NORTHEAST UTILITIES

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

General Offices • Selden Street, Berlin, Connecticut

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

September 27, 1991

Docket No. 50-336
A09768

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, Pennsylvania 19406

Dear Mr. Hehl:

Millstone Nuclear Power Station, Unit No. 2
RI-91-A-0079

We have completed our review of identified issues concerning activities at Millstone Station. As requested in your transmittal letter, our response does 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 response have received controlled and limited distribution on a "need to know" basis during the preparation of this response. Additional time in which to respond to these issues was granted by the Region I Staff in a telephone conversation on September 19, 1991.

ISSUE 79-1:

Procedures being issued in the I&C department are inadequate in that acceptance criteria are not being established for required measurements. Specifically a draft copy of procedure IC 2416G was provided for review and it had not incorporated several comments that were raised on previous revisions. These comments included: 1) An acceptance criterion for the output of the pulse height discriminator was not established; 2) A precaution was not added to check the power supply output of the NLW-3 drawer if the Gammametrics power supply drops below 15 volts; The Gammametrics and NLW-3 drawers share the same power supply and the Gammametrics output acceptance criterion is 15 + 1.5 VDC while the NLW-3 output acceptance criterion is 15 + 0.0075 VDC. Therefore the Gammametrics drawer may be in specification while the NLW-3 is out of specification; 3) The proposed acceptance criterion for the discriminator bias voltage was inadequate at .9 + 1 VDC; Gammametrics recommends 0.8 to 1.0 VDC.

In addition PORC meeting 2-89-123 authorized change No. 3 to procedure IC 2417I-1. The change authorized new settings for NLW-3 drawer discriminator voltage. Section 5.4 of IC-2417I- 1 should have also been changed at this time, and a discussion section on NLW-3 discriminator settings should have been added.

Request 79-1:

Please discuss the validity of the above assertions. Was the procedure released for use, and if so, was it unusable in this field? Please state whether or not the procedural changes were required to satisfy regulatory requirements, and discuss the review process for procedures and how comments raised during the procedure review are addressed.

Response 79-1:

The assertion that inadequate procedures are being issued in Millstone Unit No. 2 Instrumentation and Controls (I&C) is not valid.

The change number and Plant Operations Review Committee (PORC) meeting number stated in the assertion are for a change to the I&C Form and not the procedure as stated. I&C Form 2417I-1, Section 5.4, was in fact changed in July 1989, to authorize new settings for the NLW-3 drawer discriminator voltage. Discussion sections are not typically added to I&C data sheets and none was added in this case. Discussion sections are more appropriately included in the body of the procedure. In this case, a discussion section on the discriminator settings was judged to not constitute necessary information.

We were previously aware of the need for revisions to the procedure at issue and I&C procedure IC 2416G, Wide Range Discriminator Adjustment, is currently in the revision process. The review process for procedure revisions includes incorporation of format changes as required by the procedure upgrade group; a review by the person responsible for the procedure, typically an instrument specialist; and independent review and validation activities as deemed necessary. The person responsible for the procedure coordinates the resolution of comments raised through the review process. Engineering input is solicited as required to resolve issues. The procedure is then revieved by the department head and presented for PORC approval.

The draft revision has incorporated many changes of both a technical and format nature. The copy referenced has not been issued for use in the field. Comments are still being researched and information is still being incorporated. The changes being made include guidance from Gammametrics, the vendor presently responsible for support of the system. When all the existing comments have been resolved the procedure will be re-routed for final comments. When comments on the final draft are resolved, the procedure revision will be taken to PORC for review and approval. The procedure will then be issued for use in the field. This procedure change is intended to enhance the use of the procedure in the field and the changes being incorporated were not the result of any regulatory requirements.

