

**NORTHEAST UTILITIES**



THE CONNECTICUT LIGHT AND POWER COMPANY  
WESTERN MASSACHUSETTS ELECTRIC COMPANY  
HOLYOKE WATER POWER COMPANY  
NORTHEAST UTILITIES SERVICE COMPANY  
NORTHEAST NUCLEAR ENERGY COMPANY

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(203) 665-5000

Kelly <sup>17</sup>

December 23, 1991

Docket No. 50-336  
A10020

Re: Employee Concerns

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

Dear Mr. Hehl:

Millstone Nuclear Power Station, Unit No. 2  
RI-91-A-0231

We have completed our review of identified issues concerning activities at Millstone Unit No. 2. As requested in your transmittal letter of November 19, 1991, our responses do not contain any personal privacy, proprietary, or safeguards information. The material contained in these responses may be released to the public and placed in the NRC Public Document Room at your discretion. The NRC transmittal letter and our responses have received controlled and limited distribution on a "need-to-know" basis during the preparation of these responses.

**ISSUE 02:**

"Plant Operation Review Committee (PORC) actions are superficial. There are different calibration accuracy requirements between the Steam Generator radiation monitor functional test procedure (SP 2404A1), recently reviewed by the PORC, and a referenced source. Procedural problems also exist in the RBCCW [reactor building closed cooling water] radiation monitor calibration procedure, which was also recently reviewed."

**REQUEST:**

"Please discuss the validity of this assertion. Please provide assurance that the calibration accuracy requirements are correct and consistent and that procedural problems in the RBCCW are resolved."

5/138

Mr. Charles W. Hehl  
A10020/Page 2  
December 23, 1991

**RESPONSE:**

Without knowing the identification of the "referenced source," it is difficult to determine the validity of the assertion.

The procedure at issue is a functional test procedure rather than a calibration procedure so the reference to "calibration accuracy" is unclear. For the purpose of this response we have assumed the assertion was made in connection with a change made to Instrumentation and Controls (I&C) Form 2404AI-1 which is the form used by the procedure at issue.

Technicians performing this procedure in late October 1991 stopped when they noted that the procedure data sheet specified a high/fail/alert bistable set point tolerance different from the Operations Department calculation on OPS Form OP2383C-1. I&C Form 2404AI-1 specified a flat + 20 percent tolerance, while OPS Form 2383C-1 provided a tolerance that depended on the position of the set point within the decade (on a logarithmic scale). Both methods are acceptable to the NUSCO Radiation Assessment Branch (RAB) and yield tolerances that are within the 20 percent values that are expected for the radiation monitor. The I&C form was changed on October 23, 1991, to coincide with the operations specified values. Following the change, the procedure was completed satisfactorily.

There is no safety or generic significance to this assertion. We were not aware of this concern prior to receipt of notification from the NRC.

Our response to issue RI-91-A-0238 dealt with Procedure SP 2404AW for the RBCCW liquid radiation monitor.

**ISSUE 04:**

"The RBCCW radiation monitor (RM 6083) sample valves are not labeled. Additionally, the piping and instrumentation drawing (P&ID) 25203-26022, Sheet No. 1, does not reflect the actual installed configuration of the sample lines. (This concern is similar to issue 210-1 referred to you by letter under File Number RI-91-A-0210, dated August 22, 1991.)"

**REQUEST:**

"Please discuss the validity of this assertion. Please provide assurances that the RBCCW radiation monitor (RM 6083) sample valves will be labeled in the future and that piping and instrumentation drawings will reflect actual conditions."

Mr. Charles W. Hehl  
A10020/Page 3  
December 23, 1991

**RESPONSE:**

With respect to the valve labeling issue, this assertion is a statement of fact describing the normal operating practice concerning the labeling of valves internal to vendor-supplied equipment.

The radiation monitor at issue is a "skid-mounted" piece of equipment which senses radiation levels in the RBCCW process fluid and provides local and remote annunciation on high radiation. It is our standard practice that valves internal to the radiation monitor skid are not assigned unique numbers and labeled during installation. These valves are not used to operate the equipment; therefore, there is no requirement that we provide Millstone Unit No. 2 specific valve numbers or show the valves on applicable P&IDs. The valves external to the radiation monitor skid were labeled as part of our ongoing labeling project for Millstone Unit No. 2.

With respect to the P&ID sheet, this assertion is a true statement but does not represent a valid safety concern. The drawing at issue has been checked against actual system and the installed configuration of the sample lines was correct. However, a difference was found in that the lead brick shielding, which was removed when the monitor was upgraded to a unit not requiring additional shielding, is still shown on the drawing. A drawing change has been issued to eliminate the lead bricks shown on the P&ID.

We were not aware of this concern prior to notification by the NRC.

**ISSUE 06:**

"I&C technicians incorrectly started the Steam Jet Air Ejector (SJAE) radiation monitor (RM 5099) with the sample pump inlet valve shut. Subsequently, the motor failed to re-start. The sample pump was started by I&C Department personnel. It should have been operated by Operations Department personnel."

**REQUEST:**

"Please discuss the validity of this assertion and provide assurances that the stated problems with regard to the SJAE radiation monitor system operation are resolved with regard to safety requirements."

**GENERAL REQUEST:**

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

Mr. Charles W. Hehl  
A10020/Page 4  
December 23, 1991

**RESPONSE:**

This assertion is not valid. A review of work performed on this radiation monitor over the last six months was conducted. No documented instance of the above alleged activities by I&C technicians was found. Discussions with I&C and Operations Department staff personnel identified no similar concern or generic problem. The operation of the RM-5099 radiation monitor is independently verified by the performance of Surveillance Procedure SP2404AT, "Steam Jet Air Ejector Radiation Monitor (RM-5099) Functional Test," prior to returning to service. Operations Procedure OP2383A also verifies proper start-up and operation of the sample pump, and it is performed by Operations department personnel.

