

## NORTHEAST UTILITIES



THE CONNECTICUT LIGHT AND POWER COMPANY  
WESTERN MASSACHUSETTS ELECTRIC COMPANY  
HOLYOKE 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) 665-5000

July 18, 1991

Docket No. 50-336  
B13883

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

Dear Mr. Behl:

Millstone Nuclear Power Station, Unit No. 2  
RI-91-A-187

In reviewing our response to this allegation in our letter dated April 26, 1991, it has come to our attention that the clarity of our response to Issue 2 could be improved. In the interest of assuring that there is no ambiguity in our response to this issue, we are providing additional information regarding the seismic qualification of the RCS flow transmitters noted in the allegation.

The original installation specification of the transmitters required that the installation be done in accordance with Bechtel's MS-66 criteria as indicated in the second paragraph of our response to Issue 2. The MS-66 criteria was developed to allow field installation of instrumentation to seismic requirements without performing a specific seismic analysis for each installation. When instrumentation was installed to these guidelines, conformance to seismic stress analysis criteria was assured. The guidelines were prepared in a very conservative manner using bounding calculations to determine support requirements. Our response did not clearly indicate that our review of this allegation identified that the installation did not follow the guidance of this design document. The MS-66 guidance required that the seismic span requirements of instrument tubing meet certain limits. A review of the "as-built" configuration in April 1991, indicated that the span requirements were not met. Hence, the instrument did not meet the criteria contained in the MS-66 guidance requirement.

Mr. Charles W. Ehrl, Director  
U. S. Nuclear Regulatory Commission  
B13883/Page 2  
July 18, 1991


This does not mean that the instrument tubing will fail during a postulated seismic event. In order to resolve the issue, the instrument tubing lines were analyzed using a computer code to determine the calculated stress levels and to make a definitive determination of the adequacy of the transmitter tubing installation.

The computer analysis results showed that stress levels in the instrument tubing were acceptable and that during a postulated seismic event, the installation would remain functional. Therefore, the actual installation is acceptable. Drawing changes were processed which reflect the as-built condition of the installation. The results of the computer analysis have been documented.

We anticipate that this clarification will resolve any misunderstanding regarding our response to this item. Please contact my staff if there are any further questions on this item.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

  
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  
~~\_\_\_\_\_~~

# NORTHEAST UTILITIES



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*MATERIALITY...*

*Verification to OI...  
(not material)*

*Refer to 91-161  
re. Inaccurate  
Information*

July 18, 1991

Docket No. 50-336  
B13883

Mr. Charles W. Behl, Director  
Division of Reactor Projects  
U. S. Nuclear Regulatory Commission  
Region I  
475 Allendale Road  
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Millstone Nuclear Power Station, Unit No. 2  
RI-91-A-187

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Mr. Charles W. Behl, Director  
U. S. Nuclear Regulatory Commission  
B13883/Page 2  
July 18, 1991

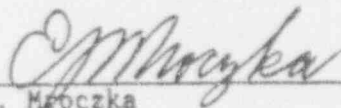
This does not mean that the instrument tubing will fail during a postulated seismic event. In order to resolve the issue, the instrument tubing lines were analyzed using a computer code to determine the calculated stress levels and to make a definitive determination of the adequacy of the transmitter tubing installation.

The computer analysis results showed that stress levels in the instrument tubing were acceptable and that during a postulated seismic event, the installation would remain functional. Therefore, the actual installation is acceptable. Drawing changes were processed which reflect the as-built condition of the installation. The results of the computer analysis have been documented.

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Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

  
\_\_\_\_\_  
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  
E. M. Kelly, Chief, Reactor Projects Section 4A

ALLEGATION RECEIPT REPORT

UPDATE

Date/Time Received: 7/12/91 9AM

Allegation No. 90-RI-A-187  
(leave blank)

Name: [REDACTED]

Address: 91-RI-A-161

Phone: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Confidentiality:

- Was it requested? \_\_\_\_\_
- Was it initially granted? \_\_\_\_\_
- Was it finally granted by the allegation panel? \_\_\_\_\_
- Does a confidentiality agreement need to be sent to allegor? \_\_\_\_\_
- Has a confidentiality agreement been signed? \_\_\_\_\_
- Memo documenting why it was granted is attached? \_\_\_\_\_

Yes _____	No _____
Yes _____	No _____
Yes _____	No _____
Yes _____	No _____
Yes _____	No _____
Yes _____	No _____

Allegor's Employer: NU

Position/Title: [REDACTED]

Facility: Millstone 2

Docket No.: 336

(Allegation Summary (brief description of concern(s)):

NU not communicating with [REDACTED] licensee only responds when I "... they have to" because of NRC pressure

Number of Concerns: 1

Employee Receiving Allegation: E. M. Kelly  
(first two initials and last name)

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

Materials License No. (if applicable): \_\_\_\_\_

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

Chronology: 1) JFC gets away from  
2) MS-66 visual call (block to valve change out)  
on runs only; not plumbing...