ISSUE 79-2:

While troubleshooting a disabled ICC thermocouple, it was noted that a Litton-Veam connector used to perform the troubleshooting was identical to what is installed in the ICC system. The connector used for the troubleshooting was obtained from the NNECO warehouse and was not EQ. Work order AWO M2-90-13287, used for the troubleshooting, did not reference procedures IC 2421C and IC 2821E, which provide guidance to personnel for working on Litton-Veam connectors that are EQ. I&C department supervisors were unavare that this section of the ICC system cabling was EQ. Also the loop folders which were being used for this work were out of date.

Request 79-2:

Please discuss the validity of the above assertions. If valid, please discuss actions taken to ensure that EQ requirements were met in this case.

Response 79-2:

The assertion as stated is not valid. We were made aware of this issue during performance of troubleshooting activities under the Automated Work Order (AWO).

Troubleshooting is a logical approach to solving a problem. It is not unusual to use similar, but not qualified, equipment during troubleshooting because this equipment is not left installed in the system.

The original issue of the AWO did not reference the Electrical Environmental Qualification (EEQ) maintenance procedures but did contain the information that the work was on an EEQ system. There are no special maintenance activities required to maintain the EEQ boundary of this equipment. The procedures mentioned in this assertion contain information on the reactor vessel head cabling removal and testing (2421C) and head area cabling support system connector assembly (2421E). The connector assembly procedure (2421E) does not contain maintenance guidance for testing or troubleshooting existing connectors and was not considered relevant to the AWO. Procedure 2421C contains maintenance information and this reference was added to the AWO job description in response to the specialist's questions during the work activity.

The assertion that the loop folders are out of date is not valid as there are no loop folders for the ICC thermocouples.

ISSUE 79-3:

Recently, a PDCR which installed an audio monitoring system on the pressurizer safety valves was authorized. The audio system did not contain a spare hookup as shown on the PDCR drawing. Also the wire hookup in the PDCR showed two different setups. These problems caused the job to be delayed resulting in excessive radiation exposure of the workers.

Request 79-3:

Please discuss the validity of the above assertions. If valid, please discuss the methods used to ensure that procedures are technically correct prior to performance and what preparations are performed to ensure worker radiation exposure is minimized.

Response 79-3:

The assertion concerning excessive radiation exposure is not valid. The total radiation exposure for the job amounted to 0.24 manrem. The work scope accounted for in this total included construction and removal of staging to accomplish the work on the shield assemblies. The extra time in the area that can be attributed to the confusion caused by the drawings and procedure figures is approximately 1 manhour, and approximately 0.019 manrem. While any unnecessary exposure is undesirable, this is not considered to be excessive.

The Acoustic Flow Valve Monitoring System (AVMS) installed at Millstone Unit No. 2 utilizes two shield assemblies as was noted in the original and latest revision of the maintenance procedure. The vendor drawings show, and technical information states, that the system can be supplied with up to three charge converters in one shield assembly. The plant drawings and installation and maintenance procedure IC 2417T, figures and attachments, were developed from the vendor information and made reference to a third charge converter as being there but not used. A note in the body of the procedure states that only two charge converters are used at Unit No. 2.

The "wire hookup... setup" refers to the vendor drawings which show different methods for different signal conditioning equipment. The PDCR correctly referred to the proper method for the equipment installed at Millstone Unit No. 2.

We were made aware of this issue during work performed under an AWO in May 1991. The installation and maintenance procedure, IC 2417T Rev. 1, has been changed to clarify the internal part arrangement shown in Figure 8.2 and the number of preamplifier assemblies described in Attachment 10.2 to indicate that two charge converters are installed. Also NUSCO drawings 25203-28500 sh. 193, 194, 298, 299, have been revised, via Design Change Request (DCR) No. M2-P-015-91, to remove any reference to a "spare" charge converter.

