PSE&G Public Service Electric and Gas Company

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Robert L. Mittl General Manager
Nuclear Assurance and Regulation

February 7, 1985

Director of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
7920 Norfolk Avenue
Bethesda, Maryland 20814

Attention: Mr. Albert Schwencer, Chief
Licensing Branch 2
Division of Licensing

Gentlemen:

TECHNICAL SPECIFICATIONS
HOPE CREEK GENERATING STATION
DOCKET NO. 50-354

Public Service Electric and Gas Company submitted the Hope Creek Generating Station (HCGS) Draft Technical Specifications, Revision 0, on January 17, 1985, for NRC review (letter from R. L. Mittl, PSE&G to A. Schwencer, NRC). Enclosed (Attachment I) for your use and incorporation into the HCGS Draft Technical Specifications, Revision 0, are five (5) sets of the List of Effective Pages (LEP) which indicates the latest revision of each page in the HCGS Draft Technical Specifications. The LEP will be updated and reissued for all future revisions to the HCGS Draft Technical Specifications.

Also enclosed (Attachment II) are five (5) sets of the following revised HCGS Draft Technical Specification pages:

Page: Insert to Pg. 3/4 3-86, Rev. 1
3/4 4-4, Rev. 1
3/4 6-8, Rev. 1
Insert A to Pg. 3/4 6-8, Rev. 1
Insert B to Pg. 3/4 6-8, Rev. 1
Insert C to Pg. 3/4 6-8, Rev. 1
3/4 6-10, Rev. 1
3/4 6-11, Rev. 1
3/4 6-11a, Rev. 1

B001
1/1

Page: 3/4 6-11b, Rev. 1
3/4 6-11c, Rev. 1
3/4 6-11d, Rev. 1
3/4 6-11e, Rev. 1
3/4 6-11f, Rev. 1
3/4 6-11g, Rev. 1
3/4 6-12, Rev. 1
3/4 6-18, Rev. 1
Insert A & B to Pg. 3/4 6-18, Rev. 1
3/4 6-31, Rev. 1
3/4 6-37, Rev. 1
3/4 6-39, Rev. 1
3/4 6-40, Rev. 1
3/4 6-42, Rev. 1
3/4 6-52, Rev. 1
Insert A to Pg. 3/4 6-52, Rev. 1
3/4 7-20, Rev. 1
3/4 7-21, Rev. 1
3/4 7-23, Rev. 1
3/4 7-25, Rev. 1
3/4 7-26, Rev. 1
Insert to Pg. 3/4 7-26, Rev. 1
3/4 7-27, Rev. 1
Insert to Pg. 3/4 7-27, Rev. 1
3/4 7-28, Rev. 1
Insert A & B to Pg. 3/4 7-28, Rev. 1

These revised pages should be inserted into the HCGS Draft Technical Specifications submitted in the above referenced letter. The LEP provided in Attachment I reflects those revisions in Attachment II.

Should you have any questions in this regard, please contact us.

Very truly yours,

Attachment I - HCGS Draft Technical Specifications List of Effective Pages
Attachment II - Revised HCGS Draft Technical Specification Pages

C D. H. Wagner
USNRC Licensing Project Manager
A. R. Blough
USNRC Senior Resident Inspector

ATTACHMENT I

HCGS DRAFT TECHNICAL SPECIFICATIONS LIST OF EFFECTIVE PAGES

HOPE CREEK GENERATING STATION
DRAFT TECHNICAL SPECIFICATIONS

LIST OF EFFECTIVE PAGES

Pages	Revision Numbers
Index	0
i	0
ii	0
iii	0
iv	0
v	0
vi	0
vii	0
viii	0
ix	0
x	0
xi	0
xii	0
xiii	0
xiv	0
xv	0
xvi	0
xvii	0
xviii	0
xix	0
xx	0
xxi	0
Section 1.0	0
1-1	0
1-2	0
1-3	0
1-4	0
1-5	0
1-6	0
Insert A to pg. 1-6	0
1-7	0
1-8	0
1-9	0
Section 2.0	0
2-1	0
2-2	0
2-3	0
2-4	0
Bases for Section 2.0	0
Note	0

