



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 98 TO FACILITY OPERATING LICENSE NO. DPR-65  
NORTHEAST NUCLEAR ENERGY COMPANY, ET AL.  
MILLSTONE NUCLEAR POWER STATION, UNIT 2  
DOCKET NO. 50-336

INTRODUCTION

In a letter dated December 10, 1984, Northeast Nuclear Energy Company (NNECO) proposed an amendment to Operating License No. DPR-65 for Millstone Unit No. 2. The amendment would involve a change to Technical Specification 3.9.4(a) (Containment Penetrations during Refueling Operations) which would authorize use of a temporary, specially designed equipment hatch door (with penetrations) in place of the permanent door (which has no penetrations). The permanent equipment hatch door is described in Section 5.2.7.1.3 of the Millstone Unit No. 2 FSAR. The temporary outage equipment hatch door is required to facilitate steam generator maintenance activities while maintaining primary containment integrity during core alterations or fuel movement.

Evaluation

The Millstone Unit No. 2 containment building includes an equipment hatch, nineteen (19) feet in diameter, to permit transfer of large components into and out of the containment. It is fitted with a double gasket flange around the dished door to minimize leakage in the unlikely event of a loss-of-coolant-accident (LOCA).

Technical Specification 3.9.4 specifies the required status of certain containment penetrations during core alterations or movement of irradiated fuel within the containment. These requirements ensure that a release of radioactive material within the containment will be restricted from leakage to the environment. The radioactive material released from a postulated fuel element rupture would be retained within the building due to the lack of containment pressurization potential while in the refueling mode coupled with the penetration integrity requirements.

The temporary equipment hatch door proposed to be utilized during refueling outages will consist of a circular 1/4 inch thick steel plate with stiffeners. The door will be mounted to the 3/4 inch thick, 8 inch wide, embedded plate which circles the exterior end of the equipment hatch containment penetration.

It will be secured in place by thirteen (13) studs which will be welded to the embedded plate.

The O-ring gasket is located between the temporary door and the embedded plate to provide an "air tight" seal between the containment and the enclosure building. A doorway opening is located in the center of the hatch door for personnel access. During fuel movement the opening is blocked with a steel plate bolted to the hatch door.

Ten (10) six inch diameter penetrations through the temporary door are provided for various hoses and electrical cables. The temporary door is designed to maintain primary containment penetration integrity required by Technical Specification 3.9.4 during core alterations or movement of irradiated fuel within the containment while refueling. The penetrations will be isolated by blind flanges when not in use. Penetrations in which cables or hoses pass through will be sealed with silicone RTV fire-resistant foam to provide the required sealing.

The ten (10) penetrations will consist of one foot long segments of six inch diameter pipe penetrating the door and welded along their perimeters. The silicon foam will surround the hoses and cables and completely fill the one foot pipe segment. The silicon foam is quick drying and will harden to a rubber-like consistency. Testing of this foam shows that it will stay in place and maintain a vapor barrier. The hoses and cables will be supported by scaffolding on both sides of the temporary equipment hatch door. If one of the foam seal barriers fails during fueling operations, the amended Technical Specification will require that all refueling activities be immediately suspended.

The features incorporated into the design of this temporary equipment hatch door ensure that containment integrity will be maintained while core alterations or fuel movements are conducted within the containment considering the negligible pressure gradient which will exist across the equipment hatch penetration. The temporary equipment hatch door was inspected by staff members during a site visit on January 14, 1985.

Based on our review and discussions with the licensee and our inspection of the temporary hatch door, we conclude that the licensee's proposal will provide adequate containment integrity during refueling outages. Therefore, we find the proposed modifications and Technical Specification change acceptable.

#### ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that this amendment

involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

CONCLUSION

We have concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: February 12, 1985

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