3) Sent up a DCR to Berlin/PSE, page 2 of 2  
would be ok as "... doesn't look right"

Detailed Description of Allegation:

4) OK install; minor dimensional discrepancies

5) did not trouble to it installation of R/S Flaw 1st transect tubing  
per a Berthel Specification (90-187)

6) Tom S.  
notes  
discrepancy

Re: 1. case reported on 4/26/91 memo with  
"preliminary" info indicating that the installation of 11-16'  
was in accord with Spec. 66; however, later  
Berlin PSE analyses showed that 1) it wasn't  
per the Spec, but 2) nonetheless is essentially  
appropriate

2 Issues:

test f. H. H.  
uncapped  
- FT changed  
out in PSE

[redacted] asserts that - beyond the inaccuracy  
of the preliminary evaluation - NU would not  
otherwise pursue these issues and feedback to  
him if the NRC weren't 'forcing' the issues.

OWB  
28512

Significance/ Preliminary Recommendations:

NU response on 4/26/91 to be supplemented by  
another NU letter



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WESTERN MASSACHUSETTS ELECTRIC COMPANY  
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P.O. BOX 270  
HARTFORD, CONNECTICUT 06141-0270  
(203) 665-5000

April 26, 1991

Docket No. 50-336  
A09354

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-90-A-187

*2 wk extension  
Nb.*

We have completed our review of an allegation concerning activities at Millstone Unit No. 2 (RI-90-A-187). 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. Based upon our request on March 15, 1991, Region I personnel extended the due date for this response to April 26, 1991. Additional time was requested to support the ongoing INPO evaluation and to prepare for an Enforcement Conference held on March 27, 1991 involving an ongoing allegation-related matter.

## Issue 1

Isometric drawing 25203-23512 contains a number of deficiencies including inaccurate transmitter piping distances and incorrect support mounting orientations.

Please discuss the accuracy of the above assertion and your corrective actions with regard to any identified deficiencies. Please discuss if identified drawing problems are indicative of a generic problem with configuration control.

## Background

Drawing 25203-28512 is a general representation of the installation for all the instruments in question and not detailed documentation of specific as-built dimensions. The drawing shows a tubing configuration for one instrument and states that it is "typical" for all eight.

9105310100

Mr. Charles W. Behl  
U.S. Nuclear Regulatory Commission  
A09354/Page 2  
April 26, 1991

#### Response

The drawing referenced in the statement (25203-23512) does not exist. Investigation into the subject indicates that the correct number should be 25203-28512 and that this drawing does have the discrepancies noted.

Drawing change request M2-P-198-90 was initiated to correct drawing 25203-28512. This activity took place after the discrepancies were identified during the 1990 refueling outage. The only potential implication of the discrepancies was that the seismic analysis may have been affected. NNECO has performed a seismic analysis of the configuration as defined on drawing 25203-28512 with "as-built" dimensions that were taken during the refueling outage. This analysis is documented in SQR #90-076, Rev. 0 and was completed on April 12, 1991. The results of the analysis verified that the configuration in its existing condition is seismically sound.

The discrepancies identified with this isometric drawing do not represent a generic problem with configuration control. A procedure is now in place (ACP-QA-3.10) requiring upgrade of isometric drawings whenever changes are made. When a design change is accomplished, the proposed change is "walked down" in the field before and after implementation and "as-built" configuration is documented at that time. This procedure was not in place at the time these modifications were made.

#### Issue 2

The reactor coolant flow transmitter test connections are missing swagelok port connectors and swagelok cap assemblies. One unidentified test connection is bent at the reducer location. Quality Assurance Audit QS-274 may identify a number of problems with test connections. A modification of this system controlled by Plant Design Change Record (PDCR) 2-66-83 did not include seismic certification for the transmitter installation nor did the original purchase order, 2E3-318.

Please discuss the accuracy of the above assertions. Please discuss the safety significance of any identified problems as well as your corrective actions and actions that you have taken to ensure plant safety. Please discuss seismic qualification of the reactor coolant flow transmitters.

#### Background

PDCR 2-66-83 was written in 1983 to upgrade the reactor coolant flow indicating system with more reliable instrumentation that is also qualified for EEO service.



