

5/15/88

88-A-0101

26

MEMORANDUM FOR: WILLIAM FANE, DRP, DIRECTOR  
FROM: PETER J. HABIGHORST, MILLSTONE 2 RESIDENT INSPECTOR  
SUBJECT: ALLEGATION ACCOUNTABILITY FOR MILLSTONE 2

Recently, the NRC has come under scrutinization for inspection efforts and follow-up of Northeast Utilities (NU) employee allegations at Millstone 2. As of May 15, one licensee employee has notified by letter Chairman, Techn. senators, representatives, and the governor of Connecticut, of NRC actions in dealing with nuclear employee concerns.

I am the NRC's representative at Millstone 2, and I desire immediately to be held accountable as required by law for all actions as a federal employee. A beginning to achieve this end, I offer to spend some time in the regional office to explain each allegation, what was done to followup the concern, what the NRC decision was, the nuclear safety significance of each item and what further NRC followup is required. I feel this time is necessary based on the regulatory environment as it now exists. I disagree with a reactive letter-by-letter followup of this item. For the NRC's benefit, full specific information in each item is a necessity for the benefit of outside interaction and interest, and for the image of the NRC.

Thank you for your time and consideration.



Pete Habighorst  
Resident Inspector  
Millstone 2

cc: Jacque Durr, DRP  
Ebe McCabe, DRP  
William Raymond, DRP

K/24

ALLEGATION PANEL DECISIONS

SITE: MILLSTONE 2  
 ALLEGATION NO.: RZ-48-A-003  
RZ-55-A-029  
RZ-55-A-040  
 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  
<sup>ATTING</sup>  
 Branch Chief - J. IKAR  
 Section Chief - E. McCABE  
J. GUTIERREZ, RC  
S. BARR, REACTOR ENGINEER  
M. PERKINS, OAC

ACTION:

- 1) AOC TO PULL ALL OPEN ALLEGATION ITEMS TOGETHER  
(ECO 5/19/89)
- 2) AOC TO CONTACT UTILITY/INDIVIDUALS TO SCHEDULE A  
MEETING WITH INDIVIDUALS RAISING CONCERNS.
- 3) REGION I TO SEND TEAM TO MILLSTONE TO TRANSCRIBE  
ALL OTHERS INTERVIEWS REGARDING CONCERNS. REVIEW
- 4) CONCERNS AND TAKE APPROPRIATE ACTION TO RECONVENE  
PANEL FOR CLOSEOUT ACTIONS.
- 5) \_\_\_\_\_
- 6) \_\_\_\_\_

K/30

27

Docket No: 50-336

MAY 27 1988

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: Routine Resident Inspection 50-336/88-07 (3/22/88 - 5/2/88)

This transmits the report of the above subject inspection of Millstone 2. The inspection findings have been discussed with Messrs. S. Scace and J. Keenan of your staff.

A violation was identified for improper calibration of the Control Room Ventilation Radiation Monitors. Also, a deviation (Appendix B) was identified on calibration of these radiation monitors. Please respond to the violation and deviation in accordance with Appendices A and B.

We consider it significant that the enclosed violation and deviation were identified by NRC follow-up on an allegation by one of your employees. Further, as is stated in Detail 8.2.5 (Page 25) of the enclosed report, deficiencies in radiation monitor calibrations have been repeatedly noted by the NRC. These circumstances indicate deficiencies in the content and/or management of your programs to elicit and address employee concerns and to address NRC findings. Therefore, with your reply to the enclosed violation, please specifically include your actions to improve the effectiveness of addressal of employee concerns and NRC findings.

We also wish to note the effective implementation of identified and preventive maintenance programs on various safety systems (Report Detail 3.1). Good oversight and management of the programs was found.

Your cooperation with us is appreciated.

Sincerely,

Original Signed As

*for*  
*Lee H. Bettenhausen*  
Lee H. Bettenhausen, Chief  
Projects Franch No. 1  
Division of Reactor Projects

Enclosures:

- 1. Appendix A, Notice of Violation
- 2. Appendix B, Notice of Deviation
- 3. NRC Region I Inspection Report 50-336/88-07

*K/JS*  
*EEU*

OFFICIAL RECORD COPY

DL50-336/88-07 - 0001.0.0  
05/20/88

*6/18*

cc w/encls:

W. D. Romberg, Vice President, Nuclear Operations  
R. M. Kacich, Manager, Generation Facilities Licensing  
D. O. Nordquist, Director of Quality Services  
S. E. Scace, Station Superintendent  
Public Docket Room  
Local Public Document Room (LPDR)  
Nuclear Safety Information Center (NSIC)  
NRC Resident Inspector  
State of Connecticut

bcc w/encls:

Region I Docket Room (with concurrences)  
Management Assistant, DRMA (w/o enclosures)  
DRP Section Chief  
W. Raymond, SRI, Millstone 1,2&3  
J. Shedlosky, SRI, Haddam Neck  
D. Jaffe, LPM, NRR  
R. Bores, DRSS  
M. Conner, DRP  
A. Shropshire, RI

RI:DRP

*W. S.*  
Raymond/mec  
5/26/88

RI:DRP

*McCabe*  
McCabe  
5/27

*Kelly*  
*fn* RI:DRP 5/27  
Bettenhausen

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DL50-336/88-07 - 0002.0.0  
05/20/88

to be closed and tagged. The following additional valves, identified as potential dilution paths, are also required to be closed and tagged by Step 3.4.

- 2-CH-422, PMW to Volume Control Tanks.
- 2-CH-091, PMW to Charging Pump Suction.

Based upon the review of OP-2207 and OP-2209A, the inspector concluded that the licensee has met their commitment, contained in their letter of December 28, 1977, to close and tag certain valves to prevent unanticipated boron dilution during Modes 5 and 6. Moreover, as additional boron dilution paths were created (via plant modifications) or identified as a result of subsequent review, the associated valves were also required to be closed and tagged in Modes 5 and 6, per OP-2207 and OP-2209A. No additional boron dilution paths were identified by NRC review. No inadequacies were noted.

