(45)

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

FEB 27 1992

[redacted]

Dear [redacted]

The NRC Region I office completed its followup of the concerns that you brought to our attention on May 20, 1991, regarding Millstone Units 1 and 2. Our resolution of these concerns is as follows:

(1) You asserted that the Northeast Utilities (NU) April 26, 1991 response to the NRC, concerning the use of calibration sources traceable to the National Institute of Standards and Technology at Millstone Unit 2, was not correct. You based this on statements included in the NUSCO Radiological Assessment Branch (RAB) Phase 2 report of November, 1989.

The NRC completed two inspections relating to the traceability of calibration sources and documented the results in reports 50-336/91-19 and 91-27. The inspections concluded that NU has traceability of the past and current sources to national standards. We consider this concern resolved and therefore plan no further action.

(2) You asserted that on May 19, 1991, NU failed to heed a Millstone Unit 1 technician's recommendation on the proper installation of "O" ring seals which, as a result, had to be redone on May 20, 1991. Further , you stated the reinstallation of the "O" rings at Millstone Unit 1 resulted in additional radiation for a technician and is not consistent with the ALARA philosophy.

The NRC completed inspection of this concern and documented the results in report 50-245/91-06. The inspector concluded that, although the installation procedure lacked some needed detail, it was adequate and consistent with vendor information. We substantiated the fact that rework on the moisture intrusion seals was required and that an additional 600 millirem of radiation exposure was incurred by three technicians. However, the radiation exposure received by the workers was well within regulatory limits and licensee guidelines. Based on the findings of the inspection, we consider this concern resolved and therefore plan no further action.

Q/48

(3) You asserted that technicians were required to implement a modification of a float switch on the Emergency Diesel Generator clean waste tank at Millstone Unit 2 using a Plant Design Change Request (PDCR) that failed to provide correct as-built drawings. Since the concern was not specific, you were contacted and on August 28, 1991, you provided the float switch numbers, the PDCR No. (MP2-90-035), and the drawing numbers.

The Region 1 staff reviewed the PDCR documents and the drawings, and has determined that the only problem with the subject PDCR was the color of the wire to be used. The PDCR MP2-90-035 specified "yellow", which was not available and "blue" had to be substituted. The NRC inspected the drawings in question, found that they reflected the correct wire color presently installed (i.e. originally yellow, but now blue), and documented the results in report 50-336/91-31. We consider this concern to be insignificant. We therefore plan no further action.

(4) You stated that the RAB Phase 2 audit report of November, 1989 cites the need to maintain an exact geometry when calibrating a radiation monitor. You asserted that this requirement is not being met at Millstone Unit 2 and many of your past monitor calibration concerns have dealt with this issue (geometry).

The NRC completed inspection of this concern and documented the results in report 50-336/91-19. The inspector's conclusion was that "the licensee's calibration technique was excellent" and "the licensee conducted an excellent program to calibrate the effluent/process radiation monitors". We consider this concern resolved and therefore plan no further action.

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,

Edward Wenzinger

Edward Wenzinger, Chief
Reactor Projects Branch 4

Attachments: (1) Excerpt from NRC Inspection Report 50-245/91-06 (Detail 5.1.2).
(2) NRC Inspection Report 50-336/91-19.
(3) Excerpt from NRC Inspection Report 50-336/91-27 (Detail 2.0).
(4) Excerpt from NRC Inspection Report 50-336/91-31 (Detail 12.0).

[redacted]

bcc /w encl:
Allegation file: RI-91-A-0111
E. Conner
W. Raymond/T. Shedlosky
Contractor's Office (Roberts)

concurrences:

RI:DRP
Barkley
12/12/91

RI:DRP
Kelly
12/12/91

RI:DRP
Wenzinger
12/12/91

JUN 4 1991

Docket No. 50-245

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

Dear Mr. Mroczka:

Subject: Millstone Unit 1 Inspection 91-06

This refers to the routine safety inspection conducted by Mr. D. Dempsey of this office on April 9 through May 20, 1991, at Millstone Unit 1 in Waterford, Connecticut. The preliminary findings were discussed with Mr. S. Scace and others 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 consisted of performance observations of ongoing activities, independent verification of safety system status and design configuration, interviews with personnel, and review of records.

Good performance by unit management and staff was noted in the overall conduct of the refueling outage and in response to unanticipated events. Focus was consistently maintained on the safety and quality of work.

