



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SCHEDULAR EXEMPTION FROM APPENDIX J INTERVAL

FOR LOCAL LEAK RATE TESTING OF CONTAINMENT ISOLATION VALVES

NIAGARA MOHAWK POWER CORPORATION

NINE MILE POINT NUCLEAR STATION UNIT NO. 1

DOCKET NO. 50-220

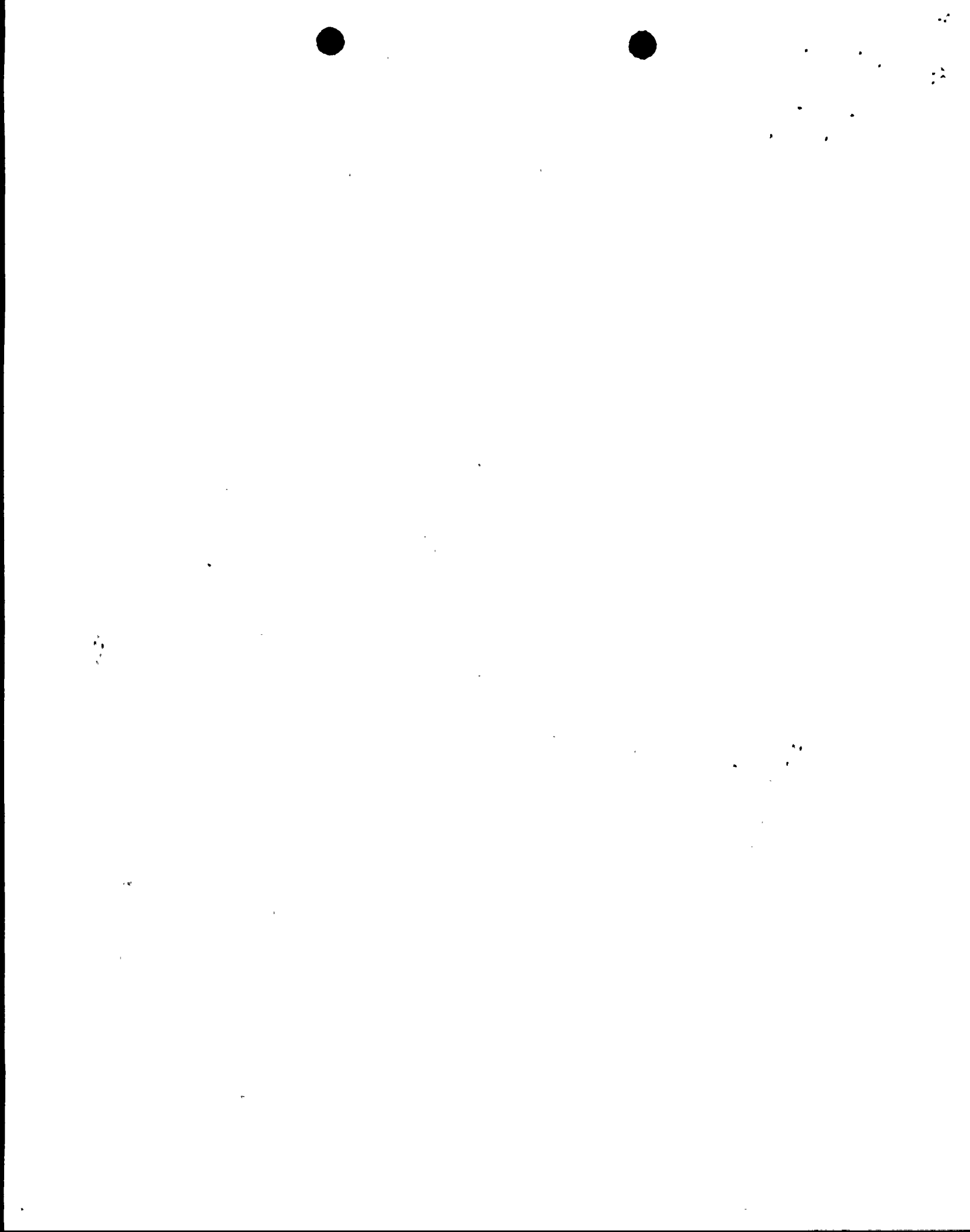
1.0 INTRODUCTION

By letter dated November 3, 1992, Niagara Mohawk Power Corporation (NMPC) requested a schedular exemption pursuant to 10 CFR 50.12(a) from the requirements of 10 CFR 50, Appendix J, Section III.D.3. This letter superseded a NMPC application dated October 14, 1992. NMPC requested temporary relief from the requirement to perform local leak rate tests (LLRTs) at intervals of no greater than 2 years for 39 Type C tests. A one-time only delay, up to a maximum of 7 weeks, was requested for the performance of these leakage tests. NMPC's request was necessitated by a proposed delay in the start of the next refueling outage (RFO-12) of Nine Mile Point Nuclear Station Unit No. 1 (NMP1) from January 2, 1993, to February 19, 1993.

The schedular exemption is required to permit NMPC to operate NMP1 until February 19, 1993, the proposed start date for RFO-12. The refueling outage is currently scheduled to begin on January 2, 1993, with an end date of about February 25, 