#### 7.0 Surveillance (51726)

Surveillance Procedure (SP) 2401E is used to insure the NI safety/control instruments are representative of the core neutron flux as indicated by in-core detector measurements. The inspector observed calibrations completed per SP 2401E on April 19, 1988. This satisfied the TS 4.3.1.1.1 Table 4.3.1.1.1 requirement for monthly calibration of the excore nuclear instruments (NI) following equilibrium at 100% power. The licensee normally performs this calibration every two weeks. The inspector reviewed SP 2401E and the completed SP 2401E forms for bistable trip data. Calorimetric data is entered into a computer with the as-found settings and, later, the as-left settings. A computer program calculates each detector voltage with allowable limits and the as-left Axial Shaping Index (ASI). After the calibration is completed, a computer report is prepared for each channel giving the input data, allowable limits and the final data. The print-out was attached to the surveillance cover sheets as permanent records. The Channel C as-found 15% Trip Permissive was outside the licensee's 14.5 +/- 0.2% acceptance criteria at 14.74%. Since it met the TS limit of less than 15%, an Instrument Calibration Report (ICR) was issued. A Plant Incident Report (PIR) would be required if TS limits were exceeded. The inspector had no further questions.

#### 8.0 Allegations (92720/92702)

##### 8.1 RI-88-A-29, Procedural Compliance in Meterology Lab

On March 18, the inspector received an allegation from a licensee employee. The allegor had two specific concerns dealing with meterology laboratory work. The meterology lab calibrates quality assurance (QA) standard instrumentation used for in-plant instrument calibrations. The allegor's concerns were:

- Inadequate procedural compliance for safety-related instrument calibration.
- Job discrimination from licensee management. [The allegor has taken this allegation to the Department of Labor (DOL).]

The inspector interviewed the allegor on March 22. For QA standards (QA-107, QA-110) calibrated per I/C 1101C, "Simpson multimeter calibration," the allegor stated that data error was in the opposite direction between one procedure revision and the next, and felt this was improper. To follow-up, the inspector reviewed data on the following multimeter calibrations.

<u>Standard</u>	<u>Procedure</u>	<u>Instrument</u>	<u>Date Calibrated</u>
QA-110	I/C 1101C	QA-2867	3/16/88, 1/27/88
		QA-2814	8/25/87, 7/8/86
		QA-2770	10/29/87, 10/23/86
		QA-2863	2/24/88, 1/19/87
QA-107	I/C 1101C	QA-2824	2/24/88, 10/13/86

The inspector reviewed the latest two revisions to procedure I/C 1101C and, on April 7, witnessed a calibration with QA standard 110, instrument QA-2824. No discrepancy was found in procedural compliance or adequacy. The revised procedure changed whether the calibrated instrument reading is subtracted from the reference reading (or vice versa). That changes the algebraic sign of the error but not calibration accuracy or validity. This part of the allegation was unsubstantiated.

Another technical concern from the allegor concerned procedural compliance during deadweight calibrations of Heise pressure gauges. The concern was that identical data readings recorded for increasing as well as decreasing pressure points indicated improper data logging and procedure performance. The inspector reviewed the data sheets from the following Heise gauges:

<u>Standard</u>	<u>Procedure</u>	<u>Instrument</u>	<u>Calibration Dates</u>
QA-177	I/C 1104A	QA-379	12/23/87
QA-176	I/C 1104A	QA-307	1/4/88, 10/9/87, 7/8/87,
			3/30/87, 12/29/87, 9/23/87
QA-280	I/C 1104A	QA-280	1/3/88, 5/6/87, 2/9/87
QA-176	I/C 1104A	QA-282	1/3/88, 10/28/88, 7/10/87,
			5/6/87, 2/19/87, 11/19/86,
QA-172	I/C 1104A	QA-284	8/20/86
			3/10/88, 12/11/87, 8/31/87,
			5/28/87, 2/27/87, 12/5/86

The data for the Heise gauge calibrations between 8/20/86 and 3/23/88 was reviewed. There were instances of data points on pressure increase being the same as in pressure decrease. The inspector independently took data in parallel with the licensee on a 0-15 psig Heise gauge (QA-303) on 4/7. Calibration results met the acceptance criteria, and no significant difference existed between the inspector's and the licensee's data. The inspector noted it was possible for a pressure gauge to indicate the same results in pressure rise as in pressure drop. This part of the allegation is unsubstantiated.

In regard to the alleged job discrimination, the inspector reviewed licensee administrative control procedures (ACP) 1.14 "Employee Complaints and Grievances," and ACP-1.14A "Nuclear Complaints and Concerns." The inspector also interviewed licensee management and first line supervisors concerning the alleged discrimination. No conclusion was reached. This aspect remains open pending receipt of the DOL disposition.

#### 8.2 RI-88-A-40, Procedure Adequacy and Controls on Control Room Radiation Monitors (92720/83726)

On April 11, 1988, the inspector received an allegation from a licensee employee relating to the Unit 2 Control Room Ventilation Area Radiation Monitors (RIT 9799A and 9799B). The allegor raised two specific concerns:

- a. The above monitors were not being adequately calibrated by the Unit 2 Instrument and Control (I&C) group.
- b. Employee concerns regarding the adequacy of monitor calibration were not responded to appropriately by I&C supervision.

During the week the allegation was received, a routine Health Physics inspection was being performed onsite by NRC Region 1 based Radiation Specialists. The allegor's concerns relating to the technical adequacy of monitor calibration were reviewed by the NRC radiation specialist.

##### 8.2.1 System Description

The Unit 2 Control Room Ventilation Area Radiation Monitors (RIT 9799A, 9799B) view the Heating Ventilation and Air Conditioning (HVAC) inlet ducting upstream of the Unit 2 Control Room. Upon detection of area radiation levels equal to or in excess of the alarm setpoint (1 mR/hr), the monitors switch the Control Room Ventilation to the Recirculation mode. The two monitors feature RD-1 GM detectors supplied by GA Technologies. The monitor range is from 0.1 to 10,000 mR/hr.

