



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

NIAGARA MOHAWK POWER CORPORATION

DOCKET NO. 50-220

NINE MILE POINT NUCLEAR STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 159
License No. DPR-63

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Niagara Mohawk Power Corporation (the licensee) dated July 16, 1996, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter 1;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-69 is hereby amended to read as follows:

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(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, as revised through Amendment No. 159 are hereby incorporated into this license. Niagara Mohawk Power Corporation shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance to be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



S. Singh Bajwa, Acting Director
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: February 10, 1997



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ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 159 TO FACILITY OPERATING LICENSE NO. DPR-63

DOCKET NO. 50-220

Replace the following pages of the Appendix A Technical Specifications with the attached pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change.

Remove

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LIMITING CONDITION FOR OPERATION

3.3.3 LEAKAGE RATE

Applicability:

Applies to the allowable leakage rate of the primary containment system.

Objective:

To assure the capability of the containment in limiting radiation exposure to the public from exceeding values specified in 10 CFR 100 in the event of a loss-of-coolant accident accompanied by significant fuel cladding failure and hydrogen generation from a metal-water reaction.

To assure that periodic surveillances of reactor containment penetrations and isolation valves are performed so that proper maintenance and repairs are made during the service life of the containment, and systems and components penetrating primary containment.

Specification:

Whenever the reactor coolant system temperature is above 215°F the primary containment leakage rate shall be limited to:

SURVEILLANCE REQUIREMENT

4.3.3 LEAKAGE RATE

Applicability:

Applies to the primary containment system leakage rate.

Objective:

To verify that the leakage from the primary containment system is maintained within specified values.

Specification:

- a. The primary containment leakage rates shall be demonstrated at test schedules and in conformance with the criteria specified in the 10 CFR 50 Appendix J Testing Program Plan as described in Specification 6.16.
- b. The provisions of Specification 4.0.1 are not applicable, and the surveillance interval extensions are in accordance with the 10 CFR 50 Appendix J Testing Program Plan.