1993. However, based on projections from the New York Power Pool (NYPP), the current schedule may impact the ability of the NYPP to provide reliable power during the winter peak load period. Accounting for planned maintenance, required reserves, and normal unplanned outages, the NYPP is projecting net margin deficiencies during the period January 3, 1993, through February 20, 1993. Consequently, NMPC has determined that the most prudent and effective course of action would be to delay the start of RFO-12 approximately 7 weeks until February 19, 1993.

NMPC has stated that during the forced outage that began on May 1, 1992, and ended on August 8, 1992, it recognized that the start of RFO-12, originally scheduled to begin on September 11, 1992, would be impacted due to insufficient fuel burnup. The current outage start date of January 2, 1993, was established at that time, and NMPC performed the Types B and C leak tests during the forced outage required to support the revised start date. NMPC became aware of the NYPP projections of net margin deficiencies for the period January 3, 1993, through February 20, 1993, subsequent to the startup from the forced outage.

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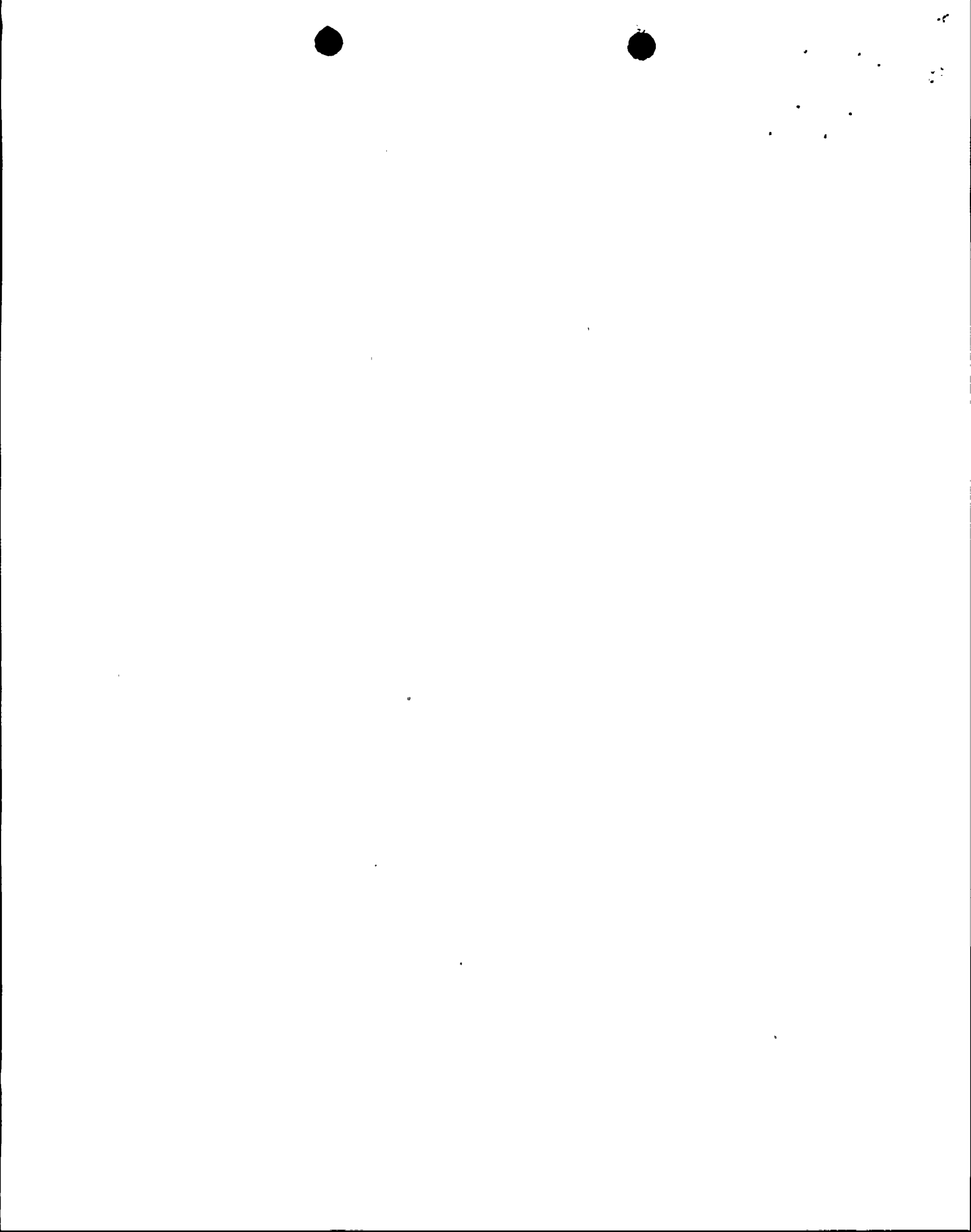
## 2.0 EVALUATION