Calibration frequency for these monitors is once every 18 months. Initial system calibration was performed in June 1985. Both monitors were recalibrated in December 1986; the 9799A monitor was calibrated again in February 1988 after the readout module was replaced.

The inspector evaluated the technical adequacy of the licensee's calibration of these monitors by discussion with cognizant personnel and review of the following:

- Procedure SP2404BA, "Control Room Ventilation Radiation Monitor Calibration."
- Procedure SD2404AZ, "Unit 2 Control Room Ventilation Area Radiation Monitor RIT-9799A & 9799B Functional Test."
- Results of monitor calibrations performed in 6/85, 12/86 and 2/88.
- GA Technologies Operation and Maintenance Manual E-115-185.
- ANSI N323-1978, "Radiation Protection Instrumentation Test and Calibration."
- Unit 2 FSAR.

#### 8.2.2 Procedural Adequacy

NRC review of calibration procedure SP2404BA identified the following steps performed as the radiological calibration of the Control Room Ventilation monitors:

- Test sources are obtained with gamma flux values equivalent to the lowest decade (0.1 to 1.0 mR/hr) and as close as possible to the highest decade (1.0 to 10.0 R/hr) of the monitor.
- The test source strengths are measured using HP Calibration Lab equipment. These measurements then become the "desired" values for calibration.
- The test sources are held adjacent to the monitors and the monitor readout is compared with the "desired" value.

The inspector noted that no direction was given in the procedure to ensure that i) dose rates generated by the test sources were measured at a specified distance from the sources or that ii) test sources were held at the same distance from the detector during the calibration. No notations were made on completed data sheets indicating measurements of source to detec-



*TRC av 28*



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

Docket/License: 50-336/DPR-65

JUL 07 1988

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: Routine Resident Inspection 50-336/88-13 (5/3/88 - 6/13/88)

This transmits the report of the above subject inspection of Millstone 2. The inspection findings have been discussed with Messrs. H. Haynes and J. Keenan of your staff.

No violations were cited, and no reply to this letter is required.

Your cooperation with us is appreciated.

Sincerely,

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

Enclosures:

1. NRC Region I Inspection Report 50-336/88-13
2. Appendix A, List of Facilities Potentially Affected by Gamma-Metrics 10 CrR 21 Report
3. Appendix B, Followup on Allegations Not Specific to Millstone Unit 2

cc w/encl:

- W. D. Rumberg, Vice President, Nuclear Operations
- R. M. Kacich, Manager, Generation Facilities Licensing
- D. O. Nordquist, Director of Quality Services
- S. E. Scace, Station Superintendent
- Public Document Room (PDR)
- Local Public Document Room (LPDR)
- Nuclear Safety Information Center (NSIC)
- NRC Senior Resident Inspector
- State of Connecticut

~~8807110390~~

*K/26*

U.S. NUCLEAR REGULATORY COMMISSION  
REGION I

Report No.: 50-336/88-13

Docket No.: 50-336

License No. DPR-65

Licensee: Northeast Nuclear Energy Company  
P.O. Box 270  
Hartford, CT 06101-0270

Facility Name: Millstone Nuclear Power Station, Waterford, Connecticut

Inspection At: Millstone Unit 2

Dates: May 3 - June 13, 1988

Inspectors: Peter J. Habighorst, Resident Inspector  
David Jaffe, Licensing Project Manager, NRR  
William J. Raymond, Senior Resident Inspector  
James Trapp, Reactor Engineer, Division of Reactor Safety

Reporting  
Inspector: Peter J. Habighorst, Resident Inspector

Approved by: *E. C. McCabe*  
E. C. McCabe, Chief, Reactor Projects Section 1B

7/6/88  
Date

Inspection Summary: 5/3 - 6/13/88 (Report No. 50-336/88-13)

Areas Inspected: Routine NRC resident, region-based, and specialist inspection of plant operations, surveillance, maintenance, radiation protection, physical security, outage activities, allegations, Licensee Event Reports (LERs), Safety Issue Management System (SIMS) items, and committee activities.

Results: No unsafe conditions were identified. Additional follow-up is warranted on a 10 CFR 21 Report concerning wide range nuclear instrumentation susceptibility to moisture intrusion (Detail 4.6) and allegations (Detail 8.4, and Appendix B).

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The alleged saw pigeons inside containment during the refueling outage in February, 1988. He was concerned that the pigeons would spread radioactive contamination and that they might be contaminated and be eaten by people. NRC radiation specialists evaluated this as not a radiation safety hazard. The inspector discussed with licensee management the advisability of preventing pigeon entrance into containment for housekeeping reasons. The licensee committed to address methods of preventing pigeons from entering containment during outages.

The inspector reviewed egress routes from the frisking station, and whole body friskers (PCM-1A) on the lower elevation of the auxiliary building. The inspector did not detect a method of bypassing the frisking stations without violating posted requirements. The inspector considered the existing controls adequate. Adherence to the requirements is routinely checked by licensee personnel and NRC inspectors.

On the containment access concern, NRC review noted that the information provided by the alleged lack specificity on the date of occurrence, frisker reading, and scale reading on the frisker. During routine inspection throughout the period, the inspector observed containment access controls, individual frisking techniques, and anti-contamination clothing removal. No inadequacies were noted. The inspector discussed this specific concern with the licensee and asked that it be considered in contractor radiation protection training. No inadequacies were noted.

NRC follow-up did not substantiate the alleged's concerns in this case. Because of the potential for adverse housekeeping effects, however, birds present in containment will be routinely monitored and assessed. So will adherence to radiation protection requirements.

### 8.2 Telephone Conversation with a Concerned Citizen

The inspector received a telephone call at 3:00 p.m. on June 7 from a resident of Pleasant Beach in Waterford, Connecticut. This individual was concerned about the loud noise he heard from the Millstone Station all day. The inspector checked and informed the citizen that the sound was from the Millstone 2 atmospheric dump valves used as part of the normal procedure to cooldown the plant. The inspector assured the citizen that there was no offsite hazard from the non-radioactive steam emanating from the dump valves. The inspector stated that the noise should cease by about 8:00 p.m. on June 7, after cooldown via the atmospheric dump valves was completed. The citizen appeared satisfied with the information provided. No inadequacies were identified relative to licensee activities.

