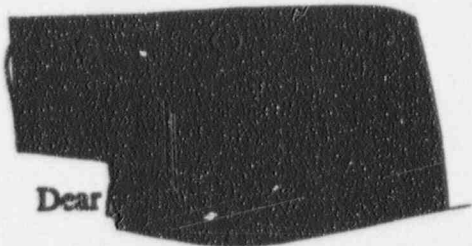




UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1416

203

FEB 28 1992



Dear

I am responding to the concern that you provided to us on October 22, 1991, asserting that there were deficiencies in the non-safety related Turbine and Computer Battery procedures and that similar deficiencies may exist with the safety related Station Batteries.

These concerns were referred to Northeast Utilities (NU) for their evaluation; attached for your information is their response. In addition, these concerns were inspected by the NRC; a report that documents the results of that inspection is attached for your information. Based on our inspection and the response that was received from NU, we have determined that your the battery surveillance and maintenance procedures in question have not incorporated the periodic connection tightness checks contained in the applicable technical documentation. NU is in the process of updating these procedures to include these checks. However, there is no indication that the absence of this surveillance requirement has had a negative impact on the overall performance or reliability of these batteries. Therefore, no further action is planned by the NRC in this matter, and we consider this concern to be resolved.

We appreciate you informing us of your concerns and feel that we have been responsive. Should you have any additional questions regarding these matters, please call me collect at (215) 337-5225.

Sincerely,

for
Edward Wenzinger, Chief
Reactor Projects Branch 4

- Attachments: (1) NU Response Letter A10024 of January 8, 1992.
(2) Excerpts from NRC Inspection Report 50-336/91-31 (Detail 10.0).

Information in this record was deleted
in accordance with the Freedom of Information
Act, exemptions 7c
FOIA- 92-762

T/196

bcc /w encl:

Allegation File: RI-91-A-0278

E. Conner's files

W. Raymond/T. Shedlosky

Contractor's office files (Meeker)

NORTHEAST UTILITIES



THE CONNECTICUT LIGHT AND POWER COMPANY
THE STATE OF CONNECTICUT ELECTRIC COMPANY
THE YORK WATER POWER COMPANY
NORTHEAST UTILITIES SERVICE COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY

General Offices • Selden Street, Berlin, Connecticut

P.O. BOX 270
HARTFORD, CONNECTICUT 06141-0270
(203) 865-5000

January 8, 1992

Docket No. 50-336
A10024

Re: Employee Concerns

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

Dear Mr. Hehl:

Millstone Nuclear Power Station, Unit No. 2
RI-91-A-0278

We have completed our review of an identified issue concerning activities at Millstone Unit No. 2. As requested in your transmittal letter of November 19, 1991, 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 transmittal letter and our response have received controlled and limited distribution on a "need-to-know" basis during the preparation of this response.

The response to this allegation was originally due on December 24, 1991. Additional time in which to respond was granted in telephone conversations with the Region I Staff on December 19, 1991, and January 7, 1992.

ISSUE:

"The Unit 2 non-safety related turbine and computer battery procedures are deficient. The inter-cell connectors are required to be checked clean and tight, but the procedures as written fail to provide specific requirements for:

1. Inter-cell and end-cell connecting bar bolt torque and re-torque frequency;
2. Acceptable values for inter-cell electrical connection resistance, test method (voltage drop or resistance measurements) and test frequency; and
3. Electrical connection bar temperature measurements during battery performance discharge test.

"The manufacturer recommends inspecting connector integrity at least four times per year. This inspection includes cleanliness, torque values and inter-cell voltage drop or resistance (IEEE Standard 450-1980 discusses inter-cell resistance).

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15 pp.

Mr. Charles W. Hehl
A10024/Page 2
January 8, 1992

"As these specific requirements should also apply to the Unit 2 safety related station batteries (201A and 201B), those procedures may also be deficient. In particular, the specific requirements in these procedures for periodically rechecking connecting bar fastener tightness and measuring electrical connection bar temperature during load testing were questioned."

REQUEST:

"Please provide your review of the above assertions. In particular, address if:

1. "Terminal bolt torque checks are required;
2. "Terminal resistance checks are required; and
3. "Inspection for hot spots during a test discharge are required.

"Also please provide what specific directions are given to the technicians for both the non-safety related (reference: procedure MP 2720F1) and safety related (reference: procedure MP 2720F2 and SP 2736E) batteries.

"If the above concerns are valid, notify us of the corrective actions you have taken to prevent recurrence. Also provide us with an assessment of the safety significance of any identified deficiencies, including generic considerations."

RESPONSE:

This assertion is partly valid. As discussed below, the battery is tested periodically for high resistance connections and hot spots, and connectors are verified to be tight. However, we are considering revising the test frequency and will revise the torque criteria.

1. Terminal bolt torque: The issue of terminal bolt torque values was initially brought to our attention on October 10, 1991. Following discussions with the Millstone Unit No. 2 Engineering Department, a change which provided specific retorquer values was made to Procedure SP 2736A--"Battery Pilot Cell Surveillance." This change to SP 2736A became effective November 7, 1991. Procedure MP2720F2-- "Battery Terminal Inspection and Cleaning"--contains specific retorquing values to be used when batteries are disassembled for cleaning.

