



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 36 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

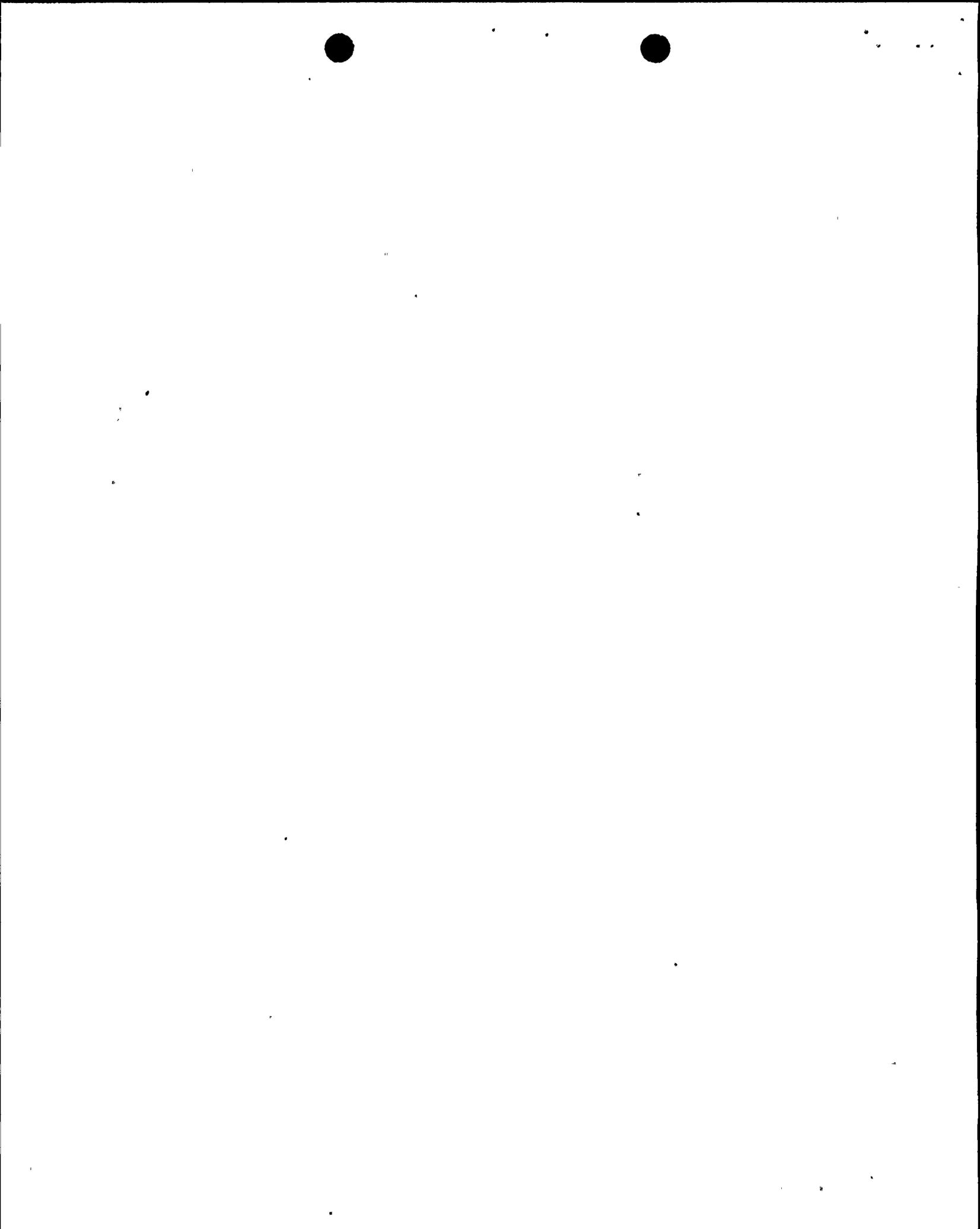
By letter dated November 6, 1991, as supplemented December 5, 1991, the Niagara Mohawk Power Corporation (the licensee) submitted a request for changes to the Nine Mile Point Nuclear Station, Unit 2, Technical Specifications (TS). The requested changes would revise the surveillance requirement of Technical Specification 4.5.1.e.2(b) to incorporate a revised reactor steam dome pressure at which to perform testing of the automatic depressurization system (ADS). The licensee stated that the proposed revision was necessary to reduce the potential of seat damage of the safety relief valves that could occur during low pressure testing. The December 5, 1991, letter provided clarifying information that did not change the initial proposed no significant hazards consideration determination.

