senior Resident Inspector, Millstone Unit Nos. 1, 2,  
and 3  
E. C. Wenzinger, Chief, Projects Branch No. 4, Division of Reactor  
Projects



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

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Docket Nos. 50-245; 50-336; 50-423 **FEB 27 1990**

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

Gentlemen:

Subject: NRC Region I Combined Inspection 50-245/89-23 and 50-336/89-22  
and NRC Region I Inspection 50-423/89-23

This refers to the routine resident safety inspections conducted by Mr. P. Habighorst and others of this office on September 6, 1989 through October 20, 1989 at Millstone Nuclear Power Station Units 1 and 2 and conducted by Messrs. W. Raymond and K. Kolaczyk of this office on November 28, 1989 through January 4, 1990 at Millstone Nuclear Power Station Unit 3. Areas examined during these inspections are described in the NRC Region I inspection reports which were enclosed in my letters to you dated January 3, and February 26, 1990.

Based on the results of these inspections, it appears that one of your activities was not conducted in full compliance with NRC and Department of Transportation requirements, as set forth in the Notice of Violation enclosed herewith as Appendix A. The violation concerned a September 14, 1989 Millstone Station shipment of a limited quantity package of contaminated ladders and a fiberscope to the Haddam Neck Plant. A licensee external radiation level survey of the package conducted at the Haddam Neck Plant revealed that the dose rate on contact with the package was 1.1 millirem per hour (mr/hr), which is in excess of the 49 CFR limit of 0.5 mr/hr for shipment of a limited quantity of radioactive materials. The violation has been categorized by severity level after consideration of "The General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (Enforcement Policy). You are required to respond to this letter, and in preparing your response, you should follow the instructions in Appendix A.

The response directed by this letter and the accompanying notice is not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, PL-96-511.

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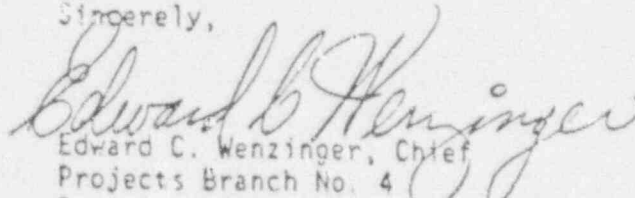
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FEB 27 1990

Your cooperation with us in this matter is appreciated.

Sincerely,

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

cc:  
W. D. Romberg, Vice President, Nuclear Operations  
S. E. Scace, Nuclear Station Director, Millstone Station  
J. P. Stetz, Nuclear Unit Director, Millstone Unit 1  
J. S. Keenan, Nuclear Unit Director, Millstone Unit 2  
C. H. Clement, Nuclear Unit Director, Millstone Unit 3  
D. O. Nordquist, Director of Quality Services  
R. M. Kacich, Manager, Generation Facilities Licensing  
Gerald Garfield, Esquire  
Public Document Room (PDR)  
Local Public Document Room (LPDR)  
Nuclear Safety Information Center (NSIC)  
NRC Resident Inspector  
State of Connecticut

The loss of normal feedwater analysis assumes the normal feedwater regulating system is inoperative. Assuming single active failure of one of the two motor driven pumps, and a passive AFW feedline break, one motor driven AFW pump is still available to maintain a heat sink in the steam generators. The turbine-driven AFW pump is inoperative due to loss of steam flow from the steam generator with the passive failure.

In the course of this review the inspector noted an apparent discrepancy between the FSAR accident review and the TS basis for the combination of AFW pumps necessary to remove reactor decay heat. The discrepancy was presented to the licensee for disposition.

In conclusion, the licensee maintains the auxiliary feedwater system's intended safety function with one of two parallel steam supply valves shut to the turbine driven auxiliary feedwater pump.

#### 9.2 Allegation: Reactor Protection System (RPS) Matrix Testing (RI-88-0040)

On September 22, the inspector received two concerns from a licensee employee. The concerns were: During performance of RPS matrix testing, an abnormal time delay was indicated in the activation of the hold/drop-out light in the trip path for channels A and D RPS logic combination, potentially resulting in a time delay impacting RPS response time and operability, and the allexer was "directed" by the shift supervisor to continue the surveillance rather than investigate the identified test discrepancy as required per procedure.

On September 22, the allexer was performing monthly surveillance procedure SP 2401D "RPS Matrix Logic and Trip Path Relay Test" as required per technical specification 3.3.1.1, Table 4.3-1, Item 12 and 14. Procedural step 6.18 says to place the AD matrix channel trip select switch to off and verify the AS-1, AD-2, AD-3, and AD-4 hold/drop-out white lights are on. The acceptance criterion is that the lights are illuminated with no prescribed time interval. The allexer indicated that the hold/drop-out lights illuminated with an abnormal time interval (two-four seconds). The initial concern was if the time delay potentially impacted the RPS operability. The inspector assessed RPS operability utilizing licensee wiring diagrams, FSAR 7.2.3.2.2, and 7.2.4, discussions with licensee personnel, review of SP 2401D, and review of TS 3.3.1.1 requirements.