HOPE CREEK GENERATING STATION
DRAFT TECHNICAL SPECIFICATIONS

LIST OF EFFECTIVE PAGES

Pages	Revision Numbers
B2-1	0
B2-2	0
B2-3	0
B2-4	0
B2-5	0
B2-6	0
B2-7	0
B2-8	0
B2-9	0
Section 3.0 & 4.0	0
3/4 0-1	0
Insert A to pg. 3/4 0-1	0
3/4 0-2	0
3/4 0-3	0
3/4 1-1	0
3/4 1-2	0
3/4 1-3	0
3/4 1-4	0
3/4 1-5	0
3/4 1-6	0
3/4 1-7	0
3/4 1-8	0
3/4 1-9	0
Insert to pg. 3/4 1-9	0
3/4 1-10	0
3/4 1-11	0
3/4 1-12	0
3/4 1-13	0
3/4 1-14	0
3/4 1-15	0
3/4 1-16	0
3/4 1-17	0
3/4 1-18	0
3/4 1-19	0
3/4 1-20	0
3/4 1-21	0
3/4 2-1	0
3/4 2-2	0
3/4 2-3	0
3/4 2-4	0
3/4 2-5	0

HOPE CREEK GENERATING STATION
DRAFT TECHNICAL SPECIFICATIONS

LIST OF EFFECTIVE PAGES

Pages	Revision Numbers
3/4 2-6	0
3/4 3-1	0
3/4 3-2	0
3/4 3-3	0
3/4 3-4	0
3/4 3-5	0
3/4 3-7	0
3/4 3-8	0
3/4 3-9	0
3/4 3-10	0
3/4 3-11	0
3/4 3-12	0
3/4 3-13	0
3/4 3-14	0
3/4 3-15	0
3/4 3-16	0
3/4 3-17	0
3/4 3-18	0
3/4 3-19	0
3/4 3-20	0
3/4 3-21	0
3/4 3-22	0
3/4 3-23	0
3/4 3-24	0
3/4 3-25	0
3/4 3-26	0
3/4 3-27	0
3/4 3-28	0
3/4 3-29	0
3/4 3-30	0
3/4 3-31	0
3/4 3-32	0
3/4 3-33	0
3/4 3-34	0
3/4 3-35	0
3/4 3-36	0
3/4 3-37	0
Insert A to page 3/4 3-37	0
3/4 3-38	0
3/4 3-39	0

HOPE CREEK GENERATING STATION
DRAFT TECHNICAL SPECIFICATIONS

LIST OF EFFECTIVE PAGES

Pages	Revision Numbers
3/4 3-40	0
3/4 3-41	0
3/4 3-42	0
3/4 3-43	0
3/4 3-44	0
3/4 3-45	0
3/4 3-46	0
3/4 3-47	0
3/4 3-48	0
3/4 3-49	0
3/4 3-50	0
3/4 3-51	0
3/4 3-52	0
3/4 3-53	0
3/4 3-54	0
3/4 3-55	0
3/4 3-56	0
3/4 3-57	0
3/4 3-58	0
3/4 3-59	0
3/4 3-60	0
3/4 3-61	0
3/4 3-62	0
3/4 3-63	0
3/4 3-64	0
3/4 3-65	0
3/4 3-66	0
3/4 3-67	0
3/4 3-68	0
3/4 3-69	0
3/4 3-70	0
3/4 3-71	0
3/4 3-72	0
3/4 3-73	0
3/4 3-74	0
3/4 3-75	0
3/4 3-76	0
3/4 3-77	0
3/4 3-78	0
3/4 3-79	0
3/4 3-80	0

HOPE CREEK GENERATING STATION
DRAFT TECHNICAL SPECIFICATIONS

LIST OF EFFECTIVE PAGES

Pages	Revision Numbers
3/4 3-81	0
3/4 3-82	0
3/4 3-83	0
3/4 3-84	0
3/4 3-85	0
3/4 3-86	0
Insert to pg. 3/4 3-86	1
3/4 3-87	0
3/4 3-88	0
3/4 3-89	0
3/4 3-90	0
3/4 3-91	0
3/4 3-92	0
3/4 3-93	0
3/4 3-94	0
3/4 3-95	0
3/4 3-96	0
3/4 3-97	0
3/4 3-98	0
3/4 3-99	0
3/4 3-100	0
3/4 3-101	0
3/4 3-102	0
3/4 3-103	0
3/4 3-104	0
3/4 3-105	0
3/4 3-106	0
3/4 3-107	0
3/4 3-108	0
3/4 3-109	0
3/4 3-110	0
3/4 3-111	0
3/4 3-112	0
3/4 3-113	0
3/4 3-114	0
3/4 4-1	0
3/4 4-2	0
3/4 4-3	0
3/4 4-4	1
3/4 4-5	0
3/4 4-6	0

