



NRC NEWS
U. S. NUCLEAR REGULATORY COMMISSION

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(Tuesday, May 21, 1996)

NOTE TO EDITORS:

The Nuclear Regulatory Commission staff has issued two new letters to Northeast Utilities, requesting additional information, under oath or affirmation, relative to the operation of Millstone Units 1, 2 and 3, and of the Haddam Neck plant. All three Millstone units are shut down, while the Haddam Neck plant is operating. The four nuclear power units are all in Connecticut.

Responses to these Millstone letters are due within 30 days for the first Millstone unit the utility proposes to restart and not later than 60 days before the proposed restart for the other Millstone units. Earlier letters asked for a response no later than seven days before restart of the respective Millstone units. Northeast Utilities is required to respond to the latest Haddam Neck letter by May 30.

Concerning the Millstone units, NRC has asked for a detailed description of plans for completing work required to respond to three earlier letters, as well as a comprehensive list of deficiencies in plant design and configuration found in the past several months.

The letter concerning Haddam Neck includes preliminary inspection findings from a recent NRC special inspection. In the light of those findings, NRC is asking the utility to review its earlier position that problems at Haddam Neck are not as serious as those at Millstone.

NRC plans to hold public meetings to discuss Northeast Utilities' planned corrective actions after a preliminary review of responses to the letters.

Texts of the letters are attached.

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Attachments:
As stated

May 21, 1996

Mr. Robert E. Busch
President - Energy Resources Group
Northeast Utilities Service Company
P.O. Box 128
Waterford, CT 06385

Dear Mr. Busch:

On December 13, 1995, the NRC issued a letter to Northeast Utilities (NU) requesting NU, pursuant to Section 182a of the Atomic Energy Act of 1954, as amended, and 10 CFR 50.54(f), to provide information describing actions taken to ensure that future operations of Millstone Unit 1 will be conducted in accordance with the terms and conditions of the Millstone Unit 1 operating license, the Commission's regulations, including 10 CFR 50.59, and the Millstone Unit 1, Final Safety Analysis Report. Similar letters were issued to NU for Millstone Unit 2 on March 7, 1996, and Unit 3 on April 4, 1996. In those letters, we requested that the information be submitted no

later than 7 days prior to the restart of the respective Millstone units.

The NRC plans to closely monitor your actions to address the licensing basis concerns identified at each of the Millstone units. To support our review, please submit for each Millstone unit a detailed description of your plans for completion of the work required to respond to the December 13, 1995, March 7, 1996, and April 4, 1996, letters. We recognize that your plans may change based on the results of your reviews and request that you provide updates of these plans as appropriate.

Also, to aid in our understanding of how deficiencies were identified and dispositioned, please provide a comprehensive list of design and configuration deficiencies identified after our December 13, 1995, 50.54(f) letter for Millstone Unit 1 and after the 7007 Report was issued for Millstone Units 2 and 3. The list should include issues that raised questions concerning operability of required equipment and the existence of unreviewed safety questions (including deficiencies that required an evaluation to determine that there was not an operability or unreviewed safety question issue, and any other deficiency that you believe is significant). For each such deficiency: (1) identify the date the deficiency was identified, (2) describe how the deficiency was identified (e.g., (a) self-disclosing, (b) identified by you through surveillance, quality assurance, or other effort, (c) third party, or (d) the NRC), (3) state how long the deficiency existed prior to its identification, and if it was previously known, but not corrected, when was it first known, and (4) describe corrective action taken or plans for dispositioning the deficiency. Again, we recognize that changes may occur based on the results of your reviews and request that you provide updates to this list as appropriate.

After a preliminary review of your plans, the staff will schedule a public meeting to facilitate the staff's review of your planned corrective actions and schedule. The staff will review the plans to verify they contain the elements necessary to correct the problems identified and prevent their recurrence. Prior to the restart of any of the Millstone units, the staff will conduct inspections and evaluations to ensure adequate implementation.

Your response to this letter must be submitted under oath or affirmation, pursuant to Section 182a of the Atomic Energy Act of 1954, as amended, and 10 CFR 50.54(f), to determine whether or not the license for each of the Millstone units should be modified, suspended, or revoked. Your response to this letter should be submitted within 30 days of the date of this letter for the first Millstone unit you propose to restart and not later than 60 days prior to your proposed restart for the remaining Millstone units.