Mr. Charles W. Hehl  
 U.S. Nuclear Regulatory Commission  
 A09354/Page 3  
 April 26, 1991

Swagelok port connectors and caps are fittings which have been included in the tubing configuration to facilitate calibration activities. They serve no critical purpose to the safety function of the instrument while it is in service. These fittings fall outside the pressure boundary of the process system and by definition are not subject to the same design criteria as other components which normally do see process pressure. These deficiencies are not considered "design" problems but normal maintenance discrepancies which were brought to the attention of department supervision and corrected.

### Response

The test fittings discussed above perform no function while the instrument is in service. Therefore, there is no safety significance to the reported deficiencies. The discrepancies were identified during calibration activities and promptly corrected. Quality Assurance Audit QS-274 identified these same maintenance discrepancies. The discrepancies were corrected by AWO Nos. M2-90-12325, M2-90-12326, M2-90-12327, and M2-90-12328.

*100% fully  
inscribed* \*

The transmitters were procured and installed to meet appropriate seismic requirements. PDCR 2-66-83 clearly states that the new instruments are qualified to IEEE 323 (1974) and 344 (1975) which covers requirements for seismic and EEQ qualification. The instruments were installed in accordance with Bechtel's MS-66, "Seismic Instrument Mounting Details," and vendor requirements for seismic qualification.

Purchase Order 283-318 does not exist. Purchase Order 628590, which is the order for the referenced transmitters, specifies the purchase of instruments nuclear qualified in accordance with IEEE 323 and 344 and a Certificate of Conformance from the vendor stating such.

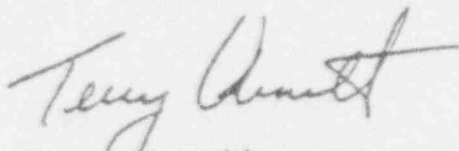
⇒ The concern was brought to management's attention via memo 901006A on October 6, 1990. A seismic qualification review was initiated to evaluate the "as-built" seismic integrity of the RCS flow transmitter tubing as shown on NUSCO Drawing No. 25203-28512. The review was finalized on April 12, 1991, and concludes that the tubing and transmitter support scheme "as installed" is seismically acceptable for its intended usage.

### Issue 3

The procedures for calibrating the RCS flow transmitters (SP-24024 and SP-24183) contain a number of deficiencies including: static alignment offset values may not be correct; the as-left alignment check is completed after the transmitters have been statically aligned; and calculational errors exist for the reactor protection system bistable and input resistance values. These deficiencies have been identified to management.

June 21, 1991

TO:



FROM: Terry Arnett  
MP2 I&C Engineer  
(Millstone Ext. 5447)

SUBJECT: Memo# 901012A "RCS Flow Transmitter Installations"

Attached is the documentation package concerning the review of the RCS Flow Instrumentation seismic qualification. The conclusion was that the installation did not meet the guide lines of MS-66 for seismic class 1 tubing. Computer analysis however, shows that the lines will remain intact and perform as designed following a seismic event. Based on the results of the analysis the installation is acceptable. Drawing changes have been processed to reflect the as built condition of the installation.

cc: J. Becker  
file

ALLEGATION RECEIPT REPORT

UPDATE

Date/Time Received: 7/12/91 9 AM

Allegation No. 90-RI-A-187  
(leave blank)  
and 91-162

Name: [REDACTED]

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Confidentiality:

Was it requested?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Was it initially granted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Was it finally granted by the allegation panel?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Does a confidentiality agreement need to be sent to allegor?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Has a confidentiality agreement been signed?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Memo documenting why it was granted is attached?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Allegor's Employer: NU

Position/Title: [REDACTED]

Facility: Thilbore 2

Docket No.: 336

(Allegation Summary (brief description of concern(s):

NU not communicating with [REDACTED] licensee only responds when I "... they have to " because of NRC pressure

Number of Concerns: 1

Employee Receiving Allegation: E. M. Kelly  
(first two initials and last name)

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

Materials License No. (if applicable): \_\_\_\_\_

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

in accordance with the Freedom of Information Act, exemptions 92-162

D/21

## Detailed Description of Allegation: \_\_\_\_\_

The issue involved questioning of a seismic installation of R/S flow instrument tubing per a Berthel Specification.

NU/consent responded on 4/26/91 memo with "preliminary" info indicating that the installation was in accord with Spec. 66; however, later Berlin PSE analyses showed that 1) it wasn't per the Spec, but 2) nonetheless is seismically appropriate.

[redacted] asserts that - beyond the inaccuracy of the preliminary evaluation - NU would not otherwise pursue these issues and feedback to him if the NRC weren't 'forcing' the issues.

## Significance/ Preliminary Recommendations: \_\_\_\_\_

NU response on 4/26/91 to be supplemented by another NU letter.