### 8.3 RI-88-A-0029, "Update on Procedural Compliance in Metrology Lab"

This alleged had two concerns dealing with metrology laboratory work. The concerns dealt with inadequate procedural compliance for safety-related instrument calibration and job discrimination by licensee management.

The calibration concern was addressed by the inspector in routine inspection report 50-336/88-07; calibrations involved were found acceptable. On the discrimination concern, the allegor filed a complaint with the U.S. Department of Labor (DOL) on April 29, 1988. Initial DOL efforts to conciliate the matter between the allegor and employer (Northeast Nuclear Energy Company) were unsuccessful. DOL began an investigation of whether job discrimination for protected activities (Energy Reorganization Act of 1974, 10 CFR 50.7) had occurred. The DOL investigator found in favor of the allegor. In a letter dated May 27, the licensee was notified by DOL of required remedial action. The licensee filed an appeal, invoking their right to a formal hearing. This aspect remains open (UNR-88-13-02). Also, as a result of NRC follow-up on another allegation, the licensee has been asked to include, with the response to a notice of violation, their actions to improve addressal of employee concerns. (5/28/88 NRC letter forwarding Inspection Report 50-336/88-07.)

#### 8.4 88-1-0040, "Update on Improper Radiation Monitor Calibration and Other Concerns"

##### 8.4.1 Control Room Radiation Monitors

On April 11, a licensee employee approached the inspector with the following concerns: control room area radiation monitors are not calibrated properly and nuclear concerns are not being addressed adequately by licensee management. The inspector reviewed the first concern during inspection 50-336/88-07, and concluded that the licensee was not in full compliance with the TS or with commitments in the Final Safety Analysis Report (FSAR). The response letter from the licensee on the proposed Notice of Violation and Notice of Deviation should address licensee actions to improve the effectiveness of addressal of employee concerns. This item remains open pending licensee response (due in mid-July 1988 based on a licensee telephone request for the time needed to respond) and pending implementation of planned actions.

During subsequent meetings with the allegor, the inspector reviewed other concerns. These were: Excore/Incore surveillance during the end of the refueling outage not properly calibrated, channel "D" of the Reactor Protection System (RPS) not responding properly due to an intermittent problem, and incorrect oil level indication for the Reactor Coolant Pumps (RCPs). These are discussed further in the following.

##### 8.4.2 "D" Reactor Protection System Response

The inspector reviewed the allegor's concerns about operability of RPS Channel "D" during plant startup from the refueling outage. The allegor's specific concern on RPS Channel "D" was intermittent response of the cold leg temperature (Tc) input

29  
 Dates 5/3~~1~~6/13/88  
 50-336/88-13  
 7/7/88

The allegor saw pigeons inside containment during the refueling outage in February, 1988. He was concerned that the pigeons would spread radioactive contamination and that they might be contaminated and be eaten by people. NRC radiation specialists evaluated this as not a radiation safety hazard. The inspector discussed with licensee management the advisability of preventing pigeon entrance into containment for house-keeping reasons. The licensee committed to address methods of preventing pigeons from entering containment during outages.

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#### 8.3 RI-88-A-0029, "Update on Procedural Compliance in Metrology Lab"

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K/27

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#### 8.4 88-A-0040, "Update on Improper Radiation Monitor Calibration and Other Concerns"

##### 8.4.1 Control Room Radiation Monitors

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

30

Docket Nos. : 50-245; 50-336;  
50-423; 50-213

JUL 14 1988

Docket No. 50-245

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

Gentlemen:

Subject: July 8, 1988 Management Meeting

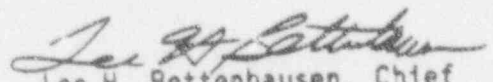
This refers to the July 8, 1988 management meeting, held at your request, in the Region I office (see Enclosure 1 for Attendees). We appreciate your interest in keeping us informed of your plans and priorities at the Haddam Neck and Millstone sites.

Matters discussed during this meeting included your corporate resource allocations, support philosophy for nuclear power plants, engineering support, Haddam Neck plant activities, Millstone Unit 3 activities, a new procedure for soliciting nuclear safety concerns at Millstone, and licensing initiatives for Northeast Utilities plants.

On our part, we outlined changes to the Systematic Assessment of Licensee Performance (SALP) Report by the NRC.

Thank you for your cooperation and for your information input. We look forward to other informative and productive meetings.

Sincerely,

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

Enclosures:

1. Meeting Attendees
2. NU/NNECO Viewgraphs

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K/28



MEETING WITH NRC

JULY 8, 1988

PRESENTATION ON

NU

INITIATIVES

KING OF PRUSSIA, PA

## MEETING AGENDA

E. J. MROZKA

- NU RESOURCE ALLOCATIONS
- CORPORATE SUPPORT PHILOSOPHY

G. L. JOHNSON

- ENGINEERING SUPPORT OF THE OPERATING UNITS

D. B. MILLER

- OVERVIEW OF HADDAM NECK PLANT ACTIVITIES

S. E. SCACE

- NEW PROCEDURES FOR RESPONDING TO NUCLEAR SAFETY CONCERNS

C. H. CLEMENT

- OVERVIEW OF MILLSTONE UNIT NO. 3 ACTIVITIES

R. M. KACICH

- LICENSING INITIATIVES AND STATUS

E. J. MROZKA

- SUMMARY

NEW PROCEDURES FOR RESPONDING TO  
NUCLEAR SAFETY CONCERNS

STEVE E. SCACE  
SUPERINTENDENT  
MILLSTONE NUCLEAR POWER STATION

MILLSTONE ALLEGATIONS PROGRAM

- 0 RESPONSIVE TO CURRENT SITE ACTIVITIES
- 0 APPLICABLE TO ALL ON-SITE PERSONNEL
- 0 CONFIDENTIAL TELEPHONE ACCESS
- 0 ALLEGATIONS PROGRAM MANAGER
- 0 PERIODIC REPORTS TO EXECUTIVE MANAGEMENT