Sincerely,

William T. Russell, Director
Office of Nuclear Reactor Regulation

Docket Nos. 50-245, 50-336,
and 50-423

May 17, 1996

Mr. Robert E. Busch
President - Energy Resources Group
Northeast Utilities Service Company
P.O. Box 128
Waterford, CT 06385

Dear Mr. Busch:

On March 7, 1996, the NRC issued a letter to Northeast Utilities (NU) requesting NU, pursuant to Section 182a of the Atomic Energy Act of 1954, as amended, and 10 CFR 50.54(f), to provide your actions taken and future plans to address the conclusions in "ACR 7007 - Event Response Team Report" (7007 Report), dated February 22, 1996, regarding the Haddam Neck Plant. NU responded to the NRC letter in an April 8, 1996, letter. The April 8, 1996, letter concluded

that although there were process problems noted at Haddam Neck, the fundamental issues raised in the 7007 Report are generally not applicable to Haddam Neck. This conclusion was based, in part, on a preliminary assessment performed by Yankee Atomic Electric Company.

In Inspection Report 50-213/96-02, dated April 26, 1996, the NRC's resident inspectors noted several examples of program weaknesses at Haddam Neck Plant similar to those found in the 7007 Report. Additionally, a special NRC inspection team recently found examples of design control process failures at Haddam Neck Plant similar to those found in the 7007 Report. The special team briefed your staff on its preliminary findings on April 26, 1996. Examples of some of the deficiencies found by the special inspection team are described in the enclosure to this letter.

Based on the preliminary results of the special inspection and the resident inspectors' findings, we have identified issues regarding design control processes that are similar in nature to those found at Millstone and which call into question the conclusion reached in your April 8, 1996, letter regarding the applicability of the 7007 Report issues to Haddam Neck Plant. Consequently, you are requested to review the conclusions in your company's April 8, 1996, response, in light of the self-identified and NRC-identified issues that have been raised since that time. In addition, your response to this letter should describe actions taken to ensure that design and configuration control deficiencies identified at Haddam Neck have been evaluated with regard to plant operability, the existence of unreviewed safety questions, and reportability.

Also, to aid in our understanding of how deficiencies were identified and dispositioned, please provide a comprehensive list of design and configuration deficiencies identified after the 7007 Report was issued that raised questions concerning operability of required equipment and the existence of unreviewed safety questions (including deficiencies that required an evaluation to determine that there was not an operability or unreviewed safety question issue, and any other deficiency that you believe is significant). For each such deficiency: (1) identify the date the deficiency was identified, describe how the deficiency was identified (e.g., (a) self-disclosing, (b) identified by you through surveillance, quality assurance, or other effort, (c) third party, or (d) the NRC), (3) state how long the deficiency existed prior to its identification, and if it was previously known, but not corrected, when was it first known, and (4) describe corrective action taken or plans for dispositioning the deficiency. We recognize that you may not be able to provide all of the requested information by the due date and also that changes may occur based on the results of your reviews. Therefore, we request that you provide updates to this list as appropriate.

Your response to this letter must be submitted by May 30, 1996, in writing under oath or affirmation, pursuant to Section 182a of the Atomic Energy Act of 1954, as amended, and 10 CFR 50.54(f), to enable the NRC to determine whether or not the license for the Haddam Neck plant should be modified, suspended, or revoked.

Also, as noted in your company's April 8, 1996, letter, you committed to submit the Haddam Neck Project Completion Plan by May 30, 1996. Your plan should reflect any corrective action deemed necessary based on the issues recently identified by your self assessments and the NRC's inspections.

After a preliminary review of your May 30, 1996 responses, the staff will schedule a public meeting to facilitate the staff's review of your submittals pursuant to 10 CFR 50.54(f) including your planned corrective actions and schedule. The NRC expects to issue its Special Team Inspection Report in approximately 30 days and will discuss the inspection findings during the above mentioned public meeting. The meeting notice will be issued separately.