2.0 EVALUATION

The current Technical Specification surveillance requirements for the automatic depressurization system (ADS) include the manual opening of each ADS valve at least once per 18 months. This testing is required to be performed within 12 hours after reaching a reactor steam dome pressure of greater than or equal to 100 psig. The ADS system is required to be operable whenever reactor vessel pressure exceeds 100 psig. The proposed change would change the test pressure from 100 psig to 950 psig.

The purpose of the proposed change is to reduce the potential of seat damage of the safety relief valves (SRVs) that could occur during low pressure testing. The ADS valve design utilizes system pressure to assure proper valve operation. The valve seats have a mirror finish to make the valves leak-tight. System pressure acts to protect this finish and prevent seat leakage. After a relief valve actuation, a higher system pressure is more efficient in counteracting the spring-assisted closing force, thereby reducing the resultant impact force on the valve seat. A higher pressure also assists in aligning the valve disk seat with the nozzle seat. If system pressure is low, the resultant impact force is much higher, the alignment is less accurate, and the potential for seat damage is therefore greater. Since the mirror finish maintains leak tightness, relatively small amounts of seat deformation will cause the valve to leak. Leakage will ultimately require valve refurbishment or replacement.

9203040233 920227  
PDR ADOCK 05000410  
P PDR



The licensee contends the proposed change in test pressure will not affect the operability of the ADS valves. The proposed change does not change the 18-month surveillance interval or the intent of the surveillance which verifies the ADS valves function properly and that no blockage exists in the SRV discharge lines. Further, valve operability and setpoint are verified prior to valve installation. Testing the ADS valves at a minimum of 950 psig serves to enhance safety by assuring the valves can operate at normal operating conditions. The proposed change will also prevent hastening operations from 100 psig to 950 psig in order to perform this surveillance within the 12-hour time limit.

The proposed change introduces a relatively short duration of time when reactor pressure is greater than the discharge head of the low pressure emergency core cooling system pumps and the ADS valves are untested. In the unlikely event that the ADS valves were inoperable prior to reaching the new test pressure of 950 psig and a small break loss of coolant accident occurred, the high pressure core spray (HPCS) system would provide adequate core cooling. The use of the nontechnical specification reactor core isolation cooling system and manual operator actions as directed by the emergency operating procedures provide supplemental means of providing adequate core cooling. Based on the above, there is not a reduction in the margin of safety if the ADS valve test pressure is increased to 950 psig.

The effect on the plant as a result of increasing the ADS test pressure to 950 psig is minimal. A mild pressure transient will result from the opening of one ADS valve and will be automatically compensated for by the electrohydraulic control system. The consequences of a stuck open relief valve has been previously analyzed and found acceptable in the Updated Safety Analysis Report (USAR), Section 15.1.4. The dynamic locals and suppression pool heatups associated with safety relief valve actuation has been shown to be acceptable in the USAR Appendix 6A, Design Assessment for Hydrodynamic Loads.

Based on the above evaluation, the NRC staff finds the proposed technical specification changes acceptable and they are approved.

### 3.0 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.

### 4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a surveillance requirement. 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