ISSUE 79-4:

On April 22, 1991 the "B" and "D" battery chargers were removed from their normal power supply. Later, a technician performing a surveillance on the "C" train Nuclear Instrument placed the instrument into Test due to a spiking problem. This action rendered three trains of nuclear instrumentation inoperable. Since the plant was in Hot Standby at the time of the test, two trains of nuclear instrumentation were required to be operable. A Plant Incident Report (PIR) was initiated to document the occurrence but the PIR was later canceled based upon an interpretation of the Technical Specification requirements.

Request 79-4:

Please discuss the validity of the above assertions. Please discuss the basis for the decision not to document the occurrence, if substantiated, with a PIR.

Response 79-4:

The conditions described in the assertion are confusing and could not be substantiated as written.

The "D" battery charger supplies the turbine battery, has only one power supply, and has nothing to do with nuclear instrumentation.

There is no entry in the Shift Supervisor's log that any electrical bus alignments related to nuclear instrumentation were changed on April 22, 1991. The nuclear instruments (RPS) are powered from vital 120 vac distribution panels, which are in turn supplied by inverters powered from the vital station batteries. The station batteries each have a dedicated charger, and there is a "swing" (backup) charger. None of these systems were realigned on April 22, 1991.

The Production Maintenance Management System (PMMS) history was revieved and no work was found to have been performed on any battery chargers on April 22, 1991, or for a few days on either side of April 22. On April 26, maintenance was performed on the 'C' battery charger, which is the non-dedicated charger and would not have affected the operability of any DC busses.

There is no entry in the Plant Incident Report (PIR) log to suggest that a PIR was "initiated" on any related topic on April 22, 1991, and neither the Administrative Control Procedure (ACP-QA-10.01) nor NNECO practice allows for PIRs to be "canceled".

We were not aware of this issue as a concern prior to receipt of the NRC transmittal letter.

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

E. J. Mroczka
Senior Vice President

cc: See Page 6

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, NRC, Millstone Nuclear Power Station

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September 13, 1991

Docket No. 50-336
A09699

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, Pennsylvania 19406

Dear Mr. Hehl:

Millstone Nuclear Power Station, Unit No. 2
RI-91-A-0113N

We have completed our review of the identified issues concerning activities at Millstone Station. As requested in your transmittal letter, our response does not contain any personal privacy, proprietary, or safeguards information. The material contained in this response may be released to the public and placed in the NRC Public Document Room at your discretion. The NRC letter and our response have received controlled and limited distribution on a "need to know" basis during the preparation of this response. Additional time in which to respond to these issues was granted by the Staff in telephone conversations of August 12 and August 30, 1991.

ISSUE 113N:

On May 20, 1991, an operator observed an abnormal indication on the Unit 2 stack radiation monitor (RM 8168). The abnormal indication was no variation on the meter. The operators secured and immediately reinstated power to the monitor and the meter response was noted to have returned. On May 21, operators again observed no variation in the monitor output. A trouble report was initiated and the technical specification action statement was entered for an inoperable monitor. The one day delay is an example of operators failing to promptly initiate a corrective action request and failing to enter the technical specification action statements when required.

Request:

Please discuss the validity of the above assertions. If any deficiencies are identified, please provide us with the corrective actions you have taken to prevent recurrence and assess the significance with regard to safety of the identified deficiencies.

ISSUE 136:

From June 3 to June 5, 1991 repetitive failures were noted in the control room indication for the Unit 2 vent stack high range radiation monitor RM8168A/B. On June 3 the "failure" lamp was lit, and on June 5, 1991 a "Trouble Tag" was found to be in place. The required technical specification action statements were not complied with during these repetitive failures.

Request:

Please discuss the validity of the above assertions. If any deficiencies in equipment availability or procedure compliance are identified, please provide us with the corrective actions you have taken to prevent recurrence and provide an assessment of the significance of the deficiencies with respect to safety.

Responses 113 & 136:

As issues 113 and 136 both deal with technical specification action statements relating to radiation monitor RM 8168, they will both be answered in a single response as follows.