Our review of the circumstances surrounding the dry tube event of May 1 found that the event was caused, in part, by your failure to recognize and address in procedures the potential for tube breakage during handling outside of the reactor vessel cavity. The event had low radiological significance due to its short duration, but suggests a need for more thorough preparation for non-routine evolutions. Potentially significant exposures were avoided by close attention to the work activity and prompt action by Operations and Health Physics personnel. We acknowledge your conservative and successful efforts to assure the safe conduct of the remainder of the dry tube replacements and subsequent local power range monitor work.

9106250152

Your cooperation with us is appreciated.

Sincerely,
ORIGINAL SIGNED BY
EDWARD C. WENZINGER

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

Enclosure: NRC Region I Inspection Report No. 50-245/91-06

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

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report/ Docket:	50-245/91-06
License No.:	DPR-21
Licensee:	Northeast Nuclear Energy Company P. O. Box 270 Hartford, CT 06141-0270
Facility Name:	Millstone Nuclear Power Station, Unit 1
Inspection At:	Waterford, CT
Dates:	April 9 - May 20, 1991
Inspectors:	W. J. Raymond, Senior Resident Inspector D. A. Dempsey, Resident Inspector, Unit 1

Approved by: Eugene M. Kelly June 14, 199
Eugene M. Kelly, Chief Date
Reactor Projects Section 4A

Areas Inspected: Routine NRC resident inspection of plant operations, radiological controls, maintenance, surveillance, security, outage activities, licensee self-assessment, and periodic reports.

Results: See Executive Summary

TABLE OF CONTENTS

The inspection procedure (IP) from NRC Manual Chapter 2515 that was used as guidance is parenthetically listed for each report section.

The inspector concluded that licensee corrective actions were consistent with vendor recommendations and were acceptable. The results of on-going analyses, identification of the failure mechanism, and final corrective activities will be documented in a subsequent routine inspection report. The inspector had no further questions regarding this maintenance activity.

5.1.2 Source Range and Intermediate Range Monitors Detector Installation Rework

During reinstallation of source and intermediate range monitor detectors following dry tube replacement, incorrect installation of a moisture intrusion O-ring seal between the shuttle and drive tubes of a detector drive assembly required that the installation be reworked. The discrepant condition was discovered when a five psig tightness test of the assembly was performed pursuant to the installation procedure. Three instrumentation and controls technicians received an additional radiation exposure of 600 millirem (total) as a result of the rework.

The inspector reviewed procedure IC-401E, SRM/IRM Detector Installation to assess the adequacy of guidance provided for installation of the seal. Following the vendor installation procedure verbatim, the applicable step merely instructs the technician to ensure that the O-ring is seated properly. A figure of the entire drive assembly is appended to the procedure and shows the general location of the O-ring. However, the figure is not detailed sufficiently to assure proper installation. The vendor drawing of the assembly shows the O-ring in a detail blowup of shuttle tube/drive tube interface, but it was not obvious to the inspector that the incorrect installation reasonably could have been prevented even if this detail had been part of the procedure.

Since this maintenance activity had not been performed previously by the licensee, special training was conducted which included a mockup of the drive and cable guard assembly. The mockup did not include the section of the assembly which contained the O-ring, as this equipment was not available in the shop. The inspector considered this pre-evolution training to have been reasonable and acceptable. The inspector concluded that the procedure lacked some detail, but was consistent with vendor procedures and adequate to assure the proper installation of the detectors.

The incorrect O-ring installation occurred as a result of lack of experience and the general nature of the guidance provided by vendor and licensee documents. Pre-evolution training and briefings were adequate. The licensee intends to incorporate lessons learned into future procedure training. The additional radiation exposure received by the workers was well within regulatory limits and licensee guidelines. The inspector had no further questions regarding this maintenance activity.

AUG 5 1991

Docket No. 50-336

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

Dear Mr. Mroczka:

Subject: Millstone Unit 2 Inspection Number 50-336/91-19

This letter refers to the special inspection conducted by Dr. Jason C. Jang of this office on July 22-24, 1991 of activities authorized by NRC License Number DPR-65, and to the discussions of our findings held by Dr. Jang with Mr. J. Keenan and other members of your staff at the conclusion of the inspection.

Areas examined during this inspection are described in the NRC Region I Inspection Report which is enclosed with this letter. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector.

Within the scope of this inspection, very good routine radioactive gaseous and liquid effluent control programs were implemented by the Chemistry Department. Excellent management support to maintain the radiation monitoring system integrity and operability was also noted during this and previous inspections. No violations or deviations were identified during this inspection.

No reply to this letter is required. Your cooperation with us in this matter is appreciated.