HOPE CREEK GENERATING STATION
DRAFT TECHNICAL SPECIFICATIONS

LIST OF EFFECTIVE PAGES

Pages	Revision Numbers
3/4 4-7	0
Insert A&B to page 3/4 4-7	0
3/4 4-8	0
3/4 4-9	0
3/4 4-10	0
3/4 4-11	0
3/4 4-12	0
3/4 4-13	0
3/4 4-14	0
3/4 4-15	0
3/4 4-16	0
3/4 4-17	0
3/4 4-18	0
3/4 4-19	0
3/4 4-20	0
3/4 4-21	0
3/4 4-22	0
3/4 4-23	0
3/4 4-24	0
3/4 4-25	0
Insert B&C to page 3/4 4-25	0
3/4 4-26	0
3/4 4-27	0
3/4 4-28	0
3/4 5-1	0
3/4 5-2	0
3/4 5-3	0
3/4 5-4	0
3/4 5-5	0
3/4 5-6	0
3/4 5-7	0
3/4 5-8	0
3/4 5-9	0
3/4 6-1	0
3/4 6-2	0
3/4 6-3	0
3/4 6-4	0
3/4 6-5	0
3/4 6-6	0

HOPE CREEK GENERATING STATION
DRAFT TECHNICAL SPECIFICATIONS

LIST OF EFFECTIVE PAGES

Pages	Revision Numbers
3/4 6-7	0
3/4 6-8	1
Insert A to pg. 3/4 6-8	1
Insert B to pg. 3/4 6-8	1
Insert C to pg. 3/4 6-8	1
3/4 6-9	0
3/4 6-10	1
3/4 6-11	1
3/4 6-11a	1
3/4 6-11b	1
3/4 6-11c	1
3/4 6-11d	1
3/4 6-11e	1
3/4 6-11f	1
3/4 6-11g	1
3/4 6-12	1
3/4 6-13	0
3/4 6-14	0
Insert A&B to page 3/4 6-14	0
3/4 6-15	0
Insert to pg. 3/4 6-15	0
3/4 6-16	0
3/4 6-17	0
3/4 6-18	1
Insert A&B to page 3/4 6-18	1
3/4 6-19	0
3/4 6-20	0
Insert A&B to page 3/4 6-20	0
3/4 6-21	0
3/4 6-22	0
3/4 6-23	0
3/4 6-24	0
3/4 6-25	0
3/4 6-26	0
3/4 6-27	0
3/4 6-28	0
3/4 6-29	0
3/4 6-30	0

HOPE CREEK GENERATING STATION
DRAFT TECHNICAL SPECIFICATIONS

LIST OF EFFECTIVE PAGES

Pages	Revision Numbers
3/4 6-31	1
3/4 6-32	0
3/4 6-33	0
3/4 6-34	0
3/4 6-35	0
3/4 6-36	0
3/4 6-37	1
3/4 6-38	0
3/4 6-39	1
3/4 6-40	1
3/4 6-41	0
3/4 6-42	1
3/4 6-43	0
3/4 6-44	0
3/4 6-45	0
3/4 6-46	0
Insert A to pg. 3/4 6-46	0
3/4 6-47	0
3/4 6-48	0
3/4 6-49	0
3/4 6-50	0
3/4 6-51	0
3/4 6-52	1
Insert A to page 3/4 6-52	1
3/4 6-53	0
3/4 7-1	0
3/4 7-2	0
Insert E&F to page 3/4 7-2	0
3/4 7-3	0
Insert to page 3/4 7-3	0
3/4 7-4	0
3/4 7-5	0
3/4 7-6	0
3/4 7-7	0
3/4 7-8	0
3/4 7-9	0
3/4 7-10	0
3/4 7-11	0