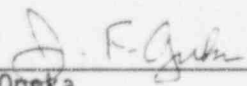
We were not aware of these assertions prior to receipt of notification from the NRC.

After our review and evaluation of these issues, we find that these issues did not present any indication of a compromise of nuclear safety.

We appreciate the opportunity to respond and explain the basis of our actions. Please contact my staff if there are further questions on any of these matters.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

  
\_\_\_\_\_  
J. F. Opeka  
Executive Vice President

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

SAMPLE RECORD OF ALLEGATION PANEL DECISIONS

SITE: Millstone 2  
ALLEGATION NO.: 91-A-0232  
DATE: 8/28/91 (Panel No. 1 2 3 4 5)  
PRIORITY: High Medium Low  
SAFETY SIGNIFICANCE: Yes No Unkn  
CONCURRENCE  
TO CLOSEOUT: DD BC SC  
CONFIDENTIALITY GRANTED: Yes No  
(See Allegation Receipt Report)  
IS THERE A HARASSMENT/DISCRIMINATION  
ISSUE: Yes No  
IF YES,  
1) has the individual been informed of the DOL  
process and the need to file a complaint within 30 days Yes No  
2) has the individual filed a complaint  
with DOL Yes No  
3) has a letter been sent to the complainant seeking  
any safety concerns Yes No  
IS A CHILLING EFFECT LETTER WARRANTED: Yes No  
IF YES, HAS IT BEEN SENT Yes No  
HAS THE LICENSEE RESPONDED TO THE CHILLING  
EFFECT LETTER: Yes No

PANEL ATTENDEES:  
Chairman - Wiggins  
Branch Chief -  
Section Chief (AOC) - G. Kelley  
Sr. Allegation Coord (SAC) Fuhrmeister  
OI Representative - J. Cullings  
(Other) D. Holady  
W. Roberts, EGG

ACTION:

- 1) DRP to acknowledge letter to allegor { EGG-2ubs
- 2) DRP to referral in letter matters 1, 2, 3 { EGG-2ubs  
to the licensee for review + response
- 3) (Re: Item 4, not considered an allegation)
- 4) \_\_\_\_\_
- 5) \_\_\_\_\_

NOTES: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

5/139



A L L E G A T I O N   M A N A G E M E N T   S Y S T E M

ALLEGATION NUMBER - RI-91-A-0232

RUN DATE: 09/11/91

DOCKET/FACILITY/UNIT: 05000336 / MILLSTONE 2  
DOCKET/FACILITY/UNIT: /  
DOCKET/FACILITY/UNIT: /  
DOCKET/FACILITY/UNIT: /

/ 2  
/  
/  
/

ACTIVITY TYPES - REACTOR

MATERIAL LICENSES -

FUNCTIONAL AREAS - OPERATIONS

DESCRIPTION - 1) RCP OIL LEVEL INSTRUMENT PROBLEMS  
                  2) INADEQUATE MAINTENANCE ON WAREHOUSE STOCK PARTS  
                  3) LOOP FOLDERS MAINTAINED BY I&C ARE INADEQUATE  
CONCERNS - 4) I&C WORKLIST INPUT SHOWING STATUS OF ALLEGATIONS MADE TO  
            4       NRC

SOURCE - LICENSEE EMPLOYEE

CONFIDENT - NO

RECEIVED - 910821   BY - JT SHEDLOSKY

/ RI

ACTION OFFICE CONTACT - EM KELLY

- (FTS)346-5183

SAFETY SIGNIFICANCE - UNKNOWN   BOARD NOTIFICATION - NO

STATUS - OPEN       SCHED COMPLETION - 911231   DATE CLOSED -

ALLEGATION SUBSTANTIATED -

ALLEGER NOTIFIED -

OI ACTION -           OI REPORT NUMBER -

REMARKS - RECEIVED AT RESIDENT OFFICE BY MEMO, WITH SUBSEQUENT UPDATE.  
          PANELED 28AUG91.

SUPPORT OFFICE:   RPS-4A  
ACTION PENDING:   REFER TO LICENSEE  
DOCUMENTATION:  
ALLEGER LAST CONTACTED: 22AUG91  
REFERENCE:

KEYWORD: INSTRUMENTS, MAINTENANCE

ENTERED SYSTEM - 910903   CLOSED SYSTEM -

RECORD CHANGED - 910903

5/11/90

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ENCLOSURE

Concerns RI-91-A-0232-01 and RI-91-A-0263-01:

There were two examples of alleged inadequate control and maintenance of equipment spare parts. First, that a spare power supply in the warehouse (SPM 798, revision 10, item 34) for the "B" RCP lower oil reservoir level alarm unit allegedly did not receive a capacitor change out, as did the in-service power supply units. Allegedly, PMMS item M2-02-ENV-PWR-X-20 (Serial No. 10521) typified a maintenance history record for a power supply replacement. Second, that an RPS spare component, the Auxiliary Logic Drawer identified in Concern RI-91-A-0263-02, allegedly lacked a modification (three versus four amber indicating lamps).

Concern RI-91-A-0263-02:

Allegedly, a spare RPS Auxiliary Logic Drawer allegedly was used to support troubleshooting, on or about October 1, 1991, of a power supply relay failure within the same drawer in RPS channel "D," but was not installed in place of the failed drawer. Allegedly, the spare RPS Auxiliary Logic Drawer lacked some original parts (three lamps).

Concern RI-91-A-0232-02:

On or about August 16, 1991, Loop Folders for the "B" RCP oil reservoir alarm instruments allegedly did not reflect the actual physical location of specific power supplies. Allegedly, some boards had five separate power supplies within the power supply unit.

Concern RI-91-A-0232-03:

On or about August 16, 1991, Loop Folders for the "B" RCP allegedly did not provide information regarding which additional instrument loads powered from each power supply. For example, power supply X-21 supplied several other instrument loops in addition to the "B" RCP upper and lower oil sump levels. The individual doing the work believed this information was considered essential to preclude the loss of power to other instrumentation when performing maintenance on an instrument loop component.