The 39 Type C tests included in the exemption request are listed in Table 1. NMPC has determined that these Type C tests of containment isolation valves cannot be performed during normal power operations for one or more of the following reasons:

- a. the valves are inaccessible due to their location in the drywell;
- b. the valves are in normally operating systems which cannot be physically tested;
- c. testing of a valve would require isolation of a system normally in service or available for service;
- d. a boundary valve required for performance of the Type C test cannot be exercised because it is inaccessible due to its location in the drywell.

The licensee has performed an analysis of the past leak rate history of the 39 containment isolation valves in question. The penetrations included in the licensee's schedular exemption request represent approximately 45 percent of the Type C penetrations at NMP1, but only 6.2 percent of the total "as-left" leakage at the beginning of the current operating cycle. The total "as-left" leakage for all Types B and C penetrations was  $0.24 L_a$  and the total "as-left" from all penetrations covered by the proposed exemption was  $0.015 L_a$ . The combined leakage from the penetrations addressed in the exemption went from an "as-left" value of  $0.016 L_a$  to an "as-found" value of  $0.05 L_a$  during the 2-year interval prior to the current operating cycle. During the 2-year period prior to that, the combined leakage from these penetrations went from an "as-left" value of  $0.0224 L_a$  to an "as-found" value of  $0.095 L_a$ . Based on the most recent "as-left" leakage of  $0.015 L_a$ , the historical performance of these penetrations, and a maximum increase of 7 percent in the surveillance interval, the licensee has determined that the maximum combined leakage from these penetrations would not be expected to exceed  $0.1 L_a$ . This provides reasonable assurance that the requested surveillance interval extension will not result in the Types B and C leakage total exceeding the  $0.6 L_a$  limit of 10 CFR Part 50, Appendix J.

The staff notes that the 2-year interval requirement for Type C components is intended to be often enough to prevent significant deterioration from occurring and long enough to permit the tests to be performed during plant outages. Leak rate testing of the penetrations during plant shutdown is preferable because of the lower radiation exposure to plant personnel. In addition, as previously noted, some penetrations cannot be tested at power. For penetrations that cannot be tested at power, or for which testing at power is inadvisable, the increase in confidence of containment integrity following a successful test is not significant enough to justify a plant shutdown specifically to perform the tests within the 2-year time period, considering the leak rate history of the penetrations addressed by the exemption.



### 3.0 CONCLUSION

Based on the above evaluation, the staff finds the requested schedular exemption, to allow the Type C test intervals of the 39 valves listed in Table 1 to be extended to the refueling outage which will begin no later than February 19, 1993, to be acceptable. To provide adequate time for plant shut down, the exemption should expire on February 20, 1993.

