

**North
Atlantic**

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The Northeast Utilities System

Ted C. Feigenbaum
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NYN- 94100

September 2, 1994

United States Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Document Control Desk

- References:
- (a) Facility Operating License No. NPF-86, Docket No. 50-443
 - (b) USNRC Letter dated August 5, 1994, "Notice of Violation (NRC Inspection Report No. 50-443/94-14)," J. H. Joyner to T. C. Feigenbaum
 - (c) North Atlantic Letter NYN-94081 dated July 21, 1994, "Licensee Event Report No. 94-11-00: Non-Compliance with High Radiation Area Controls," T. C. Feigenbaum to USNRC
 - (d) North Atlantic Letter NYN-94091 dated August 12, 1994, "Licensee Event Report No. 94-12-00: Non-Compliance with High Radiation Area Controls," T. C. Feigenbaum to USNRC
 - (e) North Atlantic Letter NYN-94036 dated April 8, 1994, "Second Supplement to a Reply to a Notice of Violation," T. C. Feigenbaum to USNRC

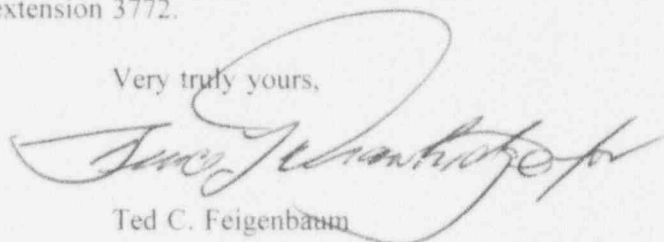
Subject: Reply to a Notice of Violation

Gentlemen:

In accordance with the requirements of the Notice of Violation contained in Reference (b), the North Atlantic Energy Service Corporation (North Atlantic) response to the cited violation is provided as Enclosure 1.

Should you have any questions concerning this response, please contact Mr. James M. Peschel, Regulatory Compliance Manager, at (603) 474-9521, extension 3772.

Very truly yours,



Ted C. Feigenbaum

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Enclosure

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North Atlantic
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ENCLOSURE 1 TO NYN-94100

REPLY TO A NOTICE OF VIOLATION

In a letter dated August 5, 1994 [Reference (b)], the NRC transmitted to North Atlantic Energy Service Corporation (North Atlantic) a Notice of Violation identified by Mr. L. Eckert during a reactive inspection on high radiation area violations during the period of July 12 through 15, 1994. In accordance with the instructions provided in the Notice of Violation, the North Atlantic response to this violation is provided below.

1. Violation

Technical Specification (TS) 6.10.1 states that "Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR 20 and shall be approved, maintained, and adhered to for all operations involving personnel radiation exposure."

Licensee Procedure RP 2.1, "General Radiation Worker Instructions and Responsibilities," Revision 9, 3/9/94 requires in step 4.1.1 that "Orders issued by Health Physics personnel concerning radiation protection matters, such as orders to stop work involving radiation exposure and radioactive materials, or orders to evacuate an area of the Station shall be complied with."

Licensee Procedure RP 9.1, "RCA Access/Egress Requirements," Revision 9, 1/1/94 requires that during RCA entries radiation workers "locate the appropriate Radiation Work Permit (RWP) for the intended work in the RCA, ensure that the task on the RWP describes the scope of work intended for the entry; review the RWP, applicable survey information, and radiological requirements; obtain any special dosimetry devices indicated on the RWP; obtain any briefings indicated on the RWP; and perform work in the RCA in accordance with the RWP and posted instructions."

- a. Contrary to the above, on June 19, 1994, a contractor welding supervisor did not comply with orders issued by radiological controls staff concerning radiation protection matters. Specifically, the welding supervisor substituted his own respirator welding lenses for those provided by licensee radiological controls, despite specific instructions from radiological controls personnel that those welding lenses were not acceptable for use with the respirators to be used.
- b. Contrary to the above, on June 20, 1994, two senior station managers entered an area in proximity to the cavity on the refueling floor, an area visibly posted as a locked high radiation area (HRA), and the individuals did not (1) locate the appropriate Radiation Work Permit (RWP) for the intended work in the RCA, (2) ensure that the task on the RWP which they had signed described the scope of work intended for the entry, and (3) comply with the radiological requirements contained in the RWP which they had signed.
- c. Contrary to the above, on June 21, 1994, a general laborer assigned locked HRA guard duties entered reactor coolant pump (RCP) cubicle "C", an area visibly posted as a HRA, and the individual did not (1) obtain the area pre-entry briefing indicated by the RWP, (2) obtain the required alarming dosimeter or positive radiation protection coverage, and (3) adhere to posted instructions describing entry requirements.
- d. Contrary to the above, on July 14, 1994, a senior engineer assigned to supervise a work crew tasked with accumulator valve testing entered an area in proximity to "C" accumulator valves, an area visibly posted as a HRA, and the individual did not obtain the required alarming dosimeter

or positive radiation protection coverage, and did not adhere to posted instructions regarding entry requirements.