HOPE CREEK GENERATING STATION
DRAFT TECHNICAL SPECIFICATIONS

LIST OF EFFECTIVE PAGES

Pages	Revision Numbers
3/4 7-12	0
3/4 7-13	0
3/4 7-14	0
Insert B&C to page 3/4 7-14	0
3/4 7-15	0
Insert D to pg. 3/4 7-15	0
3/4 7-16	0
3/4 7-17	0
3/4 7-18	0
3/4 7-19	0
3/4 7-20	1
3/4 7-21	1
3/4 7-22	0
3/4 7-23	1
Insert to pg. 3/4 7-23	0
3/4 7-24	0
3/4 7-25	1
Insert to pg. 3/4 7-25	0
3/4 7-26	1
Insert to pg. 3/4 7-26	1
3/4 7-27	1
Insert to pg. 3/4 7-27	1
3/4 7-28	1
Insert A&B to page 3/4 7-28	1
3/4 7-29	0
3/4 8-1	0
Insert A to pg. 3/4 8-1	0
Insert B to pg. 3/4 8-1	0
3/4 8-2	0
Insert to pg. 3/4 8-2	0
3/4 8-3	0
Insert to pg. 3/4 8-3	0
3/4 8-4	0
3/4 8-5	0
Notes to pg. 3/4 8-5	0
3/4 8-6	0
3/4 8-7	0
3/4 8-8	0
Insert A to pg. 3/4 8-8	0

HOPE CREEK GENERATING STATION
DRAFT TECHNICAL SPECIFICATIONS

LIST OF EFFECTIVE PAGES

Pages	Revision Numbers
3/4 8-9	0
Insert A to pg. 3/4 8-9	0
Insert B to pg. 3/4 8-9	0
3/4 8-10	0
Insert A to pg. 3/4 8-10	0
Insert B to pg. 3/4 8-10	0
3/4 8-11	0
3/4 8-12	0
Insert to pg. 3/4 8-12	0
3/4 8-13	0
Insert to pg. 3/4 8-13	0
3/4 8-14	0
Insert to pg. 3/4 8-14	0
3/4 8-15	0
3/4 8-16	0
3/4 8-17	0
3/4 8-18	0
Insert to pg. 3/4 8-18	0
3/4 8-19	0
3/4 8-20 Sheet 1	0
3/4 8-20 Sheet 2	0
3/4 8-20 Sheet 3	0
3/4 8-20 Sheet 4	0
3/4 8-20 Sheet 5	0
3/4 8-20 Sheet 6	0
3/4 8-20 Sheet 7	0
3/4 8-21	0
3/4 8-22 Sheet 1	0
3/4 8-22 Sheet 2	0
3/4 8-22 Sheet 3	0
3/4 8-22 Sheet 4	0
3/4 8-22 Sheet 5	0
3/4 8-23	0
3/4 9-1	0
3/4 9-2	0
3/4 9-3	0
3/4 9-4	0
3/4 9-5	0
3/4 9-6	0
3/4 9-7	0
3/4 9-8	0

HOPE CREEK GENERATING STATION
DRAFT TECHNICAL SPECIFICATIONS

LIST OF EFFECTIVE PAGES

Pages	Revision Numbers
3/4 9-9	0
3/4 9-10	0
3/4 9-11	0
3/4 9-12	0
3/4 9-13	0
3/4 9-14	0
3/4 9-15	0
3/4 9-16	0
3/4 9-17	0
3/4 10-1	0
3/4 10-2	0
3/4 10-3	0
3/4 10-4	0
3/4 10-5	0
3/4 10-6	0
3/4 11-20	0
Bases for Section 3.0 and 4.0	0
Note to pg. B3.0&4.0	0
B3/4 0-1	0
B3/4 0-2	0
B3/4 0-3	0
B3/4 1-1	0
B3/4 1-2	0
Insert A to pg. B3/4 1-2	0
B3/4 1-3	0
B3/4 1-4	0
Insert to pg. B3/4 1-4	0
B3/4 2-1	0
B3/4 2-2	0
B3/4 2-3	0
B3/4 2-4	0
B3/4 2-5	0
B3/4 3-1	0
B3/4 3-2	0
B3/4 3-3	0
B3/4 3-4	0
B3/4 3-5	0
B3/4 3-6	0
Insert to pg. B3/4 3-6	0
B3/4 3-7	0