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Concern RI-91-A-0232-04:

On or about August 16, 1991, Instrument Record Sheets for the "B" RCP upper and lower oil reservoir level transmitters (LT-176 & LT-177) allegedly were missing from the Instrument Loop Folders.

Concern RI-91-A-0232-05:

There were allegedly nuisance alarms, associated with the "B" RCP upper and lower oil reservoirs, caused by mechanical action within the RCP oil reservoirs (reference AWO M2-91-08614).

Request:

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

In addition to the above general request, please provide your review of the following specific questions. Are spare parts, that are either located in the warehouse(s) or used for troubleshooting, controlled and maintained in accordance with the NU QA Program? Is there a mechanical problem with RCP oil sump levels? Does Unit 2 administratively control I&C documentation in a manner consistent with the methodology used for Units 1 and 3 and with the NU QA Program? Is Departmental Instruction 2-I&C-10.03, Establishing and Maintaining Instrument Records, adequate for administrative control of I&C documentation? In general, do loop folders adequately identify instrument loads for each power supply?

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ENCLOSURE

Issue 230-1:

Two (2) examples were found in which the calibration conversion factor for the condensate demineralizer waste neutralization sump radiation monitor were incorrect. The deficiencies were found during the performance of surveillance SP-2404AP, Waste Neutralization Sump Radiation Monitor (2-CND-RM-245) Functional Test; these deficiencies were documented on Instrument Calibration Review (ICR) Forms 91-065 and 91-066, which were dated August 12 and 16, respectively. They both reference automated work order (AWO) M2-91-06944.

Request:

Please discuss the validity of this assertion and discuss actions taken to prevent occurrences such as these in the future.

Issue 230-2:

Discovery of a non-metallic "o"-rings used with fittings on the turbine hydraulic control valves. Although recognized as improper material, the "o"-rings were reused pending further investigation.

Request:

Please discuss the validity of this assertion. Please discuss actions taken to prevent the reuse of "o"-rings of improper material in the turbine hydraulic control system.

A L L E G A T I O N   M A N A G E M E N T   S Y S T E M

ALLEGATION NUMBER - RI-91-A-0230

RUN DATE: 09/11/91

DOCKET/FACILITY/UNIT: 05000336 / MILLSTONE 2  
DOCKET/FACILITY/UNIT: /  
DOCKET/FACILITY/UNIT: /  
DOCKET/FACILITY/UNIT: /

/ 2  
/  
/  
/

ACTIVITY TYPES - REACTOR

MATERIAL LICENSES -

FUNCTIONAL AREAS - OPERATIONS

DESCRIPTION - EXAMPLES GIVEN OF 2 OCCASSIONS WHEN THE CALIBRATION  
CONVERSION FACTOR FOR THE CONDENSATE DEMINERALIZER WASTE  
NEUTRALIZATION SUMP WAS FOUND TO BE INCORRECT. ALSO GAVE  
CONCERNS - EXAMPLE OF REUSE OF IMPROPER O-RINGS IN TURBINE EHC SYSTEM.  
2

SOURCE - LICENSEE EMPLOYEE

CONFIDENT - NO

RECEIVED - 910820 BY - JT SHEDLOSKY

/ RI

ACTION OFFICE CONTACT - EM KELLY

- (FTS) 346-5183

SAFETY SIGNIFICANCE - UNKNOWN BOARD NOTIFICATION - NO

STATUS - OPEN SCHED COMPLETION - 911231 DATE CLOSED -

ALLEGATION SUBSTANTIATED -

ALLEGER NOTIFIED -

OI ACTION - OI REPORT NUMBER -

REMARKS - RECEIVED AT RESIDENT OFFICE BY MEMO, WITH SUBSEQUENT UPDATE.  
PANELED 28AUG91.

SUPPORT OFFICE: RPS-4A  
ACTION PENDING: REFER TO LICENSEE  
DOCUMENTATION:  
ALLEGER LAST CONTACTED: 22AUG91  
REFERENCE:

KEYWORD: RAD MONITOR, EHC

ENTERED SYSTEM - 910903 CLOSED SYSTEM -

RECORD CHANGED - 910903

5/11/27

ALLEGATION RECEIPT REPORT

LLPO.HES

Date/Time Received: 1/27/92

Allegation No. 91-230; 91-262  
(leave blank)

Name of Allegor: \_\_\_\_\_

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

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

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

Confidentiality:

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

Allegor's Employer: Unemployed

Allegor's Position/Title: N/A

Filing: Mullsbree

Docket No.: \_\_\_\_\_

[Allegation Summary - brief description of concern(s)]: \_\_\_\_\_

Feed back on recently received absent letters (dated 1/13 and 1/21/92). Assertions that either a) licensee lied to NRC in their responses to NRC or b) licensee answers are inaccurate, inadequate and NRC didn't fully investigate to find otherwise

Number of Concern: \_\_\_\_\_

Employee Receiving Allegation: \_\_\_\_\_

Greg Miller  
(first two initials and last name)

5/1/28

## Detailed Description of Allegation:

1) 91-230-02; 1/13/92 absent letter, 10/16/91 NRC response letter  
 EHC fittings issue.

- NRC "lied" in their response... no further detail.

2) 91-262; 1/21/92 absent letter, NRC response  
 Diesel Alarms Tech Manual issue, H09963

- Lack of tech manuals is a generic problem, and  
 all other takes exception to NRC's response... no further detail.

3) The all other refused to give any specifics; he stated  
 that he would not talk to us without a court  
 recorder and an OI representative present.

He did state that NRC "already has all  
 of this". His request is based on lack of

ACTION:

Response from NRC to similar past issues  
 wherein NRC's actions are not accurate or

adequate, and we (NRC) buy them  
 "hook, line and sinker."

