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SEP 1 1977

Docket No. 50-220

Niagara Mohawk Power Corporation
ATTN: Mr. Gerald K. Rhode
Vice President - Engineering
300 Erie Boulevard West
Syracuse, New York 13202

Gentlemen:

We are continuing our review of your December 7, 1976 request for Technical Specification changes for the Nine Mile Point Unit No. 1 Spent Fuel Pool Modifications. We have concluded that we need additional information to complete our review.

Please provide responses to our request for additional information set forth in the enclosure within 30 days or sooner to permit timely review.

If you have any questions, please contact us.

Sincerely,

Original signed by

George Lear, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Enclosure:
Request for Additional
Information (Q-3)

cc:
See next page

B A-3

OFFICE ▸	ORB#3	ORB#3				
SURNAME ▸	SNowicki:acr	GLear				
DATE ▸	8/31/77	8/31/77				

NRC FORM 318 (9-76) NRCM 0240 ☆ U. S. GOVERNMENT PRINTING OFFICE: 1976 — 626-624

cc: Eugene B. Thomas, Jr., Esquire
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Oswego City Library
46 E. Bridge Street
Oswego, New York 13126

ENCLOSURE

REQUEST FOR ADDITIONAL INFORMATION (Q-3)

SPENT FUEL POOL MODIFICATION

DOCKET NO. 50-220

1. Provide the average burnup expected for the spent fuel in the spent fuel pool (SFP).

2. Discuss any expected change in the radiological liquid effluents from the Liquid Radioactive Waste Disposal System (LRWDS) because of the proposed modification. Discuss the impact of the filter precoat being transferred from the Spent Fuel Storage Pool Filtering System to the LRWDS.

3. Discuss the disposition of the material to be removed from the spent fuel pool (e.g., spent fuel racks, seismic restraints) during the proposed modification. If the material to be removed will be disposed of as solid radwaste, provide the volume of the packaged waste.

4. Provide the volume of solid waste to be generated by the replacement of the filter precoat in the Spent Fuel Storage Pool Filtering System. Provide the current frequency of operation of and the normal flow rate through the filter. Provide the current frequency of replacing the filter precoat. Discuss and quantify any expected changes in the above due to the proposed modification.

5. Explain why no equipment modifications for the Spent Fuel Storage Pool Filtering System (SFSPFS) were proposed. Consider that the proposed SFP modification may result in a factor of approximately eight times more fuel movements during the modification than during a normal refueling which may increase the level of crud in the pool above that expected during a normal refueling. Justify why SFSPFS is adequate to maintain low fuel pool concentrations of radioactivity including crud so that there are reasonably low exposure levels in and around the fuel pool area during and after the modification.

6. Provide a discussion of the increases in the doses to personnel from radionuclide concentrations in the SFP due to the expansion of the capacity of the SFP, including the following:
   (a) Identify the principal radionuclides and their respective concentrations in the spent fuel pool water found by gamma isotopic analysis during all operations. Identify the sample with respect to a specific operation (i.e. refueling, fuel handling, etc.).
   (b) Provide an estimate of the man-rem exposure that will be received during removal of the old racks and installation of new ones.
   (c) Provide an estimate of the dose rates above the spent fuel pool from the concentrations of the radionuclides identified in (a), and the concomitant occupational exposure, in annual man-rem, due to all operations associated with fuel handling in the spent fuel pool area. Describe the impact of the proposed modifications on these estimates. Include in your analysis the expected exposure from more frequent changing of the filter precoat.