These examples represent a Severity Level IV problem (Supplement IV).

II. Reason for the Violation and Corrective Actions

North Atlantic does not contest this violation. The following describes the causes and corrective actions for each of the events cited in the Notice of Violation.

a). Modification of Respirator by Unqualified Staff (ROR 94-13)

The root cause for this event is personnel error. The worker disregarded directions received from Health Physics (HP) Department personnel. The following corrective actions were taken:

1. A Radiological Occurrence Report (ROR) was completed to investigate the event and to determine appropriate corrective actions.
2. The contractor supervisor was counseled by station management.
3. A Training Development Request (TDR) has been submitted to modify Respiratory Protection Initial and Continuing training to discuss National Institute for Occupational Safety and Health (NIOSH) approval of respiratory protection equipment and consequences of unapproved modifications to this equipment.

b). Locked HRA Entry Without Signing in on the Appropriate RWP (ROR 94-15)

The primary cause for this event was determined to be miscommunication between the Containment and Control Point HP Technicians with regard to whether the management tour RWP allowed access to Locked High Radiation Areas (LHRA), as opposed to High Radiation Areas (HRA). A contributing factor was the workers' lack of knowledge of their RWP requirements and limitations. The following corrective actions have been taken:

1. An ROR was completed to investigate the event and to determine appropriate corrective actions.
2. The individuals involved in this event were counseled.
3. The involved management personnel completed "Stop, Think, Act, Review," (STAR) sheets.
4. This incident was reviewed in "Seabrook Station Outage Highlights," a publication made available to all personnel on site at Seabrook Station.
5. This incident was included as a required reading topic for HP Technicians to highlight the importance of clear communications.
6. A Training Development Request (TDR) has been submitted to modify HP Continuing Training to include a discussion of this event to emphasize proper communications.

c). HRA Entry Without Meeting Requirements (SIR 94-51)

This event was previously documented in LER 94-11-00 [Reference (c)]. The root cause for this event was determined to be a failure to implement self checking on the part of the contractor. In addition, a contributing cause for this event was that the training given for the Radiation Worker Qualification did not adequately emphasize that access beyond the barricade was controlled by specific license conditions (i.e., Technical Specifications). The individual knew he was crossing the High Radiation Area boundary without the requisite alarming dosimeter. Another contributing cause for this event concerns verbal communication as the individual did not notify his supervisor when he encountered unexpected conditions. He expected to meet an HP technician at the entrance of the RCP cubicle but upon arrival did not find a technician present and proceeded into the cubicle to see if the technician was inside. The individual thought he knew the radiological conditions inside the RCP cubicle and felt that this would be an acceptable action for such a short period of time. The final contributing cause regards supervisory methods, in that the worker felt that getting this job done quickly was more important than meeting the specified entry requirements into this area. The following corrective actions have been/will be taken:

1. A Station Information Report (SIR) was completed to investigate the event and to determine appropriate corrective actions.
2. Immediate corrective actions included directing the individual to leave the RCP cubicle and the reactor containment building. In addition, the individual was counseled and disciplined.
3. This event was discussed in a site-wide Station publication which included a summary of the High Radiation Area entry requirements along with an emphasis placed on the consequences for violating these Technical Specification requirements.
4. The Station Radiation Protection Manager reviewed this and prior HRA and LHRA events with Station management at the Station Manager's morning meeting.
5. North Atlantic and contractor supervisors reviewed this event with radiation workers emphasizing the importance of High Radiation Area controls and the relationship of these controls to Technical Specifications. Specifically reviewed was a package of information containing a detailed description of the event, the Technical Specification requirements for HRA and LHRA entry, along with color copies of the HRA, LHRA, and Informational postings.
6. The Radiation Worker Training lesson plan and Computer Based Training Module will be updated to include a description of this and similar events and emphasize the consequences for violating HRA and LHRA entry requirements.
7. North Atlantic erected poster boards at the main Radiologically Controlled Area (RCA) entry and alternate RCA entry points to help reinforce HRA control requirements. These poster boards will remain in place for a period of one month.

d). Second HRA Entry Without Meeting Requirements (SIR 94-58)

This event was previously documented in LER 94-12-00 [Reference (d)]. The root cause for this event was determined to be a failure of the individual to implement self checking prior to entering the High Radiation Area. Specifically, the test control engineer failed to follow the procedural requirements that allow entry into a High Radiation Area. The test control engineer understood the seriousness of violating the Technical Specification requirements for entry into a High Radiation Area, as he had received a

briefing on a previous event two weeks prior. He was focused on getting the job done correctly but failed to "Stop and Think" prior to entering the High Radiation Area. A contributing cause is that the managerial actions/methods taken in previous events have not been effective in preventing these types of events from occurring. The following corrective actions have been/will be taken:

1. A Station Information Report (SIR) was completed to investigate the event and to determine appropriate corrective actions.
2. Immediate corrective actions included escorting the individual from the Containment Building. In addition, the individual was counseled and disciplined. The individual's access to the Radiologically Controlled Area was revoked until remedial Radiation Worker training could be completed.
3. North Atlantic management will evaluate the need for a specific disciplinary action policy to address serious violations of the Radiation Protection Program.
4. The seriousness of the event was discussed in the Operating Experience Newsletter. This newsletter, which is provided to all site employees, summarized the recent High Radiation Area events including the disciplinary actions taken and management's expectations concerning compliance with radiation protection policies.
5. Health Physics procedures will be revised to require the use of electronic dosimetry for all future entries into High Radiation Areas, unless specifically authorized by Health Physics supervision. This will be the primary or preferred method of assuring that all High Radiation Area entries are in compliance with Technical Specification entry requirements.
6. Health Physics has enhanced High Radiation Area postings by incorporating the use of alarming swing arm gates at the entrance to High Radiation Areas, where practical. A flashing light is activated when the gate is approached to provide a visual mechanism to alert workers of a High Radiation Area barricade. The use of alarming swing arm gates will be evaluated for permanent use based on their effectiveness.
7. A radiation worker refresher training program will be developed for presentation to all radiation workers prior to their working during future refueling outages. This training will include emphasis of current practices as well as a review of recent radiological incidents.

III. Corrective Actions Taken Prior to ORO 3 to Address Procedure Compliance

As requested in the letter transmitting the Notice of Violation [Reference (b)], the following describes corrective actions that were taken prior to the start of ORO 3 to address procedure compliance concerns:

1. North Atlantic previously conducted a series of meetings with employees to provide first hand communication of the North Atlantic philosophy regarding accountability, zero tolerance for error, and the desired culture. One facet of the desired culture is the need to follow procedures. These meetings, which were intended for all employees, were conducted by the Senior Vice President and Chief Nuclear Officer, and the Station Manager.

Subsequently, the individual North Atlantic group managers conducted follow-up department specific meetings to reinforce the concepts espoused in the first meeting and to provide department specific examples.

2. North Atlantic senior and middle management conducted briefings for contract personnel prior to the start of the third refueling outage to disseminate management's expectations regarding accountability, zero tolerance for error, and the desired culture.
3. Following the personnel hatch event at the beginning of the outage (NRC Inspection Report 94-08), North Atlantic stopped all refueling outage related work and discussed the event with managers and first line supervisors. This discussion re-emphasized the need to perform tasks correctly and in accordance with procedures. Station managers and supervisors subsequently discussed this event with subordinates.

IV. Additional Corrective Actions to Address Procedure Compliance and Radiation Protection Issues

The following describes additional corrective actions to address procedure compliance and radiation protection issues:

1. The Station Manager issued a memorandum to all North Atlantic employees that described his expectations with regard to the Radiation Protection Program. This memorandum also summarized the preliminary findings of NRC Inspection 94-14 as described during the exit meeting.
2. North Atlantic is implementing the Procedure Upgrade Program, which is a Personnel Error Response Team (PERT) initiative that was previously documented in Reference (e). The Procedure Upgrade Program will revise procedures to make them easier to use by emphasizing clarity and simplicity. North Atlantic believes that this program will increase procedure compliance and reduce personnel errors since it will improve worker comprehension and eliminate the potential for work-arounds resulting from cumbersome procedures.
3. North Atlantic continues to implement and reinforce the PERT initiatives related to personal responsibilities. These initiatives include the "Stop, Think, Act, Review" (STAR) Program and implementation of the revised Supervisory Walkdown Program. North Atlantic believes that full implementation of these initiatives will improve procedure compliance and reinforce accountability and zero tolerance for error.
4. North Atlantic management will also continue to stress and hold workers accountable for procedure compliance and the Radiation Protection Program. This message is currently being disseminated at all levels of the North Atlantic management organization.
5. North Atlantic conducted a Hazard Barrier Analysis of radiological incidents involving personnel access to HRAs and LHRAs for the period of January 1, 1992, to July 7, 1994. The Hazard Barrier Analysis technique evaluates the various physical and administrative barriers that are designed to prevent a hazard from being reached. The Hazard Barrier Analysis determined that there was no correlation, pattern, or trend common to the events analyzed. However, in all but one case, all events were attributable to personnel error. Personnel errors are continuing to be addressed by the aforementioned initiatives.
6. Following the completion of the third refueling outage, the Senior Vice President and Chief Nuclear Officer conducted six meetings to brief North Atlantic personnel on the status of current initiatives. The HRA and LHRA violations were mentioned during this meeting, as were the ongoing PERT initiatives. Also stressed was the need for continued improvement and a reduction in personnel errors. These meetings were intended for all North Atlantic employees.

V. Date When Full Compliance Will Be Achieved

North Atlantic is currently in full compliance with all regulatory requirements.