HOPE CREEK GENERATING STATION
DRAFT TECHNICAL SPECIFICATIONS

LIST OF EFFECTIVE PAGES

Pages	Revision Numbers
B3/4 4-1	0
Insert B to pg. B3/4 4-1	0
B3/4 4-2	0
B3/4 4-3	0
B3/4 4-4	0
Insert to pg. B3/4 4-4	0
B3/4 4-5	0
Insert A to pg. B3/4 4-5	0
B3/4 4-6	0
B3/4 4-7	0
B3/4 4-8	0
B3/4 5-1	0
B3/4 5-2	0
B3/4 6-1	0
Insert to pg. B3/4 6-1	0
B3/4 6-2	0
B3/4 6-3	0
B3/4 6-4	0
B3/4 6-5	0
Insert to pg. B3/4 6-5	0
B3/4 6-6	0
B3/4 7-1	0
B3/4 7-2	0
Insert to pg. B3/4 7-2	0
B3/4 7-3	0
B3/4 7-4	0
Insert to pg. B3/4 7-4	0
B3/4 7-5	0
B3/4 8-1	0
B3/4 8-2	0
B3/4 8-3	0
B3/4 9-1	0
B3/4 9-2	0
B3/4 10-1	0
B3/4 11-5	0
Section 5.0	0
5-1	0
5-2	0
5-3	0
5-4	0
5-5	0

HOPE CREEK GENERATING STATION
DRAFT TECHNICAL SPECIFICATIONS

LIST OF EFFECTIVE PAGES

Pages	Revision Numbers
5-6	0
Section 6.0	0
6-1	0
6-2	0
6-3	0
6-4	0
6-5	0
6-6	0
6-7	0
6-8	0
6-9	0
6-10	0
6-11	0
6-12	0
6-13	0
6-14	0
6-15	0
6-16	0
6-17	0
6-18	0
6-19	0
Insert A,B&C to page 6-19	0
6-20	0
6-21	0
6-22	0
6-23	0
6-24	0
6-25	0
6-26	0
Insert B to pg. 6-26	0
6-27	0
6-28	0
6-29	0

ATTACHMENT II

REVISED HCGS DRAFT TECHNICAL SPECIFICATION PAGES

INSERT TO PG. 3/4 3-86:

4.3.7.7 The Traversing In-core Probe (TIP) system shall be demonstrated OPERABLE within 72 hours prior to use for the applicable monitoring or calibration functions by:

a. Verifying normalization of each of the required detector outputs during updates of the associated base TIP distribution data.

b. Verifying TIP system calibration when the manual backup method is being employed.

Rev. 1

REACTOR COOLANT SYSTEM

JET PUMPS

LIMITING CONDITION FOR OPERATION

3.4.1.2 All jet pumps shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1 and 2.

ACTION:

With one or more jet pumps inoperable, be in at least HOT SHUTDOWN within 12 hours.

SURVEILLANCE REQUIREMENTS

4.4.1.2 Each of the above required jet pumps shall be demonstrated OPERABLE prior to THERMAL POWER exceeding 25% of RATED THERMAL POWER and at least once per 24 hours by determining recirculation loop flow, total core flow and diffuser-to-lower plenum differential pressure for each jet pump and verifying that no two of the following conditions occur when the recirculation pumps are operating ~~at the same speed.~~ In accordance with Specification 3.4.1.3

a. The indicated recirculation loop flow differs by more than 10% from the established pump speed-loop flow characteristics.

b. The indicated total core flow differs by more than 10% from the established total core flow value derived from recirculation loop flow measurements.

c. The indicated diffuser-to-lower plenum differential pressure of any individual jet pump differs from the established patterns by more than 10%.

CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT LEAKAGE

LIMITING CONDITION FOR OPERATION

3.6.1.2 Primary containment leakage rates shall be limited to:

a. An overall integrated leakage rate of less than or equal to:

1. L_a, ~~(0.050)~~ 0.5 percent by weight of the containment air per 24 hours at P_a, ~~(40.4)~~ psig, ~~or~~ (Later scf/day)(Later lbs./day)

INSERT A

~~2. L_t, { 0.354 } percent by weight of the containment air per 24 hours at a reduced pressure of P_t, { 24.1 } psig.~~ 48.1

b. A combined leakage rate of less than or equal to 0.60 L_a for all penetrations and all valves ~~listed in Table 3.6.3-1~~, except for main steam ~~line~~ isolation valves* ~~(and valves which are hydrostatically tested per Table 3.6.3-1)~~, subject to Type B and C tests when pressurized to P_a, ~~(40.4)~~ 48.1 psig.

c. *Less than or equal to ~~(11.5)~~ {46} scf per hour for ~~(any one)~~ {all four} main steam line{s} through the} isolation valve{s} when tested ~~at (P