The chronology of observations reported in the two issues agrees with entries in the Millstone Unit No. 2 Shift Supervisor's log, and with a chronology of Instrumentation & Controls (I&C) Department troubleshooting and repair activities.

Relative to the specific decisions cited or implied in Issues 113 and 136, no failures to take required action occurred, as discussed in the following comments.

Taking immediate action to restore normal system output following an observed abnormal indication on RM 8168 was an appropriate response for a single 'lockup' of this microprocessor-based instrument. Such occurrences are not unusual. Removing power to this monitor and then immediately restoring it, in effect "resets" the device to its normal mode of operation. For this reason, the instrument is monitored routinely. It would not be necessary to submit a Trouble Report (TR) for such an isolated anomaly since the operator was able to immediately restore expected display outputs, and the full operational capability of the device was confirmed. Furthermore, entry into an action statement would not be appropriate since the radiation monitor operated properly once it was reset.

The RM 8168 performance anomaly observed on the morning of May 21 was repetitive, not understood, and not resettable. Evaluating the radiation monitor as "out of service" as indicated by the Shift Supervisor's log entry of 0800, the operators entered the applicable Technical Specification action statement, and remained in that condition until May 23, 1991, when replacement of a failed power supply was completed after I&C identified the cause of the indication problems as a broken wire and failed 24 volt output.

Since the performance anomaly observed on the morning of May 21 was repetitive, not understood, and not resettable, both actions (i.e., submitting the Trouble Report and entering the Technical Specification action statement, Table 3.3-6, Action 17) were clearly appropriate.

During the period from June 3 to June 5, 1991, Millstone Unit No. 2 was in Mode 5. In Mode 5 radiation detector RM 8168 is not required to be operable, hence under no conditions of RM 8168 performance would the plant have entered into, or been operated in accordance with, the Technical Specification action statement for RM 8168.

The two scenarios noted above were the result of a single problem. During the period from approximately May 24 through late July 1991, the LIC-8168 power supply anomaly caused intermittent power failure interrupts to be processed by the microprocessor. The intermittent lockup problem caused RM 8168 to stop normal processing functions, recognizable in the control room by the radiation monitor display not changing and not responding to the test push button. This problem was known to the control room operators, and corrective action to reset the radiation monitor was taken as needed. Throughout this period, it was the judgment of on-shift supervisory personnel, Operations management, and I&C management (specifically discussed in a draft Operability Evaluation approved by the I&C Manager on July 19, 1991), that RM 8168 remained operable, i.e. fully capable of meeting its Technical Specification functions.

In summary, after troubleshooting was completed, it was concluded that RM 8168 was operated in a slightly degraded state for several weeks. This degradation manifested itself to control room operators as an intermittent lockup of the radiation monitor, easily reset by on-shift operations personnel. These personnel were alerted to the problem and checked the monitor regularly for proper operation.

On-shift supervisory personnel are tasked with initiating the appropriate corrective action and compensatory measures for equipment performance problems encountered during their shift. Judgment is frequently involved in such determinations. Supervisors in the Operations Department are selected, trained, counseled and evaluated on their performance in such activities. The Operations Manager, other members of plant management, and specifically the Unit Duty Officer are available to consult with the Shift

Supervisor concerning the level of response required for a given plant performance anomaly. Similarly, various members of the staff review plant performance and corrective actions taken on a regular basis during the workday; in this fashion shift operators' responses receive frequent and multidisciplinary reviews on a continuing basis.

At no time during the events described in Issues 113 and 136, nor at any time during the period of degraded RM 8168 operations, were the Shift Supervisors' judgments concerning operability or the need for corrective action found to be in error. Therefore, these assertions are not valid.

We were not aware that these were issues of concern prior to receiving your letter of July 9, 1991.

ISSUE 114-1 (Unit 3):

On May 22, 1991 during the MP-3 refuel outage a calibration error of the accumulator tank level transmitters was identified. The error was in the range of 25% due to static fluid between the transmitter and the instrument taps. The calibration procedure did not address the error due to the level instrumentation piping configuration; therefore, the procedure was inadequate. Further, if the present instrument indication is correct, then it was achieved by using zero span adjustments without adhering to the calibration procedure.

