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Niagara Mohawk Power Corp. Syracuse, N. Y. 13202 P. D. Raymond	1-31-74	2-4-74	X			

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D. J. Skovholt	1 signed			SENT AEC PDR X SENT LOCAL PDR X

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DESCRIPTION:
Ltr trans the following:

ENCLOSURES:
Request for a change to Prov Opr Lic to allow extension to the existing building to facilitate spent fuel handling operations

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ACKNOWLEDGED
(1 Orig & 10 cys rec'd)

PLANT NAME: Nine Mile Point Unit #1

FOR ACTION/INFORMATION 2-4-74 GC

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Regulatory Docket File

NIAGARA MOHAWK POWER CORPORATION

NIAGARA MOHAWK

300 ERIE BOULEVARD WEST
SYRACUSE, N. Y. 13202

DOCKETED USAEC FEB 4 1974 REGULATORY MAIL SECTION DOCKET CLERK

January 31, 1974

RECEIVED FEB 4 1974 U.S. ATOMIC ENERGY COMMISSION Regulatory Mail Section

Mr. Donald J. Skovholt
Assistant Director for Operating Reactors
Directorate of Licensing
United States Atomic Energy Commission
Washington, D. C. 20545

Dear Mr. Skovholt:

Re: Nine Mile Point Unit 1
Docket No. 50-220

Pursuant to Section 50.59 of the Commission's Regulations, Niagara Mohawk plans to make a change in its facility under Provisional Operating License No. DPR-17. Briefly, this change consists of providing an extension to the existing reactor building to facilitate spent fuel handling operations.

For your information, a description of the proposed modification, including a safety evaluation, is attached. This evaluation shows that the probability of occurrence and the consequences of an accident or malfunction would be decreased, and margins of safety for spent fuel handling operations increased by this change.

The proposed modification has been reviewed and approved by the Safety Review and Audit Board and by the Site Operations Review Committee. Both groups are of the opinion that no additional possibility for an accident or malfunction of a different type than evaluated in the Safety Analysis Report would be created. They have also concluded that this change will not present a significant hazards consideration, but rather will enhance plant safety.

We are enclosing ten additional copies for your convenience.

Very truly yours,

Philip D. Raymond

Philip D. Raymond
Vice President - Engineering

Enclosures

961

REACTOR BUILDING EXTENSION

Received w/Ltr Dated 1-31-74

I. Introduction

The present design of the reactor building includes a double seal system to ensure secondary containment integrity. During normal operation, building integrity is maintained by outer doors in the railroad bay. When access to the building is required through the railroad bay doors, the bay can be isolated from the rest of the reactor building. As described in the FSAR[1] a bolted hatch cover at Elevation 281 feet is used for this purpose.

Since the initial operation of Nine Mile Point Unit 1, the designs of spent fuel casks have changed. The existing building design does not allow the use of current railroad cask designs. In order to bring the rail car into the building and maneuver the cask into position for hoisting up to the operating floor, the end of the rail car would have to extend through the outer doorway of the railroad bay. Since the hatch would have to be open for use of the reactor building crane, secondary containment integrity could not be maintained.

In order to accomodate use of current railroad casks while maintaining secondary containment, a change to the existing reactor building is planned.

An extension structure is to be added to the reactor building so that spent fuel loading and shipping can be performed in a more expeditious manner. The extension will be part of secondary containment and will have an outer door seal. The present outer door will remain and will be used to isolate this extension structure from the reactor building when access to the new bay is required. The need for the hatch would be eliminated.

[1] Volume I, Section VI.B.2.

II. Description

The modification involves the addition of a 20 foot by 20 foot by 80 foot long air lock with a swing door and an airtight seal. The track bay extension will be equipped with a motor operated double swing door 16 feet 0 inches wide by 17 feet 6 inches high. The door can also be operated manually, and is designed to resist an internal or external load of 40 psf. A one-piece inflatable seal of Reinforced Ethylene Propylene Diene Monomer is provided around the perimeter of each half of the door. The entire contact area of the inflatable seal will expand approximately 3/4 inch under pressure. The seal material will remain pliable and seal at temperatures of -20F to 210F.

As shown on Figure 1 the extension structure has a personnel access door on the north side adjacent to the existing structure.

An airtight access passageway will be constructed from the existing access door to this door in the reactor building extension. Procedural control only permits one of these three passageway doors to be open. The doors will have local alarms such that personnel about to enter or leave are alerted to the condition of the alternate doors.

Sufficient room is available to contain the rail car with a spent fuel shipping cask and provide adequate maneuvering room for the rail car during cask loading and unloading. The proposed modification is shown in Figure 1.

This addition to the reactor building will be designed to meet all the requirements of the original reactor building as described in the FSAR[2]. The track bay extension will be attached to the existing reactor building by an airtight seal formed between the two buildings.

[2] Volume I, Section VI.B.1

The outside paneling material will be identical to that used above the operating floor in the reactor building. The insulated metal wall panels and the metal roof deck are of leak-tight construction. The roof deck is covered with a five-ply tar and felt built-up roof.

The new and existing doors will be alarmed and procedural control will ensure that only one door in series may be open at one time. Secondary containment will be maintained at all times.

This addition also allows the hatch cover to be permanently removed and still maintain secondary containment. At the present time hatch cover removal takes about 12 hours. The operation involves unbolting or rebolting the hatch cover. Elimination of this step will optimize cask handling operations.

A retest of secondary containment will be performed after the addition has been completed to ensure that leakage characteristics have not been changed.

III. Summary

The planned modifications reduce fuel cask handling operations. Therefore, the probability of occurence of an accident or malfunction during these operations is reduced. No change to the basic functions of the reactor building and railroad bay have been made. Therefore, no new modes of accidents or malfunctions have been created. Since the additions to the reactor building will be designed to the same leaktight criteria of the original design, no change in the margin of safety defined in the Technical Specifications will occur.

Based on the above analysis, the planned building extension will not introduce any unreviewed safety questions or compromise the integrity of the reactor building, but will enhance safety aspects of spent fuel shipping.