Recommendations:

a) possible TC internal

b) "strategy" for consistency w/ past specifics

c) re-examine issue of 91-230 & 262

RECORD OF ALLEGATION PANEL DECISIONS

SITE: Millstone PANEL ATTENDEES:  
ALLEGATION NO.: RI-91-A-0230/0262 Chairman - Mehl  
DATE: 29 JAN 92 (Panel No. 1 2 3 4 5) Branch Chief -  
PRIORITY: High Medium Low Section Chief (AOC) - Kelly  
SAFE SIGNIFICANCE: Yes No Unkn Sr. Allegation Coord (SAC) Fuhrmeister  
CONCURRENCE TO CLOSEOUT: DD BC SC OI Representative - Walsh  
CONFIDENTIALITY GRANTED: Yes No (Other)  
(See Allegation Receipt Report)

IS THERE A HARASSMENT/DISCRIMINATION ISSUE: Yes No  
IF YES,  
1) has the individual been informed of the DOL process and the need to file a complaint within 30 days Yes No  
2) has the individual filed a complaint with DOL Yes No  
3) has a letter been sent to the complainant seeking any safety concerns Yes No  
IS A CHILLING EFFECT LETTER WARRANTED: Yes No  
IF YES, HAS IT BEEN SENT Yes No  
HAS THE LICENSEE RESPONDED TO THE CHILLING EFFECT LETTER: Yes No  
ACTION: RESP ECD

- 1) Make arrangements to interview him with DRP 29 FEB 92  
a court reporter, but without OI
- 2) \_\_\_\_\_
- 3) \_\_\_\_\_
- 4) \_\_\_\_\_
- 5) \_\_\_\_\_

NOTES: New new information was provided, in fact he said,  
"NRC already has all this" OI had no interest in participating  
in interview

5/1/29



ALLEGATION RECEIPT REPORT

RI-91-A-0052 RI-91-A-0230  
RI-91-A-0113 RI-91-A-0262  
RI-91-A-0128  
(leave blank)

Date/Time Received: 12 Feb 92 / 9:20 am

Allegation No. \_\_\_\_\_

Name of Allegor: \_\_\_\_\_

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 allegor?	Yes _____	No _____
Has a confidentiality agreement been signed?	Yes _____	No _____
Memo documenting why it was granted is attached?	Yes _____	No _____

Allegor's Employer: None

Position/Title: \_\_\_\_\_

Facility: Millstone

Docket No.: 50-295,336,423

Allegation Summary (brief description of concern(s): Ed Wenzinger and I called the individual to arrange for a transcribed meeting to elicit details of his disputes of allegation closeouts. He stated that he is not interested, he has already done it and hasn't gotten anywhere. He further stated that the information he has provided is not being addressed. He will sit down with his congressmen and provide the information to them, and let them explain to him why we are doing this. If we feel he has information he is not providing

Number of Concerns: 1

Employee Receiving Allegation: R. L. Fuhrmeister  
(first two initials and last name)

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

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

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

5/12

Detailed Description of Allegation: we can subpoena him. when he gets  
a subpoena and we bring him before a judge, his lawyer and the  
press will be there. we take information from him, and  
when he needs it, we bury it. He's not getting any information,  
he can't fight his case. He's not going to play our game  
anymore. "You people haven't done anything for 4 years, and  
now you're under some pressure and we'll bring it all out the  
hearings, and we will have hearings." "I have given you  
many, many legitimate concerns and you've whitewashed them.  
"You've got to get into the business of regulating nuclear  
power, not promoting it, that's your problem." "If you had  
done your job 3 years ago, I wouldn't be out on the street  
now. I would have fought my first Doh case and it would  
have been all over."

231  
INSTRUMENTATION

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.9 The radioactive liquid effluent monitoring instrumentation channels shown in Table 3.3-12 shall be OPERABLE with applicable alarm/trip setpoints set to ensure that the limits of Specification 3.11.1.1 are not exceeded. The setpoints shall be determined in accordance with methods and parameters as described in the ODCM.

APPLICABILITY: As shown in Table 3.3-12.

ACTION:

- a. With a radioactive liquid effluent monitoring instrumentation channel alarm/trip setpoint less conservative than required by the above specification, without delay suspend the release of radioactive liquid effluents monitored by the affected channel, or declare the channel inoperable, or change the setpoint so it is acceptably conservative.
- b. With the number of channels less than the minimum channels operable requirement, take the ACTION shown in Table 3.3-12. Exert best efforts to restore the inoperable monitor to OPERABLE status within 30 days and, if unsuccessful, explain in the next Semiannual Effluent Report why the inoperability was not corrected in a timely manner. Releases need not be terminated after 30 days provided the specified actions are continued.
- c. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.9 Each radioactive liquid effluent monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK, SOURCE CHECK, CHANNEL CALIBRATION, and CHANNEL FUNCTIONAL TEST operations at the frequencies shown in Table 4.3-12.

5/13/

January 1, 1986

TABLE 3.3-12

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>MINIMUM # OPERABLE</u>	<u>ALARM SETPOINT REQUIRED</u>	<u>APPLICABILITY</u>	<u>ACTION</u>
1. Gross Radioactivity Monitors Providing Automatic Termination of Release				
a. Clean Liquid Radwaste Effluent Line	1	Yes	*	1
b. Aerated Liquid Radwaste Effluent Line	1	Yes	*	1
c. Steam Generator Blowdown Monitor or Condenser Air Ejector Monitor	1**	Yes	***	2
d. Condensate Polishing Facility Waste Neut Sump	1	Yes	***	1
2. Gross Radioactivity Monitors Not Providing Automatic Termination of Release				
a. Reactor Building Closed Cooling Water Monitor#	1	Yes	*	3
3. Flow Rate Measurements				
a. Clean Liquid Radwaste Effluent Line	1	No	*	4
b. Aerated Liquid Radwaste Effluent Line	1	No	*	4
c. Condensate Polishing Facility Waste Neut Sump Discharge Line	1	No	*	4
d. Dilution Water Flow	##	No	*	NA
e. Steam Generator Blowdown Line	###	No	*	NA