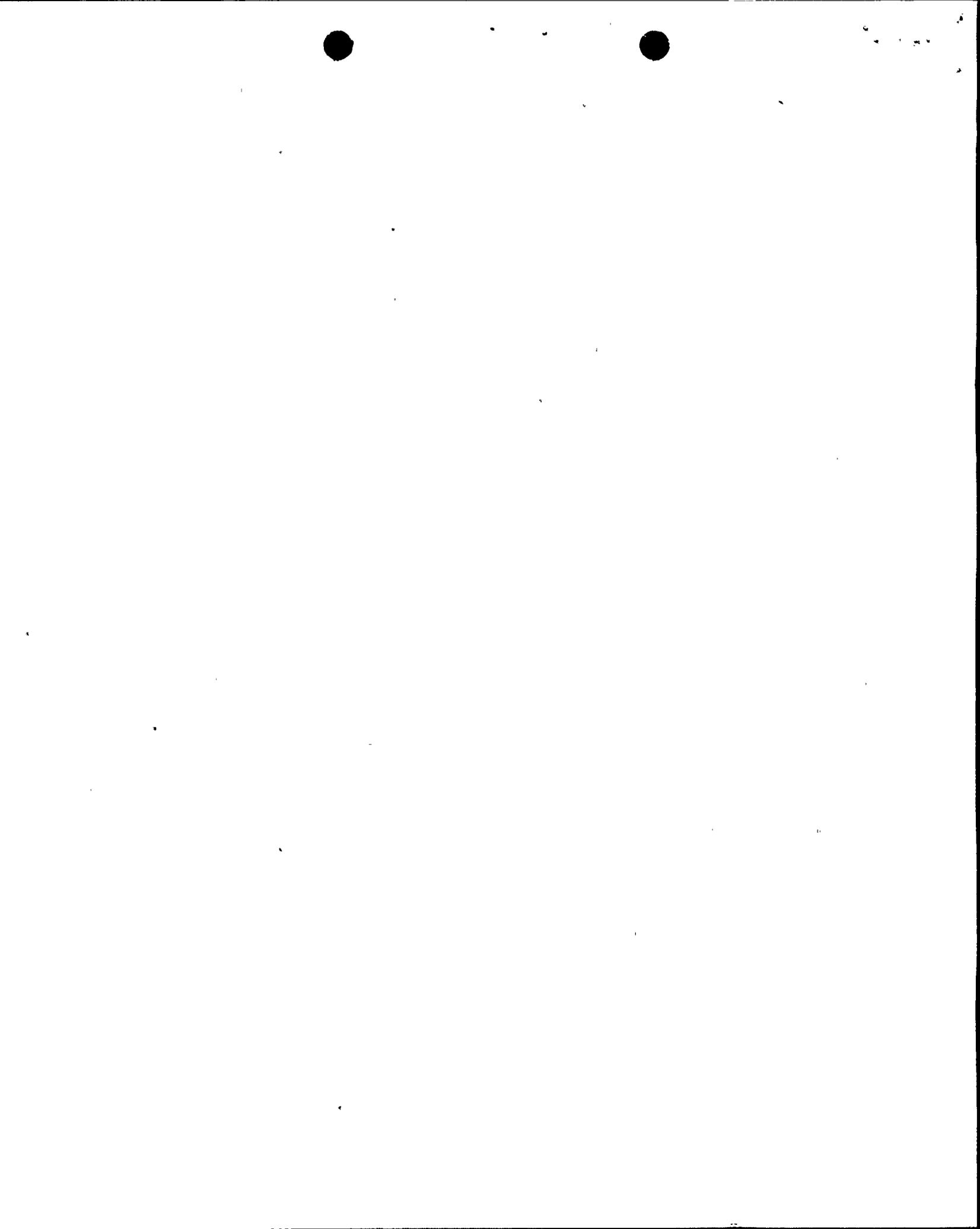
consideration, and there has been no public comment on such finding (57 FR 712). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

#### 5.0 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:  
Richard A. Laura

Date: February 27, 1992



February 27, 1992

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. M82257)

The Commission has issued the enclosed Amendment No. 36 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 November 6, 1991, as supplemented on December 5, 1991.

The amendment revises Technical Specification Surveillance Requirement 4.5.1.e.2(b) to incorporate a revised automatic depressurization system test pressure. This review was required to reduce the potential of seat damage to the safety relief valves that could occur during low pressure testing.

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:

Richard A. Laura, Acting Project Manager  
Project Directorate I-1  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Amendment No. 36 to NPF-69
- 2. Safety Evaluation

cc w/enclosures:  
See next page

OFFICE	LA:PDI-1	PM-PDI-1	NRR/SRXB	OGC <i>Handwritten initials</i>	D-PDI-1
NAME	CVogan <i>CV</i>	RLaura:av1 <i>py</i>	RJones <i>RJ</i>	<i>Handwritten initials</i>	RACapra <i>RC</i>
DATE	2/4/92	2/4/92	2/7/92	2/19/92	2/27/92