Attachment:  
Appendix J Exemption Request/  
Impacted Components - Table 1

Principal Contributor: J. Menning

Date: December 24, 1992

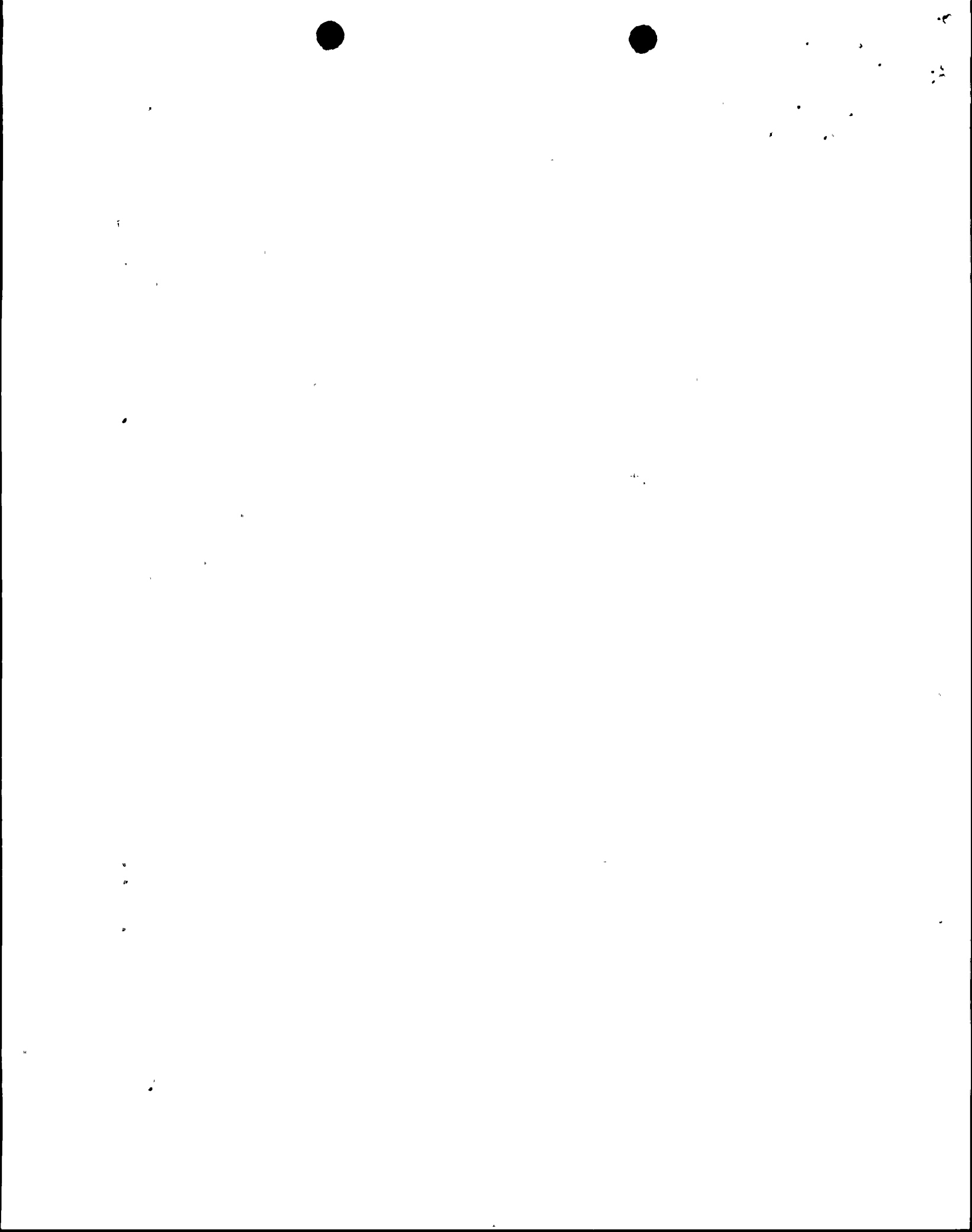


TABLE 1  
 NINE MILE POINT UNIT 1  
 DOCKET NO. 50-220  
 DPR-63

**APPENDIX J EXEMPTION REQUEST/IMPACTED COMPONENTS**

COMPONENT ID	COMPONENT DESCRIPTION
01-01	Main Steam Line Loop 11 Inboard Isolation Valve
01-02	Main Steam Line Loop 12 Inboard Isolation Valve
01-03	Main Steam Line Loop 11 Outboard Isolation Valve
31-01R	Feedwater System Loop 11 Outboard Isolation Valve
31-07	Feedwater System Loop 11 Inboard Isolation Valve
31-08	Feedwater System Loop 12 Inboard Isolation Valve
42.1-02	Liquid Poison Inboard Isolation Valve
42.1-03	Liquid Poison Outboard Isolation Valve
110-127	Reactor Recirculation Sample Line Inboard Isolation Valve
110-128	Reactor Recirculation Sample Line Outboard Isolation Valve
122-03	Post Accident Sample Line Inboard Isolation Valve
201.2-24	H <sub>2</sub> O <sub>2</sub> #12 Sample Stream D Outboard Isolation Valve
201.2-26	H <sub>2</sub> O <sub>2</sub> #12 Sample Stream C Outboard Isolation Valve
201.2-30	H <sub>2</sub> O <sub>2</sub> #12 Sample Stream B Outboard Isolation Valve
201.2-70	H <sub>2</sub> O <sub>2</sub> #12 Return Inboard Isolation Valve
201.2-71	H <sub>2</sub> O <sub>2</sub> #12 Return Outboard Isolation Valve
201.2-25	H <sub>2</sub> O <sub>2</sub> #12 Sample Stream C Inboard Isolation Valve
201.7-01	H <sub>2</sub> O <sub>2</sub> #11 Sample Stream B Inboard Isolation Valve
201.7-02	H <sub>2</sub> O <sub>2</sub> #11 Sample Stream B Outboard Isolation Valve
201.7-03	H <sub>2</sub> O <sub>2</sub> #11 Sample Stream A Inboard Isolation Valve
201.7-04	H <sub>2</sub> O <sub>2</sub> #11 Sample Stream A Outboard Isolation Valve
201.7-08	Drywell CAM Supply Inboard Isolation Valve