Sincerely,

Original Signed By:
James H. Joyner

James H. Joyner, Chief
Facilities Radiological Safety
and Safeguards Branch
Division of Radiation Safety
and Safeguards

Enclosure: NRC Region I Inspection Report Number 50-336/91-19

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U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report Number 50-336/91-19

Docket Number 50-336

License Number DPR-65

Licensee: Northeast Nuclear Energy Company
P.O. Box 270
Hartford, Connecticut 06141-0270

Facility Name: Millstone Nuclear Generating Station, Unit 2

Inspection At: Waterford, Connecticut

Inspection Conducted: July 22-24, 1991

Inspector J. C. Jang 7-26-91
J. C. Jang, Sr. Radiation Specialist Date
Effluents Radiation Protection Section (ERPS)
Facilities Radiological Safety and
Safeguards Branch (FRS&SB)

Approved by : R. J. Bores 7-31-91
R. J. Bores, Chief, ERPS, FRS&SB Date
Division of Radiation Safety and Safeguards

Inspection Summary: Special, announced inspection of the licensee's radioactive liquid and gaseous effluent control programs including: calibration and functional test of radioactive liquid and gaseous effluent/process radiation monitoring systems (RMS), and implementation of the Offsite Dose Calculation Manual.

Results: Very good routine radioactive liquid and gaseous effluent control programs were implemented by the Chemistry Department. A very good program to calibrate the effluent/process radiation monitors was also implemented by the I&C Department. Excellent management support to maintain the radiation monitoring system integrity and operability was also noted during this inspection. Within the areas inspected, no violations or deviations were identified.

DETAILS

1.0 Individuals Contacted

1.1 Licensee Personnel

* J. Becker, I&C Manager
  R. Crandall, Supervisor, Radiological Assessment Branch
  T. Itteilag, Unit 2 Chemistry Supervisor
* J. Kangley, Senior Engineer, Chemistry Department
* J. Keenan, Unit 2 Director
  P. Smith, Unit 2 I&C Supervisor

1.2 NRC Personnel

* P. Habighorst, Resident Inspector
  W. Raymond, Senior Resident Inspector

* Denotes personnel who attended that exit meeting on July 24, 1991. Other licensee employees were also contacted or interviewed during this inspection.

2.0 Purpose

The purpose of this special inspection was to review the licensee's programs for the areas of liquid and gaseous effluent controls, including calibration of the effluent and process radiation monitoring systems (RMS); implementation of the Offsite Dose Calculation Manual (ODCM); and assessment of environmental impact and public health and safety.

3.0 Calibration of Effluent/Process Radiation Monitoring Systems

The inspector reviewed the licensee's most recent calibration and functional test results for the following liquid and gaseous effluent/process radiation monitors, and for the following effluent flow instrumentation to determine the implementation of the Technical Specification (TS) requirements.

o High Range Stack Gas Radiation Monitor (RM-8186)
o Normal Range Stack Gas Radiation Monitor (RM-8132B)
o Waste Gas Process Radiation Monitor (RM-9095)
o Containment Gaseous Process Radiation Monitor (RM-8123B)
o Steam Jet Air Ejector Gaseous Radiation Monitor (RM-5099)
o Aerated Liquid Radwaste Process Radiation Monitor (RM-9116)

- o Clean Liquid Radwaste Process Radiation Monitor (RM-9094)
- o Steam Generator Blowdown Liquid Process Radiation Monitor (RM-4262)
- o Waste Neutralization Sump Radiation Monitor (RM-245)
- o Reactor Building Closed Cooling Water Liquid Process Radiation Monitor (RM-6038)
- o Effluent Flow Instrumentation
  - Stack Flow Instrumentation (F-8412)
  - Aerated Liquid Flow Instrumentation (F-9118)
  - Clean Liquid Flow Instrumentation (F-9050)
  - Waste Neutralization Sump Flow Instrumentation (F-246)

The I&C Department had the responsibility to perform electronic and radiological calibrations for the above monitors, and to perform calibrations of the above effluent flow instrumentation. All reviewed results were within the licensee's acceptance criteria. The licensee performed calibrations and functional testss for the above radiation monitors more frequently than required by the TS as shown the following table.