Request (Unit 3):

Please discuss the validity of the above assertions. If any deficiencies in calibration procedures or procedural compliance are identified, please provide us with the corrective actions you have taken to prevent recurrence. Please provide us with an assessment of the significance with regard to safety of any identified deficiencies.

Response:

We have found no justification for the statements made in issue 114-1. A calibration of the accumulator tank level transmitters was started on February 7, 1991 and successfully completed on March 18, 1991. No work was performed on May 22, 1991, nor does the Shift Supervisor's log indicate that such an error was identified on or near that date.

An error of 8.5% was found to exist between level indications on a common accumulator after completion of the refuel outage calibration dated February 18, 1991. This was in excess of the 5% desired maximum error between common channels and prompted a survey of "as built" transmitter installations on March 16, 1991. The Engineering Calculation and Surveillance were revised to reflect the survey data. A second calibration was completed on March 18, 1991 with a noted maximum error of 0.47%.

The difference between indicated and actual level for the period of February 18, 1991 to March 18, 1991 was 13.3%.

As a result of the elevation differences discovered between channels, we know that the maximum and minimum indicated range is different for each transmitter. An example is that one indicator would read down to 6550 gallons while the other indicator on the same tank would stop at 6555 gallons. There is no safety significance involved with the difference as both these indicated ranges are well beyond the operating limits specified in Technical Specifications.

Yellow caution tags have been placed on the indicators to specify the minimum and maximum display values for each transmitter. New readout scales have been generated for the indicators to allow removal of the yellow caution tags. We are currently working to ins.all these readout scales.

We are confident that the new method of calibration is more accurate, more repeatable and less time consuming to perform. Indication differences between redundant channels on all accumulators are less than 44 gallons.

The present instrument indication is correct and the new calibration method will improve reliability. The calibration procedure was always adhered to during calibrations. No zero or span adjustments were made unless directed by procedure, which is based on the Engineering Calculation. This assertion is therefore not valid, and we were not aware that this was a concern until notification by the Staff's letter of July 9, 1991.

ISSUE 114-2 (Unit 1):

On May 22, 1991 during the installation of the IRM cable detector assemblies under the reactor vessel, the RWP/HP controls were inadequate and resulted in the possible ingestion of radioactive material by a worker. The cable was identified as "5K smearable" on May 22, 1991 and the RWP required workers to wear respirators. However, on May 21, 1991, the RWP did not require respirators to do the same job.

Request (Unit 1):

Please discuss the validity of the above assertions. If any deficiencies are identified, please provide us with the corrective actions you have taken to prevent recurrence. Please provide us with an assessment of the significance with regard to safety of any identified deficiencies.

Response:

This assertion is not valid. The Health Physics controls for the under vessel IRM/SRM work were both adequate and conservative.

The "5K smearable" referred to in issue 114-2 is the loose surface contamination detected during health physics surveys. This information is expressed in terms of thousands of disintegrations per minute (dpm) over a surface area of 100 square centimeters (cm2). On May 22, 1991, the radiological data for the IRM cable work indicated a range of smearable contamination from 5K to 300K dpm/100 cm2 loose surface contamination. On the previous day the loose surface contamination had been 20K to 50K dpm/100 cm2.

The Health Physics department uses air samples in conjunction with a threshold loose surface contamination value of 100K dpm/100 cm2 for considering the required use of respiratory protection for this type of work. On May 21, conditions were such that the RWP required face shields and respiratory protection only if the work area contained dripping water from above. On May 22, as a result of the work done the previous day the loose surface contamination survey results increased from the previous day's maximum of 50K to a new value of 300K. The air sample data obtained during and after the previous day's work did not require the use of respirators. However, based on this change in smearable contamination in the work area, Health Physics took the conservative step of requiring respirators.