Millstone Unit 2

3/4 3-51

Amendment No. 104

TABLE 3.3-12 (Continued)

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

Table Notes

- \* - At all times - which means that channels shall be OPERABLE and in service on a continuous, uninterrupted basis, except that outages are permitted, for a maximum of 12 hours, for the purpose of maintenance and performance of required tests, checks, calibrations, or sampling.
- \*\* - Although both monitors are normally operable, only one is necessary as the activity measured by each can be related to the other, and both monitors are capable of automatically isolating the steam generation blowdown.
- \*\*\* - Modes 1-5 and Mode 6 when pathway is being used except that outages are permitted for a maximum of 12 hours for the purpose of maintenance and performance of required tests, checks, calibrations, or sampling.
- # - Since the only source of service water contamination is the reactor building closed cooling water, monitoring of the closed cooling water and conservative leakage assumptions will provide adequate control of service water effluents.
- ## - The dilution water is determined by the use of condenser cooling water and service water pump status. Only those pumps actually discharging to the quarry at the time of release are included. Pump status is only reviewed for purposes of determining flows.
- ### - Determined by the use of valve curves and/or make up flow rates for the purpose of determining flows only.
- NA - Not applicable.



TABLE 3.3-12  
(Continued)

ACTION STATEMENTS

ACTION 1: With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirements, effluent releases may continue provided that best efforts are made to repair the instrument and that prior to initiating a release:

1. At least two independent samples are analyzed in accordance with Specification 4.11.1.1.1; and
2. The original release rate calculations and discharge valving are independently verified by a second individual.

ACTION 2: With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided that best efforts are made to repair the instrument and that grab samples are analyzed for gross radioactivity (beta or gamma) at a lower limit of detection of at least  $3 \times 10^{-4}$  uCi/ml;

1. Once per 12 hours when the specific activity of the secondary coolant is  $> 0.01$  uCi/gm DOSE EQUIVALENT I-131.
2. Once per 24 hours when the specific activity of the secondary coolant is  $\leq 0.01$  uCi/gm DOSE EQUIVALENT I-131.

ACTION 3: With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this Pathway may continue provided that best efforts are made to repair the instrument and that once per 12 hours grab samples of the service water effluent are collected and analyzed for gross radioactivity (beta or gamma) at a lower limit of detection of at least  $2 \times 10^{-4}$  uCi/ml.

ACTION 4: With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided that best efforts are made to repair the instrument and that the flow rate is estimated once per 4 hours during actual releases. Pump performance curves may be used to estimate flow.

TABLE 4.3-12

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION  
SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>SOURCE CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>
1. GROSS RADIOACTIVITY MONITORS PROVIDING ALARM AUTOMATIC TERMINATION OF RELEASE				
a. Clean Liquid Radwaste Effluent Line	D*	P	R(1)	Q(2)
b. Aerated Liquid Radwaste Effluent Line	D*	P	R(1)	Q(2)
c. Steam Generator Blowdown Monitor	D*	M	R(1)	Q(2)
d. Condenser Air Ejector Monitor	D*	M	R(3)	Q(2)
e. Condensate Polishing Facility - Waste Neut Sump	D*	P	R(1)	Q(2)
2. GROSS RADIOACTIVITY MONITORS PROVIDING ALARM BUT NOT PROVIDING AUTOMATIC TERMINATION OF RELEASE				
a. Reactor Building Closed Cooling Water	D*	M	R(1)	Q(2)
3. FLOW RATE MEASUREMENT DEVICES				
a. Clean Liquid Radwaste Line	D*	NA	R	Q
b. Aerated Liquid Radwaste Line	D*	NA	R	Q
c. Condensate Polishing Facility - Waste Neut Sump Line	D*	NA	R	Q
d. Dilution Water Flow	D(4)	NA	NA	NA
e. Steam Generator Blowdown Line	D(4)	NA	NA	NA

TABLE 4.3-12  
(Continued)

TABLE NOTATIONS

- \* - During releases via this pathway and when the monitor is required OPERABLE per Table 3.3-12. The CHANNEL CHECK should be done when the discharge is in progress.
- NA - Not Applicable.
- (1) - Calibration shall include the use of a known radioactive liquid or solid source which is traceable to an NBS source.
- (2) - The CHANNEL FUNCTIONAL TEST shall also demonstrate that control room alarm annunciation occurs if any of the following exist:
- a. Instrument indicates measured levels above the alarm/trip setpoint.
  - b. Instrument indicates a downscale or circuit failure.
  - Automatic isolation of the discharge stream shall also be demonstrated for this case for each monitor except the reactor building closed cooling water monitor. For the condenser air ejector monitor it is the isolation of the steam generator blowdown that shall be demonstrated.
- (3) - Calibration shall be performed using a known source whose strength is determined by a detector which has been calibrated to an NBS source. The source shall be in a known reproducible geometry.
- (4) - Pump or valve status, as appropriate, shall be checked daily for the purposes of determining flow rates.