RMS/Flow Inst.	TS Requirement		Licensee's Performance	
	Calibration	Functional Test	Calibration	Functional Test
RM-8186	Refueling	Monthly	Refueling	Monthly
RM-8132B	Refueling	Quarterly	Quarterly	Monthly
RM-9095	Refueling	Quarterly	Quarterly	Monthly
RM-8123B	Refueling	Quarterly	Annually	Monthly
RM-5099	Refueling	Quarterly	Quarterly	Monthly
RM-9116	Refueling	Quarterly	Quarterly	Monthly
RM-9094	Refueling	Quarterly	Quarterly	Monthly
RM-4246	Refueling	Quarterly	Quarterly	Monthly
RM-245	Refueling	Quarterly	Quarterly	Quarterly
RM-6038	Refueling	Quarterly	Quarterly	Monthly
F-8412	Refueling	Not Required	Quarterly	Quarterly
F-9118	Refueling	Quarterly	Quarterly	Quarterly
F-9050	Refueling	Quarterly	Quarterly	Quarterly
F-246	Refueling	Quarterly	Quarterly	Quarterly

During the review of the high range stack gas radiation monitor calibration results, the inspector noted that the licensee upgraded Procedure SP 2404AR, "Unit 2

Stack Gaseous High Range Radiation Monitor, RM-8186, Functional Test" on July 12, 1991. Therefore, the licensee will determine the accuracy between meter, computer, and chart recorder rather than chart recorder during the monthly functional test. This item was recommended by the Radiological Assessment Branch (RAB), Nuclear Engineering Department during the RMS Phases I and II Audits conducted in December 1988 and November 1989, respectively. Based on these audits, the RAB and the licensee issued the Radiation Monitor Manual (see combined Inspection Report Nos. 50-245/90-18, 50-336/90-20, and 50-423/90-18 for details). The inspector noted that calibration (performed on January 12, 1990) and functional test (perform on June 26, 1991) results for the high range stack gas radiation monitor were within the licensee's acceptance criteria. The inspector stated that the determination of the accuracy between meter, computer and chart recorder will be reviewed during a subsequent inspection. The inspector also noted that this monitor was out of service as of July 16, 1991 due to failure of the power supply. The licensee stated that the replacement power supply was delivered on July 23, 1991 and will be installed within a week. The licensee also stated that the reliability and operability of the high range stack gas radiation monitor will be followed closely. It should be noted that this high range stack radiation monitor was installed to monitor potential releases in the event of an accident. All Unit 2 gaseous effluents are released through the Unit 1 stack during any accident.

The inspector noted that the licensee's calibration technique for the above radiation monitors was excellent. Radiological calibrations of these monitors were performed as the primary calibration (same monitoring geometry with National Institute of Standards and Technology traceable radionuclides: Cs-137 for the liquid monitors and Kr-85 for the gaseous monitors). The inspector discussed with the licensee the benefit of the current calibration technique versus using solid sources (button sources), because the primary calibration technique requires many extra steps during the calibration. The inspector stated that using button sources is very common after the primary calibration (See ANSI N13.10-1974, "Specification and Performance of On-site Instrumentation for Continuously Monitoring Radioactivity in Effluents" for details) and is acceptable to the NRC.

Based on the above review, the inspector determined that the licensee conducted an excellent program to calibrate the effluent/process radiation monitors.

4.0 Operability and Reliability of Radiation Monitoring Systems (RMS)

Contamination of the liquid effluent monitor sample chamber is a generic problem throughout the nuclear industry. Radioactive materials will plate out on the sample chamber resulting in increased background levels. Currently there is no optimum solution. The most common practice throughout the industry is flushing the sample chamber using clean water after radioactive liquid releases to reduce background. Occasionally the sample chamber is cleaned using decontamination solution, or the chamber is replaced if the background level is too high to obtain the required monitor sensitivity. During cleaning or replacement of the chamber, additional grab samples are taken and analyzed to satisfy the TS requirement for sampling liquid effluent prior to release.

The inspector reviewed the licensee's draft investigation results regarding a high background level [as high as 12,000 counts per minute (CPM)] for the steam generator blowdown radiation monitor on May 13, 1991. The investigation results demonstrated that the actual background level (electronic noise in the RMS, ambient background, and contamination of the sample chamber) was 5,500 CPM and the actual blowdown activity was 6,500 CPM. The licensee also calculated and demonstrated that 6,500 CPM correlated well with the latest monitor calibration curve and measured blowdown grab sample activity of about 10E-5 microcuries/cc (uCi/cc) during that time period. Based on the above licensee's investigation results, the inspector had no further questions in this matter.