The actions of Health Physics in requiring respirators on the day at issue was a conservative step and no safety deficiencies are indicated. A review of personnel contamination events for the month of May 1991, reveals no personnel contamination events as a result of IRM/SRM under-vessel work. We were not aware of this concern until receipt of the Staff's letter.

ISSUE 116:

Recently, a tagging error occurred during preparations for maintenance on the Clean Liquid Radioactive Waste Effluent Monitor (RM 9049). The solenoid valve isolation valves that needed to be tagged in accordance with prerequisites for the job were not tagged. Specifically, the valves designated to be traced by procedures IC2404AA and IC 2404AC were not traced because the operations tag form was used to verify the tagging. The root cause of the error can be attributed to the I&C technician (who verified the tagging) not being trained and qualified as a "job supervisor". Although there was a qualified job supervisor associated with the work, this individual was allowed to leave the work area while an unqualified individual continued the job.

Request:

Please discuss the validity of the above assertions. If any deficiencies in work control are identified, please provide us with the corrective actions you have taken to prevent recurrence and assess the significance of the deficiencies with respect to safety.

Response:

This is a valid concern. The root cause of the tagging error at issue was a personnel error made by a plant equipment operator who placed the tags on the wrong valves. This error was not detected by the I&C personnel assigned to the task who were expected to verify the adequacy and placement of the tagging. Verification was only made of the adequacy of the tagging documented by the completed tag log sheet in the Automated Work Order (AWO) package. The actual placement of the tags was not verified as correct as required by procedure ACP 2.02C - Work Orders.

We were aware of this issue prior to receipt of the Staff's notification. As one action to prevent recurrence, all I&C personnel have been reminded of their responsibility to verify both the adequacy and the placement of safety tagging. There was no safety significance to the tagging error that was made. There were no releases as a result of this event.

A task group has been formed to review tagging errors at all three Millstone units and provide an assessment of the level of performance of the station regarding the quality and implementation of the tagging program. This group will also provide recommendations to station management for ensuring that plant procedures and their use by our employees are adequate to minimize tagging errors in the future.

This group will present its recommendations to improve the program along with an action plan for enhanced human performance to station management for review. If appropriate, a meeting with Region I Staff will be scheduled at the completion of this review to discuss the results of any actions planned.

ISSUE 12C:

On or about May 29, 1991 workmen were dispatched to troubleshoot a flow problem with the plant vent stack monitor (RM 8032AB) [sic]. At the time, the "A" sample pump was running, pump "B" was off and flow was as expected. The pumps were switched to permit the workers to investigate the flow problem. Pump "A" was stopped, but "B" did not start due to a preventive maintenance action that was still in progress. As a result, the stack monitor was out of service for 10-15 minutes.

Request:

Please discuss the validity of the above assertions. If any deficiencies in work control are identified, please provide us with the corrective actions you have taken to prevent recurrence and assess the significance of the deficiencies with respect to safety.

Response:

This assertion is not valid. On May 27, 1991 a trouble report was submitted to the Maintenance department to determine why the RM 8132 sample fan would not develop proper flow. Later that same evening the sample fan was tagged out of service. On May 29, 1991 I&C personnel worked on RM 8132B, using AWO M2-91-05446, to check the low flow problem identified on May 27. The "Tagging Required" section of the AWO indicated that a Technical Specification action statement was involved. This entry was made by the control room operator at the time the AWO was released.

On May 29, at 1310 hours, the plant entered Technical Specification action statement 3.3.3.10.a, Table 3.3-13, Action 2 for RM 8132 being out of service. The plant was logged out of the action statement at 1740 hours that same day. Nothing in the Shift Supervisor's log indicates this was anything other than a planned event. Realizing that one sample pump was out of service for preventive maintenance and that the other might have flow problems, it was proper to enter the action statement and trouble-shoot the remaining pump.