SAMPLE RECORD OF ALLEGATION PANEL DECISIONS

SITE: MILLSTONE 2  
ALLEGATION NO.: 91-A-0231  
DATE: 8/28/91 (Panel No. 1 2 3 4 5)  
PRIORITY: High Medium Low  
SAFETY SIGNIFICANCE: Yes No Unkn  
CONCURRENCE  
TO CLOSEOUT: DD BC SC  
CONFIDENTIALITY GRANTED: Yes No  
(See Allegation Receipt Report)  
IS THERE A HARASSMENT/DISCRIMINATION  
ISSUE:  
IF YES,  
1) has the individual been informed of the DOL  
process and the need to file a complaint within 30 days  
2) has the individual filed a complaint  
with DOL  
3) has a letter been sent to the complainant seeking  
any safety concerns  
IS A CHILLING EFFECT LETTER WARRANTED:  
IF YES, HAS IT BEEN SENT  
HAS THE LICENSEE RESPONDED TO THE CHILLING  
EFFECT LETTER:

PANEL ATTENDEES:  
Chairman - Wiggins  
Branch Chief -  
Section Chief (AOC) - G. Kelly  
Sr. Allegation Coord (SAC) Fuhrmeister  
OI Representative - J. Cullings  
(Other) B. Bones  
W. Roberts, EGG  
D. Holoby

Yes No

Yes No

Yes No

Yes No

Yes No

Yes No

Yes No

Issue resolved  
previously

ACTION:

- 1) DRP to send acknowledgment letter to licensee EGG prepare  
ECD - 2 weeks
- 2) DRP to send referral letter to licensee, turning over Items 1, 2, 4 EGG prepare  
ECD - 2 weeks  
and 6
- 3) DRP to inspect Item 5 ECD - 6 weeks
- 4) DRP handling Item 3 as a more general concern
- 5) \_\_\_\_\_

NOTES: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

9/13/91

A L L E G A T I O N   M A N A G E M E N T   S Y S T E M

ALLEGATION NUMBER - RI-91-A-0231

RUN DATE: 09/11/91

DOCKET/FACILITY/UNIT: 05000336 / MILLSTONE 2  
DOCKET/FACILITY/UNIT: /  
DOCKET/FACILITY/UNIT: /  
DOCKET/FACILITY/UNIT: /

/ 2  
/  
/  
/

ACTIVITY TYPES - REACTOR

MATERIAL LICENSES -

FUNCTIONAL AREAS - OPERATIONS

DESCRIPTION - 1) NO CHECK SOURCES IN S/G BLOWDOWN OR RBCCW RAD MONITORS.  
2) PORC REVIEWS ARE SUPERFICIAL, DIDNT IDENTIFY ERRORS  
3) NU IS UNRESPONSIVE TO EMPLOYEE CONCERNSECT. ALSO GAVE  
CONCERNS - 4) RBCCW RAD MONITOR SAMPLE VALVES NOT LABELED AND DRAWING  
6 DOESNT REFLECT AS-BUILT CONDITION  
5) OPERATORS FAILED TO ENTER LCO WITH RBCCW RAD MONITOR OOS  
6) I&C TECHS INCORRECTLY STARTED SJAE RAD MONITOR  
SOURCE - LICENSEE EMPLOYEE CONFIDENT - NO

RECEIVED - 910822 BY - JT SHEDLOSKY / RI

ACTION OFFICE CONTACT - EM KELLY - (FTS) 346-5183

SAFETY SIGNIFICANCE - UNKNOWN BOARD NOTIFICATION - NO

STATUS - OPEN SCHED COMPLETION - 911231 DATE CLOSED -

ALLEGATION SUBSTANTIATED - ALLEGER NOTIFIED -

OI ACTION - OI REPORT NUMBER -

REMARKS - RECEIVED AT RESIDENT OFFICE BY MEMO, WITH SUBSEQUENT UPDATE.  
PANELED 28AUG91.

SUPPORT OFFICE: RPS-4A

ACTION PENDING: REFER TO LICENSEE

DOCUMENTATION:

ALLEGER LAST CONTACTED: 22AUG91

REFERENCE:

KEYWORD: RAD MONITOR, RESPONSIVENESS

ENTERED SYSTEM - 910903 CLOSED SYSTEM -

RECORD CHANGED - 910903

9/13/91



RECORD OF ALLEGATION PANEL DECISIONS

SITE: Millstone 2 PANEL ATTENDEES:  
ALLEGATION NO.: R1-91-A-0231 Chairman - Wiggins  
DATE: 18 Sep 91 (Panel No. 1 2 3 4 5) Branch Chief -  
PRIORITY: High Medium Low Section Chief (AOC) - Kelly  
SAFETY SIGNIFICANCE: Yes No Unkn Sr. Allegation Coord (SAC) Fuhrmeister  
CONCURRENCE TO CLOSEOUT: DD BC SC OI Representative -  
CONFIDENTIALITY GRANTED: Yes No (Other) Kottan Conner (T)  
(See Allegation Receipt Report)

IS THERE A HARASSMENT/DISCRIMINATION ISSUE: Yes No  
IF YES,  
1) has the individual been informed of the DOL process and the need to file a complaint within 30 days Yes No  
2) has the individual filed a complaint with DOL Yes No  
3) has a letter been sent to the complainant seeking any safety concerns Yes No  
IS A CHILLING EFFECT LETTER WARRANTED: Yes No  
IF YES, HAS IT BEEN SENT Yes No  
HAS THE LICENSEE RESPONDED TO THE CHILLING EFFECT LETTER: Yes No

ACTION: RESP ECD  
1) Open an allegation on "responsiveness to worker concerns" and lump all future responsiveness issues there SAC 20SEP91  
2) REPAIR NEXT WEEK DRP 25SEP91

- 3) \_\_\_\_\_
- 4) \_\_\_\_\_
- 5) \_\_\_\_\_

NOTES: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

5/135

10/91? (115)

## REACTOR BUILDING CLOSED COOLING WATER MONITOR - RM-6038

### DESCRIPTION

Gamma Scintillator - 2" x 2" NaI detector  
Off line common sample line taken off the discharge of each pump  
Detector is surrounded by 5" lead shield  
Located along the south wall (-25' 6" elev.) of Aux. Bldg. - See Figure 1  
P&ID # 25203-26022 - Sh. 1

### PURPOSE

To monitor the gross gamma activity in the RBCCW and hence, provide an indication of heat exchanger leakage.  
Alarms on High Rad - No automatic control functions.