Although the calibration results were within the acceptance criteria, one should perform the systematic trending analysis (RMS results versus measured effluent sample activity) to assess the RMS reliability. To track the reliability of radioactive liquid and gaseous effluent monitors, the RAB and Chemistry Department initiated the trending analysis in late 1990. The inspector conducted an independent evaluation during this inspection to determine the reliability. The inspector observed the actual radioactive liquid release process performed by the Operations and Chemistry (Liquid Discharge Permit Number 2283) on July 23, 1991. A grab sample counting result using a Ge gamma spectrometry system was 4.03E-5 uCi/cc for activation/fission products (about 2% of total activity and dominated by Sb-124) and 1.79E-3 uCi/cc for noble gases (about 98% of total activity and dominated by Xe-133). The inspector expected the RMS response would be higher than the grab sample result due to the contribution of noble gases (98%) and small contribution of Cs-137 activity (about 4.5% of total activation/fission products). The licensee used Cs-137 for the calibration. The net radiation monitoring result (RM-9094) was 27,000 CPM. The inspector converted this net monitoring result to activity, as uCi/cc, using a conversion factor

(CPM/uCi/cc) of RM-9094 and compared the result to a grab sample result. The comparison between the monitoring results and the grab sample indicated that the monitoring result was higher by about a factor of 2, as expected). The inspector also compared gaseous effluent monitoring results against grab sample measurement results for 1991 and the comparisons were good.

Based on the observation and independent evaluation, the inspector determined that the RM-9094 was operable and reliable. The inspector stated that the licensee's trending analysis was an excellent tool to trend the operability and reliability of the RMS.

5.0 Radioactive Liquid and Gaseous Effluent Control Programs

The inspector reviewed selected licensee's procedures and radioactive liquid and gaseous discharge permits to determine the implementation of the TS and the Offsite Dose Calculation Manual (ODCM). The selected radioactive liquid and gaseous discharge permits were completed and dose projections were made prior to discharge as required. The inspector also determined that the reviewed discharge permits met the TS requirements for sampling and analyses at the frequencies and lower limit of detections established in the TS.

Based on these reviews, the inspector determined that the licensee has conducted an effective radioactive liquid and gaseous effluent control programs.

6.0 Assessment

The licensee has experienced daily routine difficulties, such as high background problem for the effluent monitors, purchasing of monitoring system components, and procedure upgrading in the effluent control programs. Despite of all these daily routine difficulties and corrective actions, and based on this inspection results, the inspector determined that the licensee has conducted an excellent effluent control program and there were no impacts on either the environment or the public health and safety.

7.0 Exit Interview

The inspector met with the licensee representatives denoted in Section 1.1 of this inspection report at the conclusion of the inspection on July 24, 1991. The inspector summarized the purpose, scope, and findings of the inspection.

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

Docket Nos. 50-245, -336

John F. 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 Nos. 50-245/91-23 and 50-336/91-27

A special safety inspection was conducted by Mr. J. T. Shedlosky and others of this office on August 15 through September 30, 1991, at the Millstone Nuclear Station Units 1 and 2, Waterford, Connecticut. The inspection results are documented in the enclosed report; they were discussed with Mr. S. Scace and other members of your staff at the conclusion of the inspection.

The inspection focused on issues brought to you by the NRC. Our independent review evaluated your performance in complying with regulatory requirements important to public health and safety. This review consisted of performance observations of ongoing activities, independent verification of safety system status and design configuration, interviews with personnel, and review of records.

Our overall assessment is that your performance in resolving these issues is acceptable; however, evaluation of several of these concerns still indicates certain areas in need of improvement. Examples include drawing controls, incorporation of vendor information in procedures and drawings, and the procedure validation process. No violations of NRC requirements were identified.

No response to this report is required. Your cooperation with us is appreciated.

Sincerely,

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

Enclosure: NRC Region I Inspection Report Nos. 50-245/91-23 and 50-336/91-27

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U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report/ Docket No.:	50-245/91-23 50-336/91-27
License No.:	DPR-21 & DPR-65
Licensee:	Northeast Nuclear Energy Company P. O. Box 270 Hartford, CT 06141-0270
Facility Name:	Millstone Nuclear Power Station, Units 1 & 2
Inspection At:	Waterford, CT
Dates:	August 15 through September 30, 1991
Inspectors:	T. G. Humphrey, Consultant, EG&G, INEL T. H. Hunt, Consultant, EG&G, INEL C. Kido, Consultant, EG&G, INEL D. R. Lasher, Consultant, EG&G, INEL A. D. Trusty, Consultant, EG&G, INEL L. E. Briggs, Senior Operations Engineer, PWRS, OB, DRS E. L. Conner, Reactor Licensing/Risk Engineer, TSS, DRP J. T. Shedlosky, Senior Allegation Coordinator, RPS 4A, DRP

Approved by: for Richard L. Barkley
Eugene M. Kelly, Chief
Reactor Projects Section 4A

11/18/91
Date

Scope: Special inspection of concerns brought to the licensee by the NRC. These included the areas of compliance with operating license requirements, drawing control, surveillance and calibration programs, electrical workmanship on environmentally qualified equipment, and personnel safety equipment control.