We find no work control deficiency associated with this maintenance/trouble-shooting activity. We were not aware that this was an issue of concern prior to receipt of the Staff's letter.

ISSUE 128:

On June 1, 1991 a worker learned that he had been assigned duty as the on-call I&C technician (Unit 2 Emergency plan) for a 24 hour period from the morning of May 30 through the morning of May 31, 1991. The worker was unaware of this assignment on May 29 when he informed his supervisor that he would not be at work on May 30 for personal reasons. The worker did not pick up the department radio paging device and no one else was assigned as his replacement. Lapses in on-call coverage such as this example occur on a routine frequency.

Request:

Please discuss the validity of the above assertions. If any deficiencies in the on-call coverage for emergency planning are identified, please provide us with the corrective actions you have taken to prevent recurrence. In addition, please assess the frequency and significance with respect to safety of lapses in on-call coverage by the Instrument and Controls and Maintenance technical staffs.

Response:

This is a valid concern, of which Northeast Nuclear Energy Company (NNECO) is well aware. A lapse in on-call coverage for this particular I&C Technician position did occur on May 30, 1991. However, three I&C Technicians and three Maintenance Technicians, one per unit, are on call at any time.

On-call schedules are published monthly and cover a period of one month and five days. They are distributed at the end of each month so that the on-call personnel know their assignments for the upcoming month. A person assigned to be on-call May 30/31 would have been made aware of that assignment by receiving a copy of the on-call list in late April. It is the responsibility of the individual to review the list on a regular basis to ensure that they pick up a radiopager on their assigned days.

Being excused from work for personal reasons does not automatically release an individual from on-call responsibilities. Emergency Plan Implementation Procedure (EPIP) 4211 directs an individual on-call but unable to fulfill their on-call obligations to arrange for a qualified substitute themselves. An exception to this is if a person calls in sick on the day they are to assume the on-call responsibilities. Then supervision will assign another individual. If an individual becomes incapacitated or otherwise unable to fulfill their on-call responsibilities outside of normal working hours, EPIP 4211 directs that individual to notify the Millstone Unit No. 1 Shift Supervisor (SS) who will assign the Millstone Unit No. 1 Shift Supervisor Staff Assistant (SSSA) to find a qualified relief.

The purpose of the on-call Station Emergency Organization (SEO) is to provide augmentation of shift personnel to provide adequate and timely response to abnormal and emergency conditions. Any one system has failure probabilities, e.g., individual pager failure, auto accident or breakdown during response, etc. In view of this, Millstone Station has developed a response in-depth program which provides reasonable assurance that adequate SEO staffing is available in a timely manner. The I&C and Maintenance Supervisors also supplement the SEO thereby exceeding Emergency Plan requirements.

Lapses in on-call coverage for certain technician positions occur more frequently than we consider acceptable from a management perspective but not from a safety perspective. We have not had a total lapse in coverage for any of the Maintenance or I&C technician positions this year because of our response in-depth approach. If an individual from Millstone Unit No. 2 did not respond to a radiopager message during an emergency, the Millstone Unit No. 1 SSSA, upon notification by the Millstone Unit No. 2 SS, would call that individual at home using the telephone. If the individual could not be reached or was not able to respond, the Millstone Unit No. 1 SSSA will contact the next person on the on-call schedule for the same position to determine availability to assume the on-call assignment. If necessary the SSSA will continue to call until a qualified relief is found. This process limits the significance of any lapses in coverage.

NNECO has recently upgraded the Emergency Notification System to automatically verify the on-call SEO positions that have been notified of the event (called into the station system). This enables the on-shift emergency communicators to make back-up calls to alternate SEO members. Each SEO position has a minimum of five trained staff and most non-manager positions have between ten and twenty. We have taken further steps to strengthen the on-call assignment to the SEO, dissemination of on-call schedules to individuals, and have a traceable means of verification:

1. A major revision is planned to EPIP 4211, "On Call Procedure", clarifying and strengthening the responsibilities of the Lead Managers and on-call individuals.