### REGULATORY REQUIREMENTS

Technical Specification 3/4.3.3.9 - Tables 3.3-12 and 4.3-12

Included in the liquid effluent monitoring table as MP2 has no service water rad monitor to act as a final effluent monitor for service water. Detectable activity in the service water could only result if RBCCW activity was high and a leak into service water existed. An indication of high activity in RBCCW would result in more frequent service water sampling.

REMODOCM - Section E.7 of ODCM

### RANGE

10<sup>1</sup> to 10<sup>6</sup> cpm  
Based on a typical conversion factor of 6 x 10<sup>-9</sup> uCi/ml per CPM  
this corresponds to a range of 6 x 10<sup>-8</sup> uCi/ml to 6 x 10<sup>-3</sup> uCi/ml

### FLOW RATES

Sampler flow rate is maintained at approximately 2 gpm.

### ALARM SETPOINT

#### Required Setpoint

Per the ODCM, the setpoint should be less than or equal to the CPM corresponding to:

$$\text{Background} + 5 \times 10^{-5} \text{ uCi/ml}$$

In this case, background is not the normal process reading, it is the in place reading of the monitor with clean flush water in the sample chamber.

5/13/6

### Recommended Setpoint

The alarm may be set at values less than above. An alarm of 2 to 3 times the normal reading is recommended as an indication of change.

### BASIS FOR ALARM SETPOINT

#### Required Setpoint

The alarm setpoint is based on ensuring that any potential releases via the service water system are maintained within 10CFR20 limits. The alarm setpoint was calculated as follows:

Assumptions used in determining the alarm setpoint for this monitor are:

- a. Maximum flow from primary makeup water is 400 gpm and hence, assumed maximum RBCCW to service water leak rate.
- b. Minimum circulating water dilution flow is 135,000 gpm (1 circulating water pump).
- c. The release rate limit is conservatively set at 50% of the 10CFR Part 20 limit for I-131 ( $0.5 \times 3 \times 10^{-7} \text{ uCi/ml} = 1.5 \times 10^{-7} \text{ uCi/ml}$ ).
- d. Background can be added after the above calculations are performed.

Therefore, the alarm setpoint (using the latest monitor calibration curve) should correspond to a concentration of:

$$\begin{aligned}\text{Alarm (uCi/ml)} &= 135,000/400 \times 1.5 \times 10^{-7} + \text{background}^* \\ &= 5 \times 10^{-5} \text{ uCi/ml}^{**} + \text{background}\end{aligned}$$

Note that the purpose of this monitor is to detect high activity that may occur between the weekly RBCCW samples. Hence, the maximum undetected dose consequence, assuming an unlikely 400 gpm leak, is:

$$\begin{aligned}5 \times 10^{-5} \text{ uCi/ml} \times 400 \text{ gal/min} \times 168 \text{ hr/week} \times 60 \text{ min/hr} \times 3785 \text{ cc/gal} \\ \times \text{Ci}/10^6 \text{ uCi} = 0.8 \text{ Ci} \\ 0.8 \text{ Ci} \times 0.2 \text{ mrem/Ci} = 0.16 \text{ mrem maximum organ}\end{aligned}$$

This dose is below limits and is an event that should rarely, if ever, happen over the life of the plant.

\* Monitor background at monitor location.

\*\* Note that this value has been specified in the Radiological Environmental Review for REMM Change Request #88-1.

### Recommended Setpoint

As long as 2 to 3 times normal is less than the required setpoint, it is recommended to be a more sensitive indicator of change and hence, a more rapid indicator of potential heat exchanger leakage.