Results: See Executive Summary, Report Section 1.0

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Proper use of personnel safety tags was found. However, safe equipment isolation is obviously predicated upon the continued conscientiousness and cooperation of all employees involved in each isolation activity.

Maintenance and Surveillance

Additional attention to detail may be required in the validation of draft and revised procedures in order to detect and correct errors prior to the approval process. Additional instructions are also considered necessary to insure that all workers properly use the drawing control system to validate drawings prior to their use.

Improvement is also required in tracking vendor service advisories. A 16-month-old vendor notice concerning environmentally qualified limit switches was not implemented into station procedures.

The Unit 2 seismic monitoring system recording tape transport mechanism has demonstrated poor reliability during surveillance testing. Additionally, inappropriate preparatory work has been performed, by procedure, on these devices prior to performing as-found testing (although this testing is in excess of Technical Specification requirements); the licensee is currently evaluating the content of this procedure.

2.0 TRACEABILITY OF RADIOACTIVE CALIBRATION SOURCES

A concern was identified that old standard calibration sources may have not been traceable to National Bureau of Standards (NBS). Therefore, their use may have been invalid. In addition, the licensee's Millstone Radiation Monitor Review, performed by their Radiological Assessment Branch (RAB) and issued in November 1989, found a general weakness in calibration source traceability and documentation. In fact, the RAB review resulted in new Administrative Control Procedure ACP-QA-4.12, Radioactive Source Inventory and Control, which implements the RAB report recommendations on source controls.

Assessment

The licensee's response on this subject dated April 26, 1991 stated that in April 1990, CS-137 calibration sources Nos. 3 and 5 were removed from service due to the poor physical condition of the mylar coating. However, calibrations performed using the old standards were valid, in that sources are traceable to National Institute of Standards and Technology (NIST) through chemistry department records.

The inspector viewed the two sets of six calibration sources currently being used by Units 1 and 2 I&C and chemistry departments, interviewed chemistry department personnel from

both units, and reviewed the calibration documentation. The active sources were stored in a chemistry lab controlled cabinet, along with the old retired source sets and other miscellaneous radioactive devises. The original sets of Unit 2 calibration sources were established in 1978. These sources were retired a couple of years ago due to poor physical condition of some of the sources, particularly Nos. 3 and 5. The currently used source sets are common for Units 1 and 2. They were prepared in late 1980.

The inspector reviewed CP 801/280N, Computer Radioisotopic Analysis System (CRAS), Amersham England certifications for calibration of the CRASs, Amersham's Cesium-137 standardized solutions used to make up the calibration source sets, the dilution records for the source sets, and finally the confirmation, dated May 18, 1981, CRAS computer printout for each individual calibration source. Also, records for the original Unit 2 source set, including source Nos. 3 and 5, were available for review and indicated past calibration to the CRAS system existed. Thus, the original and present calibration source Sets A and B were made from a traceable solution and their radioactivity strength was documented by analyzing them on the CRAS, a traceable monitor. The licensee's calibration technique for some particular radiation monitors was reviewed during Inspection 50-336/91-17, and found to be excellent. The inspector had no further questions and considers these concerns unsubstantiated and resolved.

In performance of the above review, the inspector reviewed the RAB's Radiation Monitor Review (RMR), Phase 2 Report, issued in November 1989. This was an extensive review of all plant radiation monitor channels that made many plant-wide and unit-specific recommendations. The inspector discussed this report and the progress being made to complete the recommendations with one of the authors. One of the first consequences of the review was the production of Radiation Monitor Manuals for each unit. These manuals contain detailed technical descriptions of equipment for each unit, regulatory requirements, setpoint bases, conversion factors, and calibration techniques. RAB is tracking the unit's implementation status and their approval is required to close a recommended RMR issue closed.

The inspector reviewed the latest status report, implementation of RAB recommendations (CR-7844), issued August 2, 1991. This report detailed the status of each RMR issue. In addition, management of each unit has established a Radiation Monitor Committee (RMC). The inspector reviewed the latest Unit 2 RMC meeting minutes, dated June 28, 1991. The committee addressed the status of inoperable monitors, recent Licensee Event Reports (LERs), status of open committee items, some allegation responses, NRC concerns, and particular instrumentation problems. The inspector concluded that appropriate implementation actions were being considered by Unit 2 plant management.