## DETAILS OF ALLEGATION PROCEDURE

- 0 ADDRESSES ONLY NUCLEAR SAFETY ALLEGATIONS
- 0 REQUIRES DOCUMENTATION, EVALUATION, AND RESOLUTION
- 0 DIRECTED AT THE WORKER WHO WANTS TO SPEAK WITH SOMEONE FROM NU CONFIDENTIALLY
- 0 UTILIZES "LESSONS LEARNED" FROM MILLSTONE UNIT 3 PROGRAM
- 0 INTENDED TO PRESENT A VIABLE OPTION FOR AN EMPLOYEE BEFORE THEY CONTACT THE NRC

IMPLEMENTATION OF REVISED NU  
ALLEGATIONS PROGRAM

- 0 MILLSTONE PROGRAM WILL BE OPERATED AS A PILOT PROGRAM
- 0 REVISED PROGRAMS WILL BE INSTITUTED AT BOTH CONNECTICUT YANKEE AND BERLIN
- 0 A SINGLE ALLEGATIONS PROGRAM MANAGER WILL BE RESPONSIBLE FOR THE ENTIRE PROGRAM AND WILL RESIDE IN BERLIN

U.S. NUCLEAR REGULATORY COMMISSION  
REGION I

Report No. 50-336/88-24

Docket No. 50-336

License No. DPR-65

Licensee: Northeast Nuclear Energy Company  
P.O. Box 270  
Hartford, CT 06101-0270

Facility Name: Millstone Nuclear Power Station, Unit 2

Inspection At: Waterford, Connecticut

Dates: October 13 to November 23, 1988

Reporting Inspector: P. J. Habighorst, Resident Inspector

Inspectors: W. J. Raymond, Senior Resident Inspector, Millstone  
F. J. Crescenzo, Senior Resident Inspector, Shoreham  
P. J. Habighorst, Resident Inspector, Millstone 2  
G. S. Barber, Resident Inspector, Millstone 3  
C. H. Woodard, Reactor Engineer, DRS  
D. H. Jaffe, Project Manager, NRR  
N. Trehan, Specialist Inspector, NRR

Approved by: *E. C. McCabe Jr*  
E. C. McCabe, Chief, Reactor Projects Section 1B

12/14/88  
Date

Inspection Summary: 10/13/88-11/23/88 (Report 50-336/88-24)

Areas Inspected: Routine resident and specialist inspection of plant operations, surveillance, maintenance, previously identified items, a reactor trip, Plant Incident Reports (PIRs), security, allegations, periodic reports, a service water leak, and committee activities.

Results: No unsafe conditions were identified. No violations or deviations were identified. Further NRC follow-up is planned on Metrology Lab allegations, the service water leak, and access control to security areas. Good interdepartmental coordination was identified during relatively complex in-service testing involving boric acid reduction in storage tanks and pump suction lines.

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*8812230022*

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-- the corrosion expected based on a worst-case velocity profile would not decrease wall thickness below 0.030 inch before February 1989.

The licensee installed a temporary rubber patch to stop the leak. The inspector questioned the licensee on the weld repair procedures provided in ASME Section XI as required per 10 CFR 50.55(a)(g). The repair procedure in ASME Section XI is referenced in IW-4000, IWV-3640, IWV-3612 and IWA-5000. The licensee plans to replace the affected service water header in the February 1988 outage. The inspector will continue to review licensee actions on weld repair for the service water system. This is an unresolved item (UNR 88-24-04).

## 9.0 Allegations (92702/92720/56700)

### 9.1 Separate Review of Allegation RI-88-A-0029

A separate technical review was conducted of allegation RI-88-A-29, which concerned activities in the Metrology Laboratory. The technical aspects of the allegation were found unsubstantiated during the NRC review documented in Inspection Report 50-336/88-07. Concerns related to job discrimination and reviewed by the Department of Labor (DOL) were not addressed in the NRC reviews. Within the scope of this review, the allegation was not substantiated; however, discrepancies unrelated to the allegation were noted by the inspector.

One allegation was that a revision to procedure I/C 1101C, "Simpson Multimeter Calibration," was improper because it reversed the error recorded on the calibration data report. Prior to the revision, the technician would record the reading of the meter being calibrated (TI) with the standard set at a nominal input value. The revision now requires the technician to record the standard's input value after fine adjustment of the standard to make the TI read the desired nominal value. This changes the recorded error from a "plus" to a "minus," or vice versa but does not change the error magnitude. Both the previous and the revised method result in satisfactory calibration of the meter. The only difference is the recorded data point sign. Therefore, the specific allegation was unsubstantiated.

In conjunction with this review, the inspector noted that the input value of the standard cannot be finely adjusted when calibrating resistance scales. This prohibits compliance with Step 7.3 of procedure I/C 1101C which requires the technician to vary the input value of the standard until the TI reads nominal value. Because of this, the technicians have resorted to a variation of the old method of data recording in order to make the data conform to the revised recording requirements. The licensee was informed of this discrepancy. This will be followed in a future inspection.

A second allegation was that certain technicians had not complied with the requirements of procedure I/C 1104A, "I&C Pressure Test Gauges Calibration" for data logging and procedure performance. The allegation was

founded on identical data recordings for increasing as well as decreasing pressure points during calibrations of Heise pressure gauges. The al-  
leger felt it was improbable that such recordings would be identical and  
concluded they were the result of improper procedure compliance or data  
logging. The al-  
leger based his conclusion on personal experience with  
calibration of such gauges and on his knowledge of hysteresis effects.

The inspector reviewed the calibration records for several Heise pressure  
gauges. It was noted that some technicians were more apt to record  
identical increasing/decreasing pressure values; however, all of the  
technicians had recorded identical values during one or more calibrations.  
Generally, it was not unlikely that a calibration would result in iden-  
tical increasing/decreasing pressure values regardless of which techni-  
cian performed the calibration. The inspector also observed the per-  
formance of a Heise gauge calibration and noted identical or close to  
identical increasing/decreasing pressure values. Based on these obser-  
vations, the inspector could not conclude that recording of identical  
increasing/decreasing pressure values supported an allegation of proce-  
dural non-compliance or data logging errors. The allegation was there-  
fore unsubstantiated.