201.7-09	Drywell CAM Supply Outboard Isolation Valve
201.7-10	Drywell CAM Return Inboard Isolation Valve
201.7-11	Drywell CAM Return Outboard Isolation Valve
201.2-03	Drywell N <sub>2</sub> Makeup Outboard Isolation Valve
201.2-32	Drywell N <sub>2</sub> Makeup Inboard Isolation Valve



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**APPENDIX J EXEMPTION REQUEST/IMPACTED COMPONENTS (Cont'd)**

<b>COMPONENT ID</b>	<b>COMPONENT DESCRIPTION</b>
201.2-06	Torus N <sub>2</sub> Makeup Outboard Isolation Valve
201.2-33	Torus N <sub>2</sub> Makeup Inboard Isolation Valve
201-07, 08	Torus Air Vent and Fill Inboard and Outboard Isolation Valves
201-16, 17	Tours N <sub>2</sub> Vent and Fill Inboard and Outboard Isolation Valves
201.2-109	H <sub>2</sub> O <sub>2</sub> #11 Return Inboard Isolation Valve
201.2-110	H <sub>2</sub> O <sub>2</sub> #11 Sample Stream C Outboard Isolation Valve
201.2-111	H <sub>2</sub> O <sub>2</sub> #11 Sample Stream C Inboard Isolation Valve
201.2-112	H <sub>2</sub> O <sub>2</sub> #11 Return Outboard Isolation Valve
201.1-09	Post-LOCA Vent Loop 11 Inboard Isolation Valve
201.1-11	Post-LOCA Vent Loop 11 Outboard Isolation Valve
201.1-14	Post-LOCA Vent Loop 12 Inboard Isolation Valve
201.1-16	Post-LOCA Vent Loop 12 Outboard Isolation Valve



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Mr. B. Ralph Sylvia

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December 24, 1992

Copies of the Exemption and the NRC staff's supporting safety evaluation are enclosed. The Exemption has been forwarded to the Office of the Federal Register for publication.

Sincerely,

Original signed by:

Robert A. Capra, Director  
Project Directorate I-1  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Exemption
- 2. Safety Evaluation

cc w/enclosures:

See next page

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