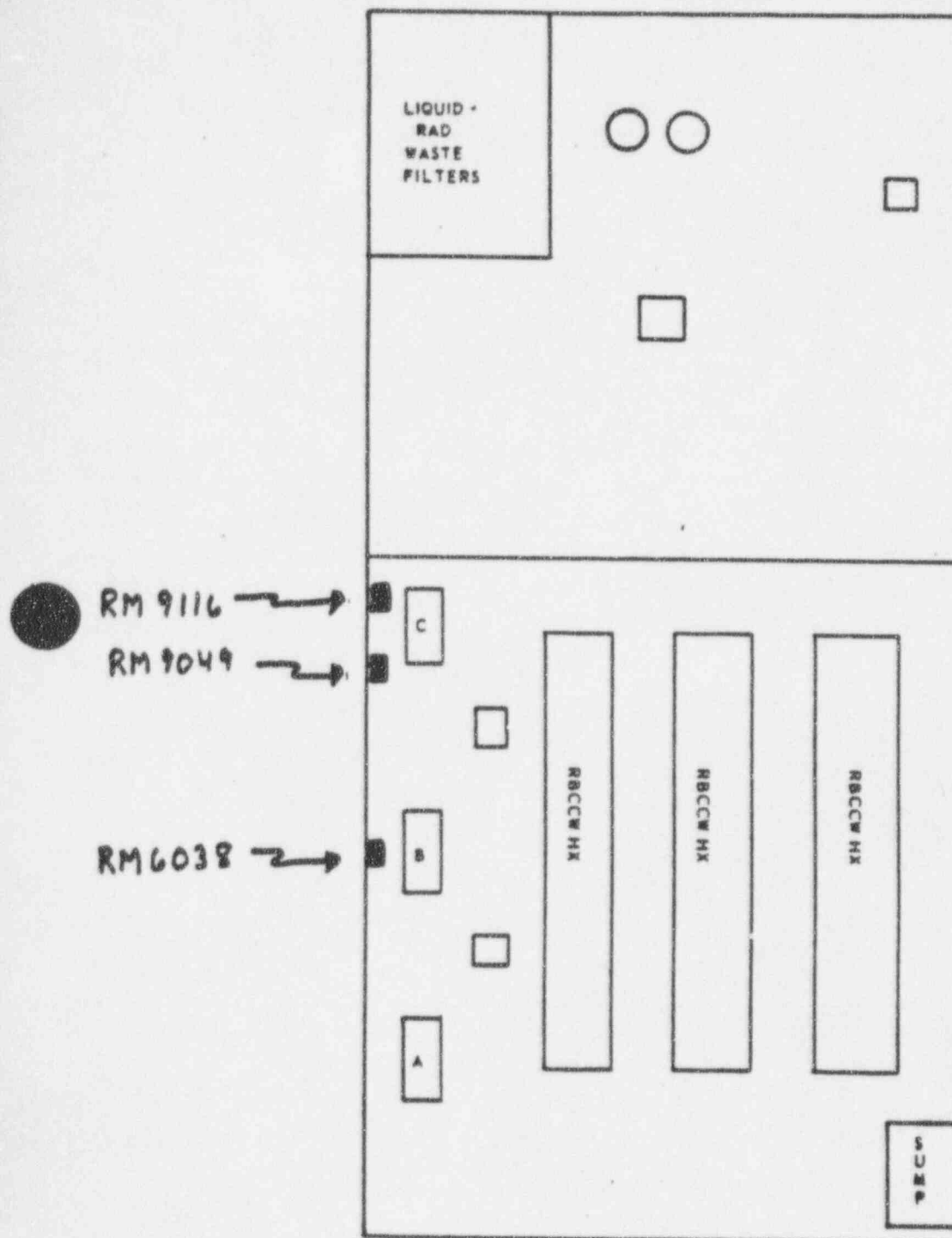
### CONVERSION FACTOR

Variable depending on latest calibration data, but based on recent (1988/1989) calibration is typically about  $6 \times 10^{-9}$  uCi/ml/ccpm.

### CALIBRATION TECHNIQUE

NBS traceable concentrations of Cs-137 in a liquid sample container of equivalent geometry to the process chamber are used. Three different concentration solutions are used and the ccpm for each is determined. An average calibration factor is then determined.

Figure 1



Aux Bldg. -25'6"



RI-91-A-231 ISSUES & REQUESTS

Issue 231-2:

Plant Operation Review Committee (PORC) actions are superficial. There are different calibration accuracy requirements between the Steam Generator radiation monitor functional test procedure (SP 2404A1), recently reviewed by the PORC, and a referenced source. Procedural problems also exist in the RBCCW radiation monitor calibration procedure, which was also recently reviewed.

Request:

Please discuss the validity of this assertion. Please provide assurance that the calibration accuracy requirements are correct and consistent and that procedural problems in the RBCCW are resolved.

Issue 231-4:

The RBCCW radiation monitor (RM 6083) sample valves are not labeled. Additionally, the piping and instrumentation drawing (P&ID) 25203-26022, Sheet No. 1, does not reflect the actual installed configuration of the sample lines. (This concern is similar to issue 210-1 referred to you by letter under File Number RI-91-A-0210, dated August 22, 1991.)

Request:

Please discuss the validity of this assertion. Please provide assurances that the RBCCW radiation monitor (RM 6083) sample valves will be labeled in the future and that piping and instrumentation drawings will reflect actual conditions.

Issue 231-6:

I&C technicians incorrectly started the Steam Jet Air Ejector (SJAE) radiation monitor (RM 5099) with the sample pump inlet valve shut. Subsequently, the motor failed to re-start. The sample pump was started by I&C Department personnel. It should have been operated by Operations Department personnel.

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RI-91-A-231 ISSUES & REQUESTS (continued)

Request (231-6):

Please discuss the validity of this assertion and provide assurances that the stated problems with regard to the SJAE radiation monitor system operation are resolved with regard to safety requirements.

GENERAL REQUEST:

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

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

OCT 29 1991

Docket Number: 50-336  
File Numbers: RI-91-A-0232 and RI-91-A-0263

Northeast Nuclear Energy Company  
ATTN: Mr. John F. Opeka  
Executive Vice President - Nuclear  
P.O. Box 270  
Hartford, Connecticut 06141-0270

Dear Mr. Opeka:

The U.S. Nuclear Regulatory Commission recently received information concerning activities at Millstone Unit 2. Enclosed are the details for your review and followup.

We request that the results of your review and disposition of these matters be submitted to Region I within 30 days of the date of receipt of this letter. We request that your response contain no personal privacy, proprietary, or safeguards information so it can be released to the public and placed in the NRC Public Document Room. If necessary, such information shall be contained in a separate attachment which will be withheld from public disclosure. The affidavit required by 10 CFR 2.790(b) must accompany your response if proprietary information is included. Please refer to file numbers RI-91-A-0232 and RI-91-A-0263 when providing your response.

The enclosure to this letter should be controlled and distribution limited to personnel with a "need to know" until your investigation of the concern has been completed and reviewed by NRC Region I. The enclosure to this letter is considered Exempt from Public Disclosure in accordance with Title 10, Code of Federal Regulations, Part 2.790(a). However, a copy of this letter excluding the enclosure will be placed in the NRC Public Document room.

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

Your cooperation in this matter is appreciated. We will gladly discuss any questions you have concerning this information.

Sincerely,

Charles W. Hehl, Director  
Division of Reactor Projects

5/1/41

411113-0202-2PP

Northeast Nuclear Energy Company

2

OCT 29 1991

Enclosure: 10 CFR 2.790(a) Information  
Issues and Requests

cc w/o encl:

Public Document Room (PDR)

Local Public Document Room (LPDR)

State of Connecticut

bcc:

Allegation Files, RI-91-A-0232 and RI-91-A-0263

E. Connor

T. Shedlosky

W. Raymond

E. Kelly

Contractors Office File (REAGAN)

Concurrence:

RI:DRP

R. Barkley

10/\_\_\_/91

RI:DRP

*E. Kelly*

10/\_\_\_/91

*10/22*

RI:DRP

*E. Wenzinger*

10/25/91

*EW*  
*10/29*