Sincerely,

William T. Russell, Director
Office of Nuclear Reactor Regulation .
HADDAM NECK PLANT

PRELIMINARY INSPECTION FINDINGS

Licensing/Design Basis Documentation

The team found inaccuracies in the Final Safety Analysis Report (FSAR). The number of

inaccuracies suggested a lack of effective design control processes for activities that may change the FSAR. For example, the actual service water system flow rates and 125 Vdc battery float charge differed from the FSAR. The team also found examples of previous plant modifications that were completed without appropriate revisions to the FSAR.

The team identified several licensee commitments that were not met or that were changed without appropriate reviews. In one case, a licensee supervisor decided to stop annual contacts with vendors for safety-related equipment, which had been a previous commitment in response to a generic letter. Other examples found by the team include failures to meet corrective action commitments in a violation response and a licensee event report.

Translation of Licensing and Design Basis to Procedures and Practices

The team identified examples where the licensing and design basis were not appropriately translated into operating procedures and practices. The team found that the licensee had not considered instrument uncertainties when establishing emergency operating procedure decision points for operator manual actions. Inadequate consideration of the uncertainties in the refueling water storage tank (RWST) level instrument, coupled with the small volume available in the RWST, could have resulted in insufficient net positive suction head for the high pressure safety injection pumps.

The team also found an emergency operating procedure that did not include a critical valve manipulation that had been assumed in a design calculation. A procedure revision had inadvertently removed a valve manipulation sequence that was necessary to prevent excessive hydrodynamic loading on the reactor coolant system head vents. Failure to operate the valves in the prescribed sequence could have resulted in damage to the vent path due to liquid slugs.

Corrective Action Process

During the inspection, the team noted that some of the licensee staff were reluctant to prepare adverse condition reports (ACRs) for potential operability issues identified during the inspection until they were certain that there was an operability impact. The team was concerned that management expectations regarding the lower threshold of the new process had not been clearly expressed. The team also noted that a recent quality assurance audit had stated that "station management from all departments has not fully accepted the ACR process yet."

The team identified that the licensee is not promptly responding to programmatic deficiencies identified by self-assessments, quality assurance audits, or third-party reviews. For example, the licensee had conducted a detailed root cause analysis in January 1996, for a condition in which the measured low pressure safety injection system flow rate was less than that assumed in the accident analysis. This condition had been the subject of an enforcement conference, but the licensee had not yet assigned responsibility for implementing many recommendations from the analysis. These recommendations addressed issues similar to the findings found by the team regarding design control and maintenance of the design basis.

Engineering and Modifications

The team identified a deficient calculation for the station batteries that resulted in declaring the batteries inoperable. The calculation had not assumed the design basis event stated in the FSAR. The team identified other examples of deficient calculations that resulted in the need for reanalysis to confirm operability. For example, the team found that the emergency diesel generator loading calculations did not include all of the loads supplied by the emergency bus and used non-conservative assumptions.

The team also found that the licensee did not have a complete and well-understood analysis of the service water system (SWS) operation during a loss of coolant accident or main steam line break inside containment. The service water design basis flow calculations were based, at different times, on two models that predicted different flow behavior (single-phase versus two-phase flow) downstream of the containment air recirculation cooling coils. The uncertainties in the modelling of two-phase flow in the SWS create the potential for inadequate containment cooling and significant system pressure oscillations in certain scenarios and overcooling transients in others, if the location and duration of the phenomenon is not precisely known.

The team also found that a recently submitted technical specification amendment request for the

containment air recirculation fan surveillance test requirements could have resulted in allowing the fans to be left near the no-flow point on the static pressure versus flow rate curve. The licensee had not adequately considered the fan performance curves when preparing the amendment. Operation in this condition could have resulted in the loss of flow through the fans due to only slight clogging of the inlet filters.

Material Classification and Qualification

The licensee's process to evaluate the safety classification of components has resulted in misclassifications. For example, the team found that the licensee had misclassified the no-voltage alarm relays in the diesel generator cabinets as non-safety-related during a January 1996 replacement. In two other examples, the diesel generator air start piping flex hoses and an electrical panel were not verified to be seismically qualified, as required to meet the design bases.