In conjunction with this review, the inspector noted a discrepancy in  
the licensee's application of the acceptance criteria of procedure I/C  
1104A. Paragraph 2 of I/C 1104A defines acceptance criteria for Heise  
gauges as  $\pm 0.1\%$  of full scale or  $\pm$  one minor scale division, which-  
ever is greater. Heise gauge No. QA-370 is a 0-5000 psig gauge with 5  
psi minor scale divisions. The inspector noted that the acceptance cri-  
teria used for calibration of this gauge was  $\pm 10$  psi, which is incon-  
sistent with the required acceptance criteria of 5 psi. The licensee  
was notified of this discrepancy. This will be followed as an unresolved  
item (UNR 88-24-05) pending further evaluation of the adequacy of the  
 $\pm 10$  psi criterion.

In summary, the technical aspects of the allegation were found to be un-  
substantiated. Two discrepancies unrelated to the specific allegations  
were identified to the licensee.

## 9.2 Heise Pressure Gauge Calibration Inadequacies

On October 7, the inspector received a written memo concerning inadequate  
Heise pressure gauge calibrations from a licensee Instrument and Control  
technician. The memo alleged that, because of a recent revision, I/C  
procedure 1104A would not assure pressure readings on the test instrument  
will be accurate in the decreasing direction; and procedure I/C 1104A  
acceptance criteria does not accurately reflect the manufacturer's  
specification. The al-  
leger described discussions of the above concerns  
with licensee management.

On October 12, the resident inspector discussed the October 7 allegation with the alleged. The resident asked when the technical concerns were addressed to licensee management. The alleged recalled a meeting with the unit superintendent in June 1988 to discuss Metrology Lab concerns. The alleged explained that he informed the superintendent of two basic concerns: (i) inadequacy of I/C 1104A procedure revision, (ii) the discrepancy between manufacturer's recommended tolerances and I/C 1104A tolerances for Heise Pressure gauges.

The inspector reviewed the alleged's technical concerns on calibration of precision Heise pressure gauges. The first issue reviewed was the current revision of I/C 1104A. The Site Operations Review Committee (SORC) approved the current revision (No. 6) on July 20, 1988. The revision to I/C 1104A included step 7.4, a check for hysteresis, and omitted the decreasing pressure data points from the calibration check section (step 7.5). Hysteresis on a Heise pressure gauge is a result of expansion/relaxation/fatigue of the Bourdon tube. Hysteresis effects can be increased by crystallization of the Bourdon tube by excessive cycling, or by a partial fracture of the tube. The inspector reviewed the Dresser Industries "Heise Technical Manual," April 1985 Edition. Licensee procedure I/C 1104A is a verbatim description of section 4.3.4, "Check for Hysteresis," in this Heise Technical Manual. The inspector noted that I/C 1104A was improved by the revision, in that it directly correlated with the manufacturer's recommendation for detecting a hysteresis problem on a Heise pressure gauge. The licensee stated the upgrade to procedure I/C 1104A was a result of an employee allegation identified in routine Inspection Report 50-336/88-07. No inadequacies were noted in procedure adequacy.

In regard to the I/C 1104A change involving removal of decreasing data points during the calibration check, the inspector contacted the manufacturer (Dresser Industries). The manufacturer stated to the inspector that the technical manual identifies twenty specific calibration points to be conducted during a calibration check. The intent was to select ten equally spaced pressure points in escalation of pressure and ten on the relaxation of pressure. According to the manufacturer, if the Heise gauge is not subjected to twenty calibration points, a hysteresis condition in the gauge may not be detected initially, but the hysteresis would be detected later time based on usage. The licensee stated that based on discussions with the manufacturer, the selection of (5) calibration points in parallel with the hysteresis check would successfully detect frictional or hysteresis problems. The inspector will follow the licensee's technical evaluation of this item and specifically technical justification for only performing 25% of the recommended calibration checks for Heise gauges. This is an unresolved item (UNR 88-22-06).

The alleged's second concern was that procedure I/C 1104A acceptance criteria do not accurately reflect the manufacturer's specification. Documents reviewed were:

- "Quality Assurance Topical Report" Rev. 11.
- IEEE Std. 336-1971 "Installation, Inspection, and Testing Equipment for Instrumentation and Electrical Equipment."
- Dresser Industries "Heise Bourdon Tube Gauges, Models "CC", "CM", and "CMM," April, 1985.
- I/C 1104A, Revision 6, "I&C Pressure Test Gauge Calibration."
- I/C 2429, "Safety-related Instrument Calibration."

Licensee procedure (I/C 1104A) acceptance criteria for check calibration of Heise Pressure Gauges is 0.1% of full scale or  $\pm$  one minor scale division, whichever is larger. The manufacturer's allowance for Heise pressure gauges is 0.1% of full scale. The inspector reviewed eleven (11) data sheets associated with procedure I/C 1104A. The data sheets depicted various gauge scales between 0-15 psig and 0-750 psig. For all data sheets reviewed the acceptance criterion was one minor scale division instead of  $\pm 0.1\%$ . The largest allowance determined from review was  $\pm 0.50$  psi for a  $\bar{U}$ -250 psig gauge. The alleged concern was therefore substantiated. The inspector also compared the acceptance criteria for Heise gauge calibrations to safety-related instrumentation tolerances (I/C 2429) and concluded no instance existed where Heise tolerances were less than four times the tolerance of safety-related instruments. Quality Assurance Topical Report, Section 12.2.2 "Calibration Standards" states; "Calibration of equipment should be against standards that have an accuracy of at least four times the required accuracy of the equipment being calibrated. When this is not possible the standards shall have an accuracy that assures the equipment being calibrated will be within required tolerance and the basis of acceptance is documented and authorized by SOPC or PORC for NUPOC-activities. In addition, the calibrating standards shall have greater accuracy than secondary standards being calibrated."

