



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 35 TO FACILITY OPERATING LICENSE NO. NPF-69

NIAGARA MOHAWK POWER CORPORATION

NINE MILE POINT NUCLEAR STATION, UNIT 2

DOCKET NO. 50-410

1.0 INTRODUCTION

By letter dated August 21, 1991, Niagara Mohawk Power Corporation (the licensee) submitted a request for a change to the Nine Mile Point Nuclear Station, Unit 2, Technical Specifications (TS). The requested change would revise TS 4.9.6c. to allow a 6 inch increase to the normal uptravel limit for the refueling platform main and auxiliary hoists.

2.0 EVALUATION

Current TS 4.9.6c. provides surveillance requirements for the main and auxiliary hoists uptravel stops. The uptravel limit is defined by the position of the fuel grapple when it is 7 feet 9-3/4 inches below the platform tracks. The licensee has assessed that during fuel transfer the fuel assembly clears the fuel transfer shield bridge floor by approximately one inch. It creates the potential for the fuel assembly to bump against the shield bridge which could result in fuel damage. The licensee is proposing to increase the normal uptravel limits for the refueling platform main and auxiliary hoists by 6 inches.

The distance between the fuel grapple and the platform tracks would be changed from the current 7 feet 9-3/4 inches as stated in TS 4.9.6c. to 7 feet 3-3/4 inches. It would provide increased clearance margin between the fuel bundles and the transfer shield bridge, and reduce the potential for fuel damage during fuel transfer operations.

The staff has evaluated the impact of the proposed change as it relates to exposure of personnel on the refueling bridge, and to the analysis of a fuel handling accident. With regard to exposure of personnel on the refueling bridge, the licensee has calculated that a 6-inch reduction in water shielding over fuel during transfer with the spent fuel pool at the minimum level would change the individual whole body dose rate from 5 mrem/hr to approximately 9 mrem/hr and the accumulated dose per outage per person would remain well below the 10 CFR Part 20 limits.

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During a conference call between the licensee and NRC on October 30, 1991, the licensee stated that during the 1990/1991 refueling outage, the total collective radiation exposure to personnel on the refueling bridge was 629 mrem. The licensee also estimated that the proposed increase of 6 inches in the uptravel limit for the refueling hoists would, at the most, double the collective radiation exposure to personnel on the refueling bridge.

The NRC staff has reviewed the licensee's estimates and finds that, as a result of the proposed change, the accumulated dose exposure to personnel on the refueling bridge during a refueling outage would remain very small and would not have any significant impact on the projected dose per outage per person.

The staff has reviewed the impact of the proposed TS change on the fuel accident analysis in Updated Safety Analysis Report Chapter 15. The fuel handling accident is assumed to occur as a consequence of the failure of the fuel assembly lifting mechanism. The most severe fuel handling accident from a radiological viewpoint is the drop of a fuel assembly from the maximum height allowed for the fuel handling equipment (30 feet) onto the top of the core when the reactor vessel head is off. This accident would produce the largest number of failed fuel rods. The total number of failed rods resulting from the accident was found by analysis to be 124. A design basis analysis based on Standard Review Plan 15.7.4, Revision 1, and Regulatory Guide 1.25 shows that the radiological consequences of such an accident are well below the 10 CFR Part 100 guidelines. The licensee has evaluated the radiological consequences of increasing the fuel assembly drop height to a maximum of 30 feet 6 inches. The licensee's evaluation concluded that the proposed TS change would increase to 125 the total number of failed rods resulting from the accident, and that it would have no significant effect on the radiological consequences, which would remain well below the 10 CFR Part 100 guidelines. The staff agrees with the licensee's conclusions that the small increase in radiological inventory potentially released as a consequence of the most severe fuel handling accident would be insignificant and that the overall radiological consequences would remain well within Part 100 exposure guideline values.

### 3.0 SUMMARY

The NRC staff concludes that the proposed change to TS 4.9.6c. is acceptable. The staff's conclusion is based on the review of previous exposure and current estimated exposure to personnel on the refueling bridge. The staff's conclusion is also based on the review of the licensee's assumptions and analyses of the radiological consequences from the most severe fuel handling accident.

### 4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the New York State official was notified of the proposed issuance of the amendment. The State official had no comments.



## 5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC 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 the amendment involves no significant hazards consideration, and there has been no public comment on such finding (56 FR 49924). Accordingly, the 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 the amendment.

## 6.0 CONCLUSION

The Commission has 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor:  
D. Oudinot

Date: December 17, 1991



December 17, 1991

DISTRIBUTION:  
See attached sheet

Mr. B. Ralph Sylvia  
Executive Vice President, Nuclear  
Niagara Mohawk Power Corporation  
301 Plainfield Road  
Syracuse, New York 13212

Dear Mr. Sylvia:

SUBJECT: ISSUANCE OF AMENDMENT FOR NINE MILE POINT NUCLEAR STATION,  
UNIT 2 (TAC NO. M81532)

The Commission has issued the enclosed Amendment No. 35 to Facility Operating License No. NPF-69 for the Nine Mile Point Nuclear Station Unit 2 (NMP-2). The amendment consists of changes to the Technical Specifications in response to your application transmitted by letter dated August 21, 1991.

The amendment revises Technical Specification 4.9.6c. to allow raising the fuel assemblies up to 6 inches higher than currently allowed during refueling operations.

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular biweekly Federal Register notice.

Sincerely,  
Original signed by  
John E. Menning, Project Manager  
Project Directorate I-1  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Amendment No. 35 to NPF-69
- 2. Safety Evaluation

cc w/enclosures:  
See next page

\*See previous concurrence

OFC	:PDI-1:LA	:PDI-1:PE	:PDI-1:PM	:*OGC	:*PRPB
NAME	:CVogan <i>W</i>	:DOudnot:avl	:JMenning <i>J</i>	:	:LCuningham
DATE	:12/17/91	:12/17/91	:12/17/91	:11/26/91	:11/19/91

OFC	:PDI-1:D	:	:	:	:
NAME	:RACapra <i>Rae</i>	:	:	:	:
DATE	:12/17/91	:	:	:	:

MEMORANDUM FOR THE RECORD

On 10/15/40, the Board of Directors met and discussed the proposed acquisition of the property located at 123 Main Street, New York, New York.

The Board has approved the acquisition of the property and has authorized the purchase of the same for the sum of \$100,000.

The purchase price of \$100,000 is to be paid in cash. The property is to be held in trust for the benefit of the employees of the Company.

The Board has also authorized the execution of a trust agreement with the Trust Company of New York, New York, as trustee.

The Board has further authorized the execution of a deed of conveyance to the Trust Company of New York, New York, as trustee.

RESOLUTIONS

Resolved, that the Board of Directors is authorized to execute the trust agreement and the deed of conveyance.

Approved: \_\_\_\_\_  
Chairman of the Board

Approved: \_\_\_\_\_  
Secretary

Attest: \_\_\_\_\_  
Clerk

10/15/40