



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

September 29, 1980

Docket No. 50-245

TRFA

50-245

US NRC
DISTRICT
REGULATION SERVICES
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
DISTRICT REGULATION
SERVICES UNIT

Mr. W. G. Council, Vice President
Nuclear Engineering and Operations
Northeast Nuclear Energy Company
Post Office Box 270
Hartford, Connecticut 06101

Dear Mr. Council:

SUBJECT: FIRE PROTECTION PROGRAM FOR MILLSTONE STATION, UNIT 1

By letter dated August 9, 1979, we informed you of the Commission's desire to complete your fire protection program modifications by October 1980. As you are aware, on May 29, 1980 the Commission published for comment a proposed Section 50.48 and Appendix R to 10 CFR Part 50, concerning fire protection, which would set forth the minimum acceptable fire protection requirements necessary to resolve contested areas of concern for nuclear power plants operating prior to January 1, 1979. The proposed rule would require all modifications (except for alternate and dedicated shutdown capability) be implemented by November 1, 1980. For your facility the alternate shutdown capability would be required to be implemented by December 1, 1981 or dedicated shutdown system by October 1, 1982. Our criteria for alternate shutdown systems was forwarded to you by our letter dated September 14, 1979.

We have reviewed all the information you have provided to date regarding your fire protection program. Several of the open items indicated in our Fire Protection Safety Evaluation (FPSE) issued September 26, 1978 (License Amendment No. 53) remain unresolved. Our position on modifications that would have to be made at your facility to resolve these open items, in a manner that would meet the requirements of the proposed Appendix R, is contained in the enclosure to this letter.

As indicated in Section 3.1.19 of the FPSE and the enclosure to this letter, our evaluation concludes that alternative shutdown capability for certain areas of your plant would provide an acceptable resolution for safe shutdown concerns in the event of a fire in those areas. This determination is based solely upon our fire protection review. However, other aspects of your facility currently under review in the SEP may impose additional requirements for shutdown capability of

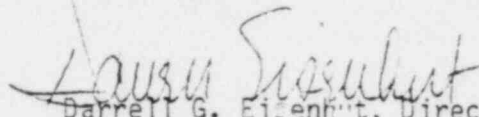
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your facility. You also should be aware that the proposed rule on fire protection would require you to submit your plans and schedules for implementing the installation of the dedicated shutdown system or alternate shutdown capability by November 1, 1980. Although there is no effective rule in place at the present time, we believe it is prudent to anticipate a short deadline and, therefore, request that you provide your proposed plans and schedules for the alternate shutdown capability by November 1, 1980.

Sincerely,


Darrell G. Eichenhart, Director
Division of Licensing

Enclosure:
As stated

cc: w/enclosure
See next page

September 29, 1980

cc

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MILLSTONE NUCLEAR POWER STATION
UNIT NO. 1

SUMMARY OF STAFF REQUIREMENTS TO
RESOLVE OPEN ITEMS

3.1.14 Auxiliary Boiler Blast Wall

In the Millstone Nuclear Power Station Unit No. 1 Fire Protection Safety Evaluation Report, the licensee had committed to construct a blast wall between the auxiliary boiler room and the diesel generator room to prevent damage to both essential onsite power sources from any fuel or steam explosion of the auxiliary boilers.

By letter dated January 24, 1980, the licensee stated that a block wall is unnecessary because when a fire tube boiler fails, the front or rear tube sheets will move along the axis of the boiler. The licensee states that there is no hazard to the diesel generator or the north side of the boiler room wall, since the wall runs parallel to the axis of the boiler.

The potential damage to both essential onsite power sources still exists since the licensee has not shown that the existing 12 inch concrete block wall can withstand any type of fuel or steam explosion involving the auxiliary boilers and prevent damage to the emergency diesel generator located on the other side.

To meet the requirements of Section III.G of the proposed Appendix R to 10 CFR Part 50 the licensee should construct the block wall as originally committed.

3.1.19 Safe Shutdown Modifications

In the Millstone Unit 1 Fire Protection Safety Evaluation Report, it was our concern that in certain areas such as cable spreading room, redundant systems required for safe shutdown could be damaged by fires. The licensee proposed to provide alternative shutdown capability independent of these areas by the following modifications:

- (1) Redundant power and control cables connected to an independent essential power source will be provided for the operation of the isolation condenser valves located inside the primary containment.
- (2) Transfer switches and local control switches will be installed to insure that at least one control rod drive pump remains in operation. The control and power cables for one pump will be rerouted.
- (3) Transfer switches and local control switches will be installed to insure that at least one shutdown cooling pump remains in operation.
- (4) Redundant power and control cables connected to an independent essential power source will be provided for the operation of the shutdown cooling isolation valve located in the primary containment.

- (5) Transfer switches and local control switches will be installed to insure that at least one reactor building component cooling water pump remains in operation.
- (6) Transfer switches and local control switches will be installed to insure that at least one service water pump remains in operation.

The SER also stated that "the licensee requested during a telephone conversation on September 20, 1978, a delay in the implementation of the safe shutdown modifications until the impact, if any, from the Systematic Evaluation Program review can be assessed. We will consider this request and following discussions with the licensee, if any changes to these modifications or their scheduled completion results, a license amendment will be required and a supporting safety evaluation providing justification for the changes will be issued."

The licensee's request for a license amendment and information regarding these modifications or schedule has not been received. Therefore, all modifications should be completed before the 1980 refueling outage ends. Recently we issued a proposed change to 10 CFR Part 50 that would require such modifications to be completed by a specific date.

To meet our fire protection guidelines, alternative shutdown capability should be provided when safe shutdown cannot be ensured by fire barriers and detection and suppression systems because of the exposure of components in a single fire area to an exposure fire, fire suppression activities, rupture or inadvertent operation of fire suppression systems. To meet Section III Paragraph G of proposed Appendix R to 10 CFR Part 50, the licensee should provide alternative shutdown capability for the following areas of the plant:

1. Cable spreading area
2. Other areas identified in the licensee's fire hazards analysis where redundant systems required for safe shutdown could be damaged by fire.

The proposed alternative shutdown system should meet the requirements of Section III, Paragraph L of proposed Appendix R to 10 CFR Part 50. A complete description of modifications providing alternative shutdown capability should be received by the NRC by November 1, 1980. The modifications should be installed by December 1, 1981. Changes to License condition 3F to achieve consistency should be proposed.

6.0

Administrative Controls - Fire Brigade

In the Millstone 1 Fire Protection Safety Evaluation Report, it was our concern that the licensee's fire brigade was not sized, drilled, and trained sufficiently to provide assurance that the manual fire suppression capability would be adequate.

By letter dated September 27, 1979, the licensee provided a document entitled "Justification For Three-Man Fire Brigade." The licensee concludes that a three-man fire brigade can adequately extinguish or control any fire to assure safe plant operation, achieve safe shutdown, and minimize radioactive release of the environment. Further, by letter dated July 11, 1979, the licensee proposed to provide annual classroom training and quarterly drills. However, the licensee concludes that ensuring all brigade members participate in one drill per quarter is not necessary to ensure an effective fire brigade response.

In our letter dated September 7, 1979, we provided the licensee our report entitled "Evaluation of Minimum Fire Brigade Shift Size" (dated June 8, 1978) in which we conclude all operating plant sites should have an onsite fire brigade shift complement of at least five trained persons. In addition, we provided our position regarding fire brigade training and drills which conclude that classroom training and drills should be held every 3 months for all fire brigade members.

The fire brigade size and training program should meet the requirements of Section III, Paragraphs H and I of the proposed Appendix R to 10 CFR Part 50.