2. The station's Emergency Plan Coordinator has been assigned responsibility for maintaining and monitoring of the on-call schedule.

3. A new procedure, EPIP -[illegible]7, "Station Emergency Organization Response Verification Drill", to require a quarterly unannounced activation of the SEO is under final review.

ISSUE 129:

On June 3, 1991, the periodic evolution of refilling the volume control tank (VCT) level instrument reference leg was performed in accordance with procedure IC-2428F. During the reference leg fill, a worker noted an unexpected increase in VCT level. Because of this unexpected increase, it was suspected that the evolution actually drained the VCT reference leg. This observation was reported to supervision. Pressure in the primary makeup water supply was checked, and it was discovered that valve 2CH-195 in the supply path was red tagged closed instead of being in the open position as specified by step 6.2 of procedure IC-2428F. The valve alignment check had been performed by a Plant Equipment Operator. At that time the PEO did not perform a hands-on position check of valve 2CH-195 and failed to notice the red tag indicating the valve was closed. There was a conflict between the work procedure IC-2428F, which required valve 2CH-195 to be open, and the requirement to prevent boron dilution during reactor shutdown, which required the valve to be closed.

Request:

Please discuss the validity of the above assertions. If any deficiencies in work control, attention to detail, or work procedures are identified, please provide us with the corrective actions you have taken to prevent recurrence and provide an assessment of the significance of the deficiency with respect to safety.

Response:

In stating that valve 2CH-195 was tagged closed, as required to prevent boron dilution during reactor shutdown, the assertion is accurate. Interviews with the I&C and Operations personnel involved have determined that there was a miscommunication regarding whether or not the valve lineup had been completed. The Plant Equipment Operator (PEO) had not previously told the I&C technician that the valve lineup had been completed when he was informed that the valve had been found closed.

The importance of complete and precise communications is stressed regularly to Millstone Unit No. 2 operators, and examples of intra- and inter-departmental communication shortcomings are used in training and counseling sessions.

As this was the required valve position for the reactor conditions, and procedure IC 2428F is designed to ensure that the reference leg filling evolution does not adversely impact the VCT level indication process, there was no safety significance involved. We were not aware that this was an issue of concern prior to receipt of the Staff's letter.

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On May 31, 1991, during the replacement of a local pressure indication gage PI8167 in the condensate recovery system a worker was issued the wrong part (diaphragm isolated liquid filled gage [sic]) to replace a conventional gage that was already in service. Instrument and Controls supervision is responsible to verify plant and equipment conditions, such as replacement part suitability before authorizing work on a system.

Request:

Please discuss the validity of the above assertions. If any deficiencies are identified, please provide us with the corrective actions you have taken to prevent recurrence and provide an assessment with respect to safety of the deficiency.

Response:

The issue of the wrong gauge being issued to be installed is accurate. The difference in gauge type was noted by the instrument specialist and he obtained and installed the correct model gauge.

Issuing replacement parts is not a normal activity for the first-line supervisor. Typically, replacement parts are identified and drawn from those maintained in stock. In this case the parts were kept in the I&C shop and the box in which the parts were stored was mislabeled. The supervisor mistook the diaphragm isolated gauge as one appropriate to be installed in this application.

There is no safety significance to this event. The pressure gauge monitors the discharge pressure of the auxiliary steam system condensate recovery tank. This system has no safety function and the proper gauge was identified and installed. For safety-related systems, the parts required for maintenance are obtained from the Stores Department via a Material Issue Form which documents traceability of the parts issued. No additional action to prevent recurrence, other than review of the issue with the supervisor, is planned.

After our review and evaluation, we find that these issues did not present any indication of a compromise of nuclear safety. We recognize the need to strive for a higher level of performance in these areas and we are aggressively working toward that objective. We appreciate the opportunity