Conclusion

The calibration sources in question are traceable to NIST. The documentation supporting this traceability is satisfactory.

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. NNECO'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. Wenzinger

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

4200 2023

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. Scace, 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

technicians provided feed back and suggested improvements, but did not receive timely responses from their managers. In response to this particular category of concerns, the system that was established by the Unit 2 I&C Manager to track such employee concerns was inspected to evaluate the validity of these assertions. NNECO's overall program for responding to and resolving employee concerns will be addressed in a broader, more generic manner.

Assessment

The records for 1990 and 1991 of the Unit 2 I&C Department Manager's employee concerns tracking system, titled "Worklist/Memo," were reviewed in an attempt to determine the effectiveness of the system and evaluate the responsiveness of the I&C Manager to employee concerns.

The system is maintained in a computer data base with the I&C Manager's secretary entering the data. There were a total of 114 items documented in 1990 and 62 items in 1991. Thirty-eight percent (38%) of the 1990 items and 24% of the 1991 items were logged as closed, which on the surface appeared to be quite low. However, when the lists were reviewed more thoroughly, many of the items that were listed as open were effectively resolved, but still carried as open items by the I&C Manager awaiting the completion of some administrative or follow-up action. The system was used by the I&C Manager as a way to track actions and not as a feedback system to the individuals submitting the concerns. A monthly printout of the open and closed items is made and interested individuals in the department can check this printout to insure that their concerns have been acted upon. A feedback response to the individual submitting a concern might have eliminated some of the assertions, but would also increase the administrative burden. For such a small department, the monthly printout would appear to be adequate.

Conclusion

The I&C Department has a system to track employee concerns (and has expended a large amount of effort to respond to them), but the individual must take some action to determine the status of their concerns.

12.0 EDG CLEAN WASTE TANK PDCR MP-2-90-035

The NRC provided a concern that a modification to install float switches in the Emergency Diesel Generator (EDG) Clean Waste Tank at Unit 2, per PDCR MP-2-90-035, failed to provide correct as-built drawings and that a blue colored wire was substituted for the yellow colored wire specified in the PDCR, due to non-availability of the yellow colored wire.

Assessment

The drawings that were alleged to be inaccurate, 25203-31165 (Sheet 22), 25203-31175 (Sheet

11), and 25203-32018 (Sheet 10), were obtained from Nuclear Records. The drawings were called up on the Generation Records Information and Tracking System (GRITS) and each drawing in GRITS reflected exactly the same revision as the drawings obtained from Nuclear Records, but all three drawings also indicated an open DCR, titled "M2, P0059-91 (PDCR)," and listed the Engineering Supervisor as the contact person for the change. The inspector proceeded to the engineering office and obtained copies of the three drawings in question. Each drawing contained the modifications associated with the float switch installation. These revised drawings correctly indicated the use of blue colored wire versus the originally specified yellow colored wire.

Conclusion

The updated drawings correctly indicating the modifications associated with the installation of the EDG Clean Waste Tank float switch installation were properly identified in the GRITS and would have been available to maintenance personnel who used the GRITS to verify drawing accuracy prior to initiating work.

13.0 RECORDER CALIBRATION METHODOLOGY

The NRC provided a concern regarding the method for recorder calibration. The concern was that, when calibrating recorders, NNECO did not use a calibrated voltmeter to measure the output of a calibrated voltage source. A related concern was that supervisory review of some completed instrument calibration data sheets may have been inadequate because the listed test instruments did not include in all cases both the calibrated voltmeter and the calibrated voltage source. Specific examples cited were boric acid flow control recorder FR-120Y and process radiation monitor multipoint recorder RJR-9373. NRC disposition of this concern involved providing the concern to NNECO for review and resolution, with subsequent NRC evaluation to ensure the adequacy of NNECO's actions. NNECO letter A09961, dated December 19, 1991, described NNECO's review of this concern.

Background

NRC Inspection Report 50-336/91-20 (IR 91-20), section 5.3, described a previous inspection of boric acid flow control system corrective maintenance. IR 91-20 concluded (in part) that NNECO efforts to identify, troubleshoot, and repair boric acid system equipment deficiencies were appropriate.

NNECO used PORC approved IC procedures and SPs and their associated data sheets as the vehicle to document calibration data and test equipment for safety related I&C components, as described in the station surveillance program (reference ACP-QA-9.02). For non-safety related I&C components, either the applicable AWO or an IC procedure document calibration data and the test equipment used to do I&C maintenance and surveillance.