Based on the above, the alleged and substantiated condition has no safety significance. The acceptance criterion stated in licensee procedures is technically acceptable. The inspector had no further questions on this aspect.

### 9.3 RI-88-A-0040, Area Radiation Monitors and Foxboro Limiters

On October 5, the resident inspector received an allegation from a licensee employee. The alleged presented the following items:

- i) Operators silence audible alarms on malfunctioning area radiation monitors by disconnecting the horns.
- ii) Foxboro printed circuit boards are manufactured and installed with problems.
- iii) Worker overtime is not controlled at the station.
- iv) The allegation system not used by workers onsite.

SEP 19 1989

Docket No. 50-336  
File RI-88-A-0101

MEMORANDUM FOR: Michael Perkins, Office Allegations Coordinator  
THRU: E. Wenzinger, Chief, Projects Branch No. 4, DRP  
D. Haverkamp, Chief, Reactor Projects Section 4A, DRP  
FROM: Ebe C. McCabe, Chief, Reactor Projects Section 3B, DRP  
SUBJECT: CLOSEOUT OF ALLEGATION FILE RI-88-A-0101

The subject allegation was made by an individual whose additional allegations are tracked under allegation file RI-88-A-0029. Initial resident inspector inspection of allegation RI-88-A-0101 was documented in Inspection Report 50-336/88-24. Follow-up inspection of the allegation was accomplished by the Millstone Unit 2 Allegation Team Inspection and will be documented in Inspection Report 50-336/89-13. During the course of that team inspection, the allegations made under file RI-88-A-0101 were incorporated into file RI-88-A-0029 and will be tracked in the future under that file number. For this reason, allegation file RI-88-A-0101 is closed.

*Ebe C. McCabe*  
Ebe C. McCabe, Chief  
Reactor Projects Section 3B

cc:  
S. Barr, DRP  
W. Raymond, Millstone

~~9203060430~~

K/31

DEC 15 1988

Docket/License: 50-336/DPR-65

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: Millstone 2 Inspection 50-336/88-24 (10/13/88-11/23/88)

This refers to the resident inspection of Millstone Unit 2 from October 13 through November 23, 1988. The inspection results are described in the enclosed report and were discussed with Messrs. Scace and Keenan of your staff.

No violations were identified and no reply to this letter is required.

We wish to call your attention to a temporary loss of access to certain spaces (Report Detail 6.1). We will continue to evaluate your controls for assuring adequate access to controlled areas.

We also wish to call your attention to open items related to allegations about the Metrology Lab (Report Detail 9). Concerns include the ability to calibrate Simpson Multimeters by literal use of the procedure, Heise gage calibrations to less than the manufacturer's specified accuracy, and whether Heise gage hysteresis checks are sufficient and in accordance with the manufacturer's recommendations.

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 50-336/88-24

OFFICIAL RECORD COPY

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DEC 15 1988

Northeast Nuclear Energy Company

2

cc w/encl:

W. D. Romberg, Vice President, Nuclear Operations  
 ... ..  
 D. O. Nordquist, Director of Quality Services  
 S. E. Scace, Station Superintendent  
 Gerald Garfield, Esquire  
 Public Document Room (PDR)  
 Local Public Document Room (LPDR)  
 Nuclear Safety Information Center (NSIC)  
 NRC Senior Resident Inspector  
 State of Connecticut

bcc w/encl:

Region I Docket Room (with concurrences)  
 Management Assistant, DRMA (w/o enclosures)  
 DRP Section Chief  
 J. Shedlosky, SRI, Haddam Neck  
 W. Raymond, SRI, Millstone 1,2 & 3  
 D. Jaffe, LPM, NRR  
 R. Bores, DRSS  
 C. Anderson, DRS (Detail 7.0)  
 R. Gallo, DRS (Detail 3.7)  
 R. Keimig, DRSS (Detail 6.0)  
 M. Conner (SIMS Coordinator) (Detail 3.1)  
 F. Crescenzo, DRP  
 C. Woodard, DRS  
 N. Trehan, NRR  
 P. Eselgroth, DRS  
 E. Brach, NRR/RVIB (Detail 9.3)

RI:DRP  
 Habighorst/meo  
 12/7/88  
 12/15

RI:DRP  
 Raymond  
 12/15

RI:DRP  
 McCabe  
 12/15

RI:DRP  
 Bettenhauser  
 12/15/88

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11/29/80

U.S. NUCLEAR REGULATORY COMMISSION  
REGION I

Report No. 50-336/88-24

Docket No. 50-336

License No. DPR-65

Licensee: Northeast Nuclear Energy Company  
P.O. Box 270  
Hartford, CT 06101-0270

Facility Name: Millstone Nuclear Power Station, Unit 2

Inspection At: Waterford, Connecticut

Dates: October 13 to November 23, 1988

Reporting  
Inspector: P. J. Habighorst, Resident Inspector

Inspectors: W. J. Raymond, Senior Resident Inspector, Millstone  
F. J. Crescenzo, Senior Resident Inspector, Shoreham  
P. J. Habighorst, Resident Inspector, Millstone 2  
G. S. Barber, Resident Inspector, Millstone 3  
C. H. Woodard, Reactor Engineer, DRS  
D. H. Jaffe, Project Manager, NRR  
N. Trehan, Specialist Inspector, NRR

Approved by: *E. C. McCabe Jr*  
E. C. McCabe, Chief, Reactor Projects Section 1B

12/14/88  
Date

Inspection Summary: 10/13/88-11/23/88 (Report 50-336/88-24)

Areas Inspected: Routine resident and specialist inspection of plant operations, surveillance, maintenance, previously identified items, a reactor trip, Plant Incident Reports (PIRs), security, allegations, periodic reports, a service water leak, and committee activities.

Results: No unsafe conditions were identified. No violations or deviations were identified. Further NRC follow-up is planned on Metrology Lab allegations, the service water leak, and access control to security areas. Good interdepartmental coordination was identified during relatively complex in-service testing involving boric acid reduction in storage tanks and pump suction lines.