RPS matrix testing (SP 2401D) is performed by opening a pair of contacts in the trip matrix and then selectively allowing one matrix relay a time to operate. Matrix testing on 9/22/89 noted a time delay between when position 2 was selected on the AD matrix trip select switch and when the matrix relay dropped out. The following is a description of how the matrix test circuit works.

The contacts in the trip matrix are selected by the channel trip select switch. This selects the parameter (e.g., high power) to be tested. When a valid position is selected on the channel trip select switch, and the matrix relay hold push button is pressed, power is applied to the "buck" coil in each of the two trip matrix relays selected. The buck coil opposes the normal coil and forces the trip matrix relays to open. When the relays open, the corresponding trip lights illuminate on the RPS bistable indicating the trip matrix relays have opened. Opening the trip matrix relay contacts removes power to the matrix relays. The matrix relay hold push button also applies power to the matrix relay "boost" coils. The boost coils hold the matrix relays closed when the power is removed from the normal coils. This prevents a plant trip during matrix testing. The matrix trip select switch opens the circuit to the boost coil of one matrix relay at a time. The matrix relay selected then drops out and a pair of scram breakers opens. If the contacts on the matrix trip select switch do not open, the power to the boost coil isn't removed and the matrix relay won't drop out. The buck and boost test circuit coils in the trip matrix relays and matrix relays are electrically separate from the normal trip relay coils. The normal relay coils continue to function even while the test circuit coils are being used.

The function of the RPS to open the scram breakers in the required time when a trip condition exists is not affected by position 2 of the AD matrix trip select switch and subsequently the time delay associated with the hold/drop-out lights.

The licensee investigation further indicated this item was previously identified on August 18, 1988 during the performance of surveillance SP 2601D. Work order M2-88-09225 was generated to replace the matrix relay select switch for the RPS AD matrix during the mid-cycle outage starting on October 21, 1989.

The inspector interviewed the shift supervisor on September 23. The shift supervisor stated that during the matrix test, the allegor came to him to report an anomaly in completing the test which the allegor thought was an anomaly required to stop the test pending further investigation. The problem presented to the shift supervisor was that the drop-out light was delayed by several seconds while performing the test of the AD logic.

The shift supervisor stated he spent time with the allegor reviewing the step in question, what action was required, and what procedure requirements existed for completion of the step. Based on this review, the shift supervisor stated he concluded there was little significance in the delay in illuminating the drop-out light, since there is no explicit acceptance criteria stated or implied to complete the step. Since the desired action did occur after only a few seconds, the shift supervisor concluded that the delay was not significant, that the intent of the step had been met, and that there

was no anomaly that would warrant immediate investigation such that testing should be suspended. The shift supervisor stated that during the test he requested the test be continued, ("I would like to finish the test"). The shift supervisor stated he tried to contact I&C supervision to request evaluation of the test results after completion. The shift supervisor was aware that the issue was evaluated later on September 22 and determined to be a known problem that involved the RPS matrix test circuitry only. The shift supervisor's basis to continue the surveillance at the time of the test, was that the delay was not significant because of the lack of explicit or implied acceptance criteria in the procedure on the completion of the step. The shift supervisor was confident at the time that RPS operability was not at issue based on his general knowledge of testing procedures at Millstone, and critical test results are highlighted by acceptance criteria.

Followup review by the inspector indicated the licensee was aware of the problem in the RPS test circuit since August, 1988. The inspector concluded that control of trouble-report identification for this item was inadequate, and a work brief prior to conducting the surveillance procedure should have identified the known discrepancy.

Inspector review has concurred with the licensee conclusion that RPS operability was not affected. When looking at the basis for the shift supervisor's decision, it can be said it was reasonable given the facts available, and it was ultimately proven acceptable when the issue had the benefit of full review by management on the same day of occurrence. The inspector concluded a difference of opinion exists between the allegor and the shift supervisor. The inspector considered that the shift supervisor decision, to continue testing and resolve the significance of the anomaly after the test was completed, was acceptable. This item is closed.

### 9.2 Followup on Previous Allegations

On October 11, the NRC issued special allegation inspection report 50-336/89-13 for Millstone 2. As a result of the inspection, five violations were identified which dealt with 1) multiple examples of failures to follow procedures, 2) lack of seismic documentation for an electric conduit run, 3) technicians using outdated drawings, 4) failure to functionally test a radiation monitor alarm, and 5) improper control of overtime. None of the violations, either singularly or collectively represented a major safety issue. The inspectors will review licensee actions in response to the special inspection report during future routine inspections.

### 10.0 Management Meetings

Periodic meetings were held with station management to discuss inspection findings during the inspection period. A summary of findings was also discussed at the conclusion of the inspection. No proprietary information was covered within the scope of the inspection. No written material was given to the licensee during the inspection period.