APPENDIX 3.1

ALLEGATION RECEIPT REPORT

Date/Time Received: 5/22/91/11:35a

Allegation No. RI-91-A-114 (leave blank)

Name: [redacted]

Address: _____

Phone: _____

City/State/Zip: _____

Confidentiality:

Was it requested?	Yes ___	No ✓
Was it initially granted?	Yes ___	No ___
Was it finally granted by the allegation panel	Yes ___	No ___
Does a confidentiality agreement need to be sent to alleger?	Yes ___	No ___
Has a confidentiality agreement been signed?	Yes ___	No ___
Memo documenting why it was granted is attached?	Yes ___	No ___

Alleger's Employer: [redacted]

Position/Title: [redacted]

Facility: Millstone Unit 1

Docket No.: 50-245

(Allegation Summary (brief description of concern(s): ① Inadequate Radiological Work Permit may have resulted in ingestion & radioactive material

Number of Concerns: _____

Employee Receiving Allegation: _____ (first two initials and last name)

Type of Regulated Activity (a) ✓ Reactor (b) __ Vendor (c) __ Materials (d) __ Safeguards (e) __ Other: _____ (Specify)

Materials License No. (if applicable): _____

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

(NRC Region I Form 207 Revised 10/89)

A3.1-1

Q/49

APPENDIX 3.1

Detailed Description of Allegation:

Millstone 1 I&C personnel are installing cables for IRM detector assemblies under the reactor vessel. Allegen states that Cable today was "5K smearable", and that RWP today requires workers to wear respirators, whereas yesterday, the RWP did not require respirators to do the same job. Allegen also states that a technician involved in the job yesterday & today was concerned about possible ingestion yesterday. Allegen did not know if individual had received whole body count or other checks for ingestion.

Allegen is not involved in the activity; he overheard the technicians discussing the issue w/ the I&C department head in the I&C shop and "came right over" to NRC office.

When asked directly by inspectr whether he was alleging any wrongdoing, the allegen said no. His expressed concern is that the RWP / HP controls yesterday were inadequate.

Recommendation: Inspection apart 50-245/91-07; 50-336/91-10; 50-423/91-08, contained a Level IV violation applicable to Unit 1 regarding inadequate determination of radiological hazards and inadequate implementation of protective measures for jobs where radioactivity may become airborne. In light of this finding, I recommend routine followup by resident.

NRC Region 1 Form 207
(Revised 10/89)

(50)

ALLEGATION RECEIPT REPORT

Date/Time Received: MAY 22, 1991 11:35 A.M. Allegation No. RI-A-91 — 114 (leave blank)

Name: [redacted] Address: [redacted]

Phone: [redacted] City/State/Zip: [redacted]

Confidentiality:

Was it requested?	Yes ___	No ✓
Was it initially granted?	Yes ___	No ___
Was it finally granted by the allegation panel	Yes ___	No ___
Does a confidentiality agreement need to be sent to alleger?	Yes ___	No ___
Has a confidentiality agreement been signed?	Yes ___	No ___
Memo documenting why it was granted is attached?	Yes ___	No ___

Alleger's Employer: [NNECO] Position/Title: [redacted]

Facility: MILLSTONE 3 Docket No.: 50-336

(Allegation Summary (Brief description of concern(s): (1) Inadequate calibration procedure for Unit 3 Accumulator level indicators

Number of Concerns: 1

Employee Receiving Allegation: P J HABIGHORST (first two initials and last name)

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

Materials License No. (if applicable): ___

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

(NRC Region I Form 207 Revised 10/89)

[redacted] information
Act. exemptions 6
FOIA 92-162

Q150

APPENDIX 3.1

Detailed Description of Allegation:

During the most recent MP-3 refuel outage, a MP-1 IC technician was performing a instrument calibration of the accumulator level transmitters. The MP-1 IC technician (Bauser) identified an error in the calibration due to the static fluid between the transmitter and the instrument tap. The error was alleged to be in the range of 25%.

The unit 1 technician does not believe the calibration procedure addressed the alleged error due to the level instrumentation piping configuration. It was alleged that if successful indication is present today, it was due to zero span adjustments and therefore an example of not adhering to the calibration procedure.

ALLEGATION: Inadequate calibration procedure for the accumulator tank levels, and procedural non-compliance if level is within calibration checks

RECOMMENDATION: NRC INSPECTION. (Further investigate details of the issue with the unit 1 IC tech).