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The licensee installed a temporary rubber patch to stop the leak. The inspector questioned the licensee on the weld repair procedures provided in ASME Section XI as required per 10 CFR 50.55(a)(g). The repair procedure in ASME Section XI is referenced in IW-4000, IWV-3640, IWV-3612 and IWA-5000. The licensee plans to replace the affected service water header in the February 1988 outage. The inspector will continue to review licensee actions on weld repair for the service water system. This is an unresolved item (UNR 88-24-04).

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In conjunction with this review, the inspector noted that the input value of the standard cannot be finely adjusted when calibrating resistance scales. This prohibits compliance with Step 7.3 of procedure I/C 1101C which requires the technician to vary the input value of the standard until the TI reads nominal value. Because of this, the technicians have resorted to a variation of the old method of data recording in order to make the data conform to the revised recording requirements. The licensee was informed of this discrepancy. This will be followed in a future inspection.

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In summary, the technical aspects of the allegation were found to be un-  
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## 9.2 Heise Pressure Gauge Calibration Inadequacies

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with licensee management.

On October 12, the resident inspector discussed the October 7 allegation with the alleged. The resident asked when the technical concerns were addressed to licensee management. The alleged recalled a meeting with the unit superintendent in June 1988 to discuss Metrology Lab concerns. The alleged explained that he informed the superintendent of two basic concerns: (i) inadequacy of I/C 1104A procedure revision, (ii) the discrepancy between manufacturer's recommended tolerances and I/C 1104A tolerances for Heise Pressure gauges.

The inspector reviewed the alleged's technical concerns on calibration of precision Heise pressure gauges. The first issue reviewed was the current revision of I/C 1104A. The Site Operations Review Committee (SORC) approved the current revision (No. 6) on July 20, 1988. The revision to I/C 1104A included step 7.4, a check for hysteresis, and omitted the decreasing pressure data points from the calibration check section (step 7.5). Hysteresis on a Heise pressure gauge is a result of expansion/relaxation/fatigue of the Bourdon tube. Hysteresis effects can be increased by crystallization of the Bourdon tube by excessive cycling, or by a partial fracture of the tube. The inspector reviewed the Dresser Industries "Heise Technical Manual," April 1985 Edition. Licensee procedure I/C 1104A is a verbatim description of section 4.3.4, "Check for Hysteresis," in this Heise Technical Manual. The inspector noted that I/C 1104A was improved by the revision, in that it directly correlated with the manufacturer's recommendation for detecting a hysteresis problem on a Heise pressure gauge. The licensee stated the upgrade to procedure I/C 1104A was a result of an employee allegation identified in routine Inspection Report 50-336/88-07. No inadequacies were noted in procedure adequacy.

In regard to the I/C 1104A change involving removal of decreasing data points during the calibration check, the inspector contacted the manufacturer (Dresser Industries). The manufacturer stated to the inspector that the technical manual identifies twenty specific calibration points to be conducted during a calibration check. The intent was to select ten equally spaced pressure points in escalation of pressure and ten on the relaxation of pressure. According to the manufacturer, if the Heise gauge is not subjected to twenty calibration points, a hysteresis condition in the gauge may not be detected initially, but the hysteresis would be detected later time based on usage. The licensee stated that based on discussions with the manufacturer, the selection of (5) calibration points in parallel with the hysteresis check would successfully detect frictional or hysteresis problems. The inspector will follow the licensee's technical evaluation of this item and specifically technical justification for only performing 25% of the recommended calibration checks for Heise gauges. This is an unresolved item (UNR 88-22-06).

The alleged's second concern was that procedure I/C 1104A acceptance criteria do not accurately reflect the manufacturer's specification. Documents reviewed were:

- "Quality Assurance Topical Report" Rev. 11.
- IEEE Std. 336-1971 "Installation, Inspection, and Testing Equipment for Instrumentation and Electrical Equipment."
- Dresser Industries "Heise Bourdon Tube Gauges, Models "CC", "CM", and "CMM," April, 1985.
- I/C 1104A, Revision 6, "I&C Pressure Test Gauge Calibration."
- I/C 2429, "Safety-related Instrument Calibration."

Licensee procedure (I/C 1104A) acceptance criteria for check calibration of Heise Pressure Gauges is 0.1% of full scale or  $\pm$  one minor scale division, whichever is larger. The manufacturer's allowance for Heise pressure gauges is 0.1% of full scale. The inspector reviewed eleven (11) data sheets associated with procedure I/C 1104A. The data sheets depicted various gauge scales between 0-15 psig and 0-750 psig. For all data sheets reviewed the acceptance criterion was one minor scale division instead of  $\pm$ 0.1%. The largest allowance determined from review was +0.50 psi for a 0-250 psig gauge. The alleged initial concern was therefore substantiated. The inspector also compared the acceptance criteria for Heise gauge calibrations to safety-related instrumentation tolerances (I/C 2429) and concluded no instance existed where Heise tolerances were less than four times the tolerance of safety-related instruments. Quality Assurance Topical Report, Section 2.2 "Calibration Standards" states; "Calibration of equipment shall be against standards that have an accuracy of at least four times the required accuracy of the equipment being calibrated. When this is not possible the standards shall have an accuracy that assures the equipment being calibrated will be within required tolerance and the basis of acceptance is documented and authorized by SORC or PORC for NUPOC-activities. In addition, the calibrating standards shall have greater accuracy than secondary standards being calibrated."

Based on the above, the alleged and substantiated condition has no safety significance. The acceptance criterion stated in licensee procedures is technically acceptable. The inspector had no further questions on this aspect.

### 9.3 RI-88-A-U040, Area Radiation Monitors and Foxboro Limiters

On October 5, the resident inspector received an allegation from a licensee employee. The alleged presented the following items:

- i) Operators silence audible alarms on malfunctioning area radiation monitors by disconnecting the horns.
- ii) Foxboro printed circuit boards are manufactured and installed with problems.
- iii) Worker overtime is not controlled at the station.
- iv) The allegation system not used by workers onsite.