LIMITING CONDITION FOR OPERATION

SURVEILLANCE REQUIREMENT

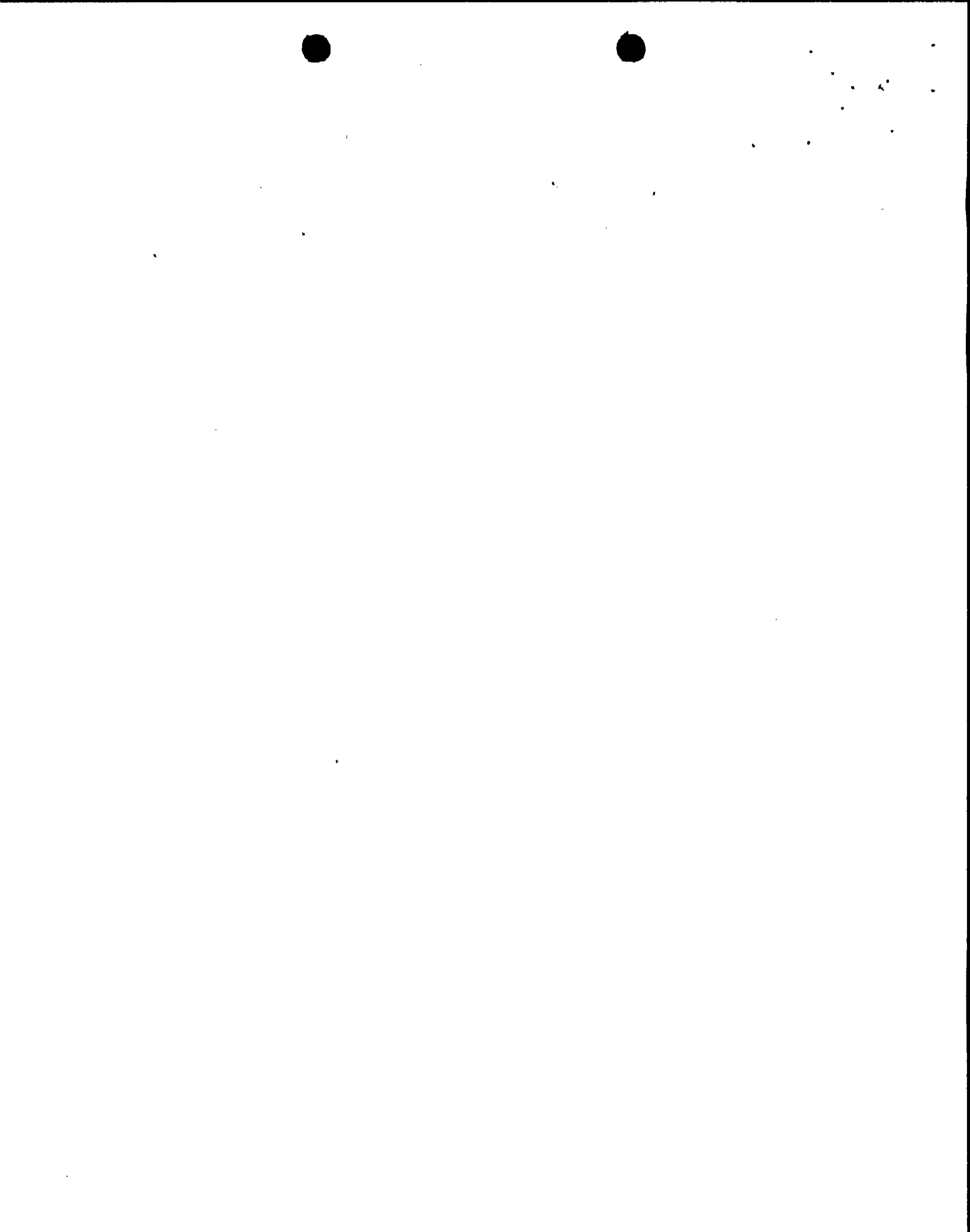
- a. An overall integrated leakage rate of less than 1.5% by weight of the containment air per day (La), at 35 psig (Pac).
- b. A combined leakage rate on a minimum pathway basis of less than 0.6 La for all penetrations and all Primary Containment Isolation Valves subject to Types B and C tests when pressurized to 35 psig (Pac).



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PAGES 133 THROUGH 139 DELETED

AMENDMENT NO. 159



BASES FOR 3.3.3 AND 4.3.3 LEAKAGE RATE

Although the dose calculations suggest that the allowable test leak rate could be allowed to increase to about 3.0%/day before the guideline thyroid dose limit given in 10CFR100 would be exceeded, establishing the limit at 1.5%/day provides an adequate margin of safety to assure the health and safety of the general public. It is further considered that the allowable leak rate should not deviate significantly from the containment design value to take advantage of the design leak-tightness capability of the structure over its service lifetime. Additional margin to maintain the containment in the "as built" condition is achieved by establishing the allowable operational leak rate. The operational limit is derived by multiplying the allowable test leak rate by 0.75 thereby providing a 25% margin to allow for leakage deterioration which may occur during the period between leak rate tests.

Closure of the containment isolation valves for the purpose of the test is accomplished by the means provided for normal operation of the valves. The reactor is vented to the containment atmosphere during ILRT testing.

The primary containment leak rate test frequency is based on maintaining adequate assurance that the leak rate remains within the specification. The leak rate test frequency is based on Option B of 10 CFR 50 Appendix J.

The penetration and air purge piping leakage test frequency, along with the containment leak rate tests, is adequate to allow detection of leakage trends. Whenever a double-gasketed penetration (primary containment head equipment hatches and the suppression chamber access hatch) is broken and remade, the space between the gaskets is pressurized to determine that the seals are performing properly. The test pressure of 35 psig is consistent with the accident analyses and the maximum preoperational leak rate test pressure. It is expected that the majority of the leakage from valves, penetrations and seals would be into the reactor building. However, it is possible that leakage into other parts of the facility could occur. Such leakage paths that may affect significantly the consequences of accidents are to be minimized.

Leakage from airlocks is measured under accident pressures in accordance with Option B of 10 CFR 50 Appendix J.