On November 4, 1991, the Millstone Unit No. 2 Maintenance Department requested assistance from the Millstone Unit No. 2 Engineering Department in evaluating the remaining procedures dealing with battery surveillance and testing to ensure these procedures are consistent in addressing torque values and torquing check frequency. The information provided by the Engineering Department will be utilized to revise the battery service test procedures prior to the next service test, currently scheduled for the next refuel outage.

2. Terminal resistance checks: Terminal resistance checks are required and are provided for in SP2736E-- "Battery Service Test"--by the measurement and recording of voltage drops across the terminals of a battery cell. Loose

Mr. Charles W. Hehl
A19024/Page 3
January 8, 1992

battery terminals will result in a high resistance path which would be detected by a corresponding unacceptably high voltage drop across the connections of the affected cell. We have not detected any high cell connection voltage drops during discharge testing of the batteries.

Discussions with the battery manufacturer have indicated that the voltage drop method of resistance checking is effective only when the battery being monitored is being discharged at a known rate as in the discharge testing surveillances. Recommendations that supplemental resistance checks be performed have resulted from discussions between the battery manufacturer and the Millstone Unit No. 2 Maintenance and Engineering departments. Millstone Unit No. 2 Maintenance will work with Millstone Unit No. 2 Engineering to establish test methods for resistance checks, frequency, and acceptance criteria to be incorporated into appropriate maintenance procedures prior to the next battery service test.

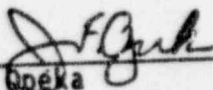
3. Inspection for hot spots: As hot spots are caused by high resistances during battery discharge, we consider the cell connection voltage drop measurements made during discharge testing to be adequate and specific inspection for hot spots is not required. The combination of visual inspections of battery connections (done weekly under Procedure MP2720F1--"Computer and Turbine Battery Inspections"), retorquing, resistance checks, and cell connector voltage drops during testing, are considered sufficient to prevent "hot spots."

Specific directions for technicians performing the above practices are contained in the applicable procedures.

After our review and evaluation of this issue, we find that this issue did not present any indication of a compromise of nuclear safety, nor were there any generic implications associated with the issues discussed herein. We appreciate the opportunity to respond and explain the basis of our actions. Please contact my staff if there are further questions on any of these matters.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY



J. F. Opoka
Executive Vice President

cc: M. J. Raymond, Senior Resident Inspector, Millstone Unit Nos. 1, 2, and 3
E. C. Wenzinger, Chief, Projects Branch No. 4, Division of Reactor Projects
E. M. Kelly, Chief, Reactor Projects Section 4A
J. T. Shedlosky, U.S. Nuclear Regulatory Commission, Millstone



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

Docket No. 50-336

FEB 24 1992

Mr. J. Opeka
Executive Vice President - Nuclear
Northeast Nuclear Energy Company
P.O. Box 270
Hartford Connecticut 06141-0270

Dear Mr. Opeka:

Subject: NRC Region I Inspection Report No. 50-336/91-31

Mr. J. T. Shedlosky and others of this office conducted a special safety inspection December 17, 1991, through February 7, 1992, at the Millstone Nuclear Station Unit 2, Waterford, Connecticut. The inspection results are documented in the enclosed report. They were discussed with Mr. J. S. Keenan and other members of your staff at the conclusion of the inspection.

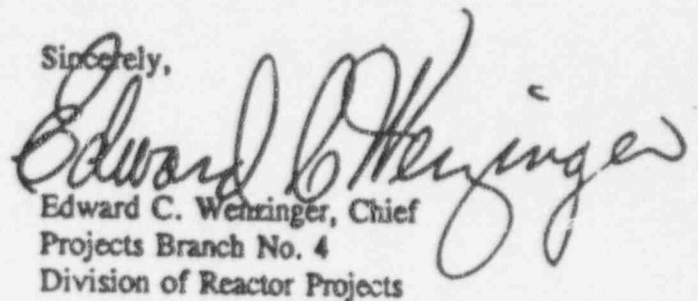
Areas examined during the inspection are described in the enclosed report. Within these areas, the inspection focused on issues brought to Northeast Utilities by the NRC. Our independent review evaluated your performance in complying with regulatory requirements important to public and worker health and safety. This review consisted of performance observations of ongoing activities, inspection of plant equipment, interviews with personnel, and review of records.

Our overall assessment was that performance was acceptable. The enclosed inspection report notes a number of issues on which your staff agreed to provide a response to the NRC. NNECC's response to the NRC may be made in communication with the resident inspectors.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be placed in the NRC Public Document Room. The responses directed by this letter are not subjected to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Public Law No. 96.511.

Your cooperation with us is appreciated.

Sincerely,


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

9203020233

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FEB 24 1992

Northeast Nuclear Energy Company 2

Enclosure: NRC Region I Inspection Report No. 50-336/91-31

cc w/enclosure:

W. D. Romberg, Vice President, Nuclear Operations
D. O. Nordquist, Director of Quality Services
R. M. Kacich, Manager, Nuclear Licensing
S. E. Scaee, Nuclear Station Director, Millstone
J. S. Keenan, Nuclear Unit Director, Millstone Unit 2
Gerald Garfield, Esquire
Nicholas Reynolds, Esquire
K. Abraham, PAO (2)
Public Document Room (PDR)
Local Public Document Room (LPDR)
Nuclear Safety Information Center (NSIC)
NRC Resident Inspector
State of Connecticut

A concern was identified related to the disposition of setpoint control forms for radiation monitor surveillance. Specifically, procedure OP 2383C, "Radiation Monitor Setpoint Control," requires that Alarm Setpoint Control form OP 2383C-1 be forwarded to the Engineering Department for review following an equipment setpoint change. However, during the performance of SP 2404AV, "RBCCW Radiation Monitor RM 6038 Calibration," it was noted that Setpoint Control forms for two setpoint changes conducted May 11, 1991, and July 8, 1991, had not been forwarded to the Engineering Department.

NNECO responded that the necessary forms were on file, having been reviewed in September 1991. The inspector obtained copies of the forms in question and conducted a review of the forms and procedure OP 2383C. The procedure specifies no time frame restrictions for routing Setpoint Control forms to the Engineering Department, and the inspector concluded that the procedure was being followed. Unit 2 Engineering does maintain a file of all radiation monitor setpoint control forms.

Conclusion

The inspector determined that NNECO took appropriate action in response to the above issues. Correct actions were taken to resolve vendor manual and procedure differences for RM 9095. Additionally, the Change Routing Sheet was adequate as initially filled out to implement the necessary procedure change of SP 2404AF, and the I&C supervisor was exercising supervisory discretion in his assignment of the procedure change action. The issues reflected minor administrative problems in the conduct of routine maintenance, procedures, and record keeping. These issues did not affect nuclear safety, and the corrective actions taken indicate that these concerns should be closed.

10.0 STATION BATTERIES

The NRC provided a concern about the safety-related Station Battery and the non-safety-related Turbine and Computer Battery procedures. The NRC disposition of this concern involved an initial NRC inspection of the safety aspects of the concern and then the concern was provided to the licensee for review and resolution. After the licensee response was received, a subsequent NRC inspection was conducted to evaluate the adequacy of the licensee's corrective actions. NNECO letter A10024, dated January 8, 1992, described the licensee's evaluation of the concern. The results of the subsequent NRC inspection are as follows:

Assessment

The inspector reviewed the battery procedures in question along with the technical manual and other applicable technical documentation associated with the installed batteries. The inspector also interviewed the engineer responsible for battery procedures and reviewed the ongoing actions at Millstone to improve the battery procedures.

A change to "Battery Pilot Cell Surveillance," SP 2736A, did provide retorque values for the

Station Batteries, 201A and 201B. However, the vendor technical manual and the Institute of Electrical and Electronics Engineers (IEEE) Standard 450-1980 requirement to perform periodic connection retorque checks and the IEEE requirement to observe the battery for inter-cell connector heating are not contained in present Station Battery or Turbine and Computer Battery procedures. Periodic terminal resistance checks are presently performed during Battery Service Tests, which are conducted every 15 to 18 months and use Individual Cell Voltage (ICV) measurements. NNECO is in the process of revising the applicable battery procedures to include the connection retorque check frequency and a periodic inter-cell electrical resistance measurement method, acceptance values, and test frequency. NNECO does not intend to institute electrical connection bar temperature measurements during battery performance discharge tests. NNECO technically justified this action and obtained the vendor's concurrence with this decision.

During the inspection, opportunities to improve the Battery Pilot Cell Surveillance procedure, SP 2736A, Computer and Turbine Battery Inspections procedure, MP 2720F1, and Battery Terminal Inspection and Cleaning procedure, MP 2720F2, were noted. These are not necessarily regulatory requirements, but constitute enhancements that would be helpful. The following are examples of such improvement opportunities:

- Incorporate the Caution statement of the vendor technical manual, VTM2-127-001A, paragraph 4.3, that requires disconnecting the battery from the load and charger equipment when performing the connection checks;
- Coordinate the battery procedure revisions so that the common notes, cautions, and actions are worded in standardized formats in all the appropriate procedures; and
- Since the Computer battery is not made by the same vendor as the Turbine battery, a thorough review of both Technical Manuals should be made to insure that procedure guidance properly reflects the requirements of both batteries. If significant differences are noted, it may be more appropriate to produce separate procedures for each battery and not retain the present common procedure. Since a Computer Battery technical manual was not available on site, the inspector was unable to perform such a review.

Conclusion

The inspector concluded that the Millstone Unit 2 storage battery procedures were adequate for routine operations, but that the applicable surveillance and maintenance procedures have not incorporated the periodic connection tightness checks contained in applicable technical documentation. NNECO is in the process of correcting these discrepancies.

11.0 NNECO RESPONSIVENESS TO EMPLOYEE CONCERNS

The NRC received approximately 26 concerns regarding the lack of responsiveness by NNECO to employee concerns, particularly from technicians. Specifically, it was asserted that