BASES FOR 3.3.3 AND 4.3.3 LEAKAGE RATE

The Type A test follows the guidelines stated in ANSI/ANS-56.8⁽⁸⁾ and/or the Bechtel Topical Report.⁽⁴⁾ This program provides adequate assurance that the test results realistically estimates the degree of containment leakage following a loss-of-coolant accident. The containment leakage rate is calculated using the Absolute Methodology.⁽⁸⁾

The specific treatment of selective valve arrangements including the acceptability of the interpretations of 10 CFR 50 Appendix J requirements are given in References 5, 6, and 7. They serve as the bases for alternative test configurations (e.g., reverse accident, multi-valve, water leakage flow tests) as well as relaxations from previous leakage limits or constraints.

References:

- (1) FSAR, Volume II, Appendix E
- (2) UFSAR, Section VI B.2.1
- (3) TID-20583, Leakage Characteristics of Steel Containment Vessels and the Analysis of Leakage Determinations
- (4) BN-TOP-1 "Testing Criteria for Integrated Leakage Rate Testing of Primary Containment Structures for Nuclear Power Plants," Revision 1, Bechtel Corporation, November 1, 1972
- (5) NRC Safety Evaluation Report dated May 6, 1988, "Regarding Proposed Technical Specifications and Exemption Requests Related to Appendix J."
- (6) Niagara Mohawk Letter dated July 28, 1988, "Clarifications, Justifications & Conformance with 10 CFR 50 Appendix J SER."
- (7) NRC Letter dated November 9, 1988, "Review of the July 28, 1988 Letter on Appendix J Containment Leakage Rate Testing at Nine Mile Point Unit 1."
- (8) ANSI/ANS - 56.8 - 1994, "Containment System Leakage Testing Requirements."



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6.13 Fire Protection Inspection

6.13.1 An independent fire protection and loss prevention inspection and audit shall be performed annually utilizing either qualified off-site licensee personnel or an outside fire protection firm.

6.13.2 An inspection and audit by an outside qualified fire consultant shall be performed at intervals no greater than 3 years.

6.14 Systems Integrity

Procedure shall be established, implemented and maintained to meet or exceed the requirements and recommendations of Section 2.1.6.a of NUREG 0578.

6.15 Iodine Monitoring

Procedures shall be established, implemented and maintained to meet or exceed the requirements and recommendations of Section 2.1.8.c of NUREG 0578.

6.16 10 CFR 50 Appendix J Testing Program Plan

A program shall be established to implement the leakage rate testing of the containment as required by 10 CFR 50.54(o) and 10 CFR 50, Appendix J, Option B. This program shall be in accordance with the guidelines contained in Regulatory Guide 1.163, entitled "Performance-Based Containment Leak-Test Program," dated September 1995 with the following exceptions:

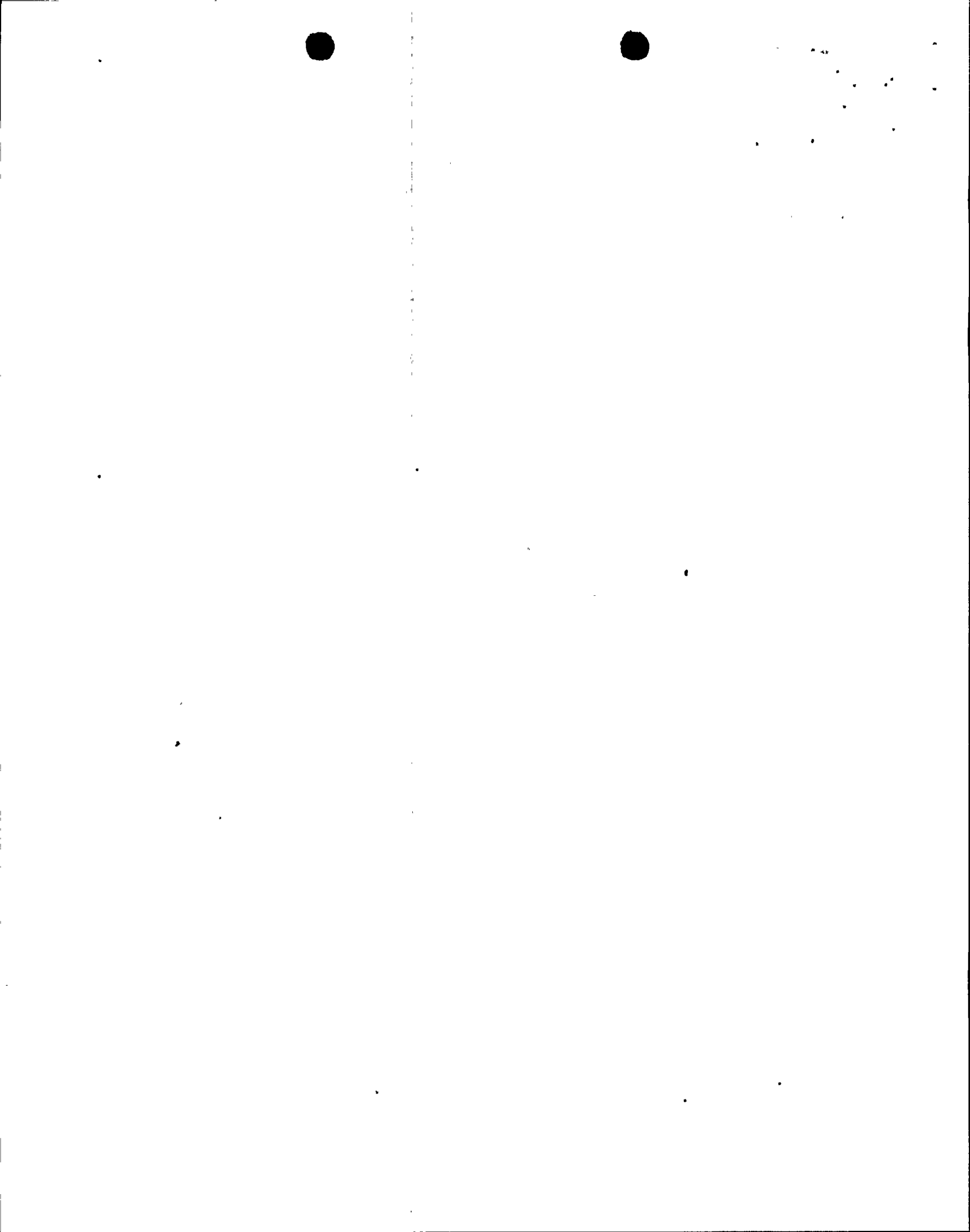
1. Type A tests will be conducted in accordance with ANSI/ANS 56.8-1994 and/or Bechtel Topic BN-TOP-1, and
2. The first Type A test following approval of this Specification will be a full pressure test conducted approximately 70, rather than 48, months since the last low pressure Type A test.

The peak calculated containment internal pressure (P_{ac}) for the design basis loss of coolant accident is 35 psig.

The maximum allowable primary containment leakage rate (L_a) at P_{ac} shall be 1.5% of primary containment air weight per day.

Leakage Rate Surveillance Test acceptance criteria are:

1. The as-found Primary Containment Integrated Leak Rate Test (Type A Test) acceptance criteria is less than $1.0 L_p$.
2. The as-left Primary Containment Integrated Leak Rate Test (Type A Test) acceptance criteria is less than or equal to $0.75 L_p$, prior to entering a mode of operation where containment integrity is required.
3. The combined Local Leak Rate Test (Type B & C Tests including airlocks) acceptance criteria is less than $0.6 L_p$, calculated on a maximum pathway basis, prior to entering a mode of operation where containment integrity is required.



4. The combined Local Leak Rate Test (Type B & C Tests including airlocks) acceptance criteria is less than $0.6 L_p$, calculated on a minimum pathway basis, at all times when containment integrity is required.

The provisions of Specification 4.0.1 do not apply to the test frequencies specified in the 10 CFR 50 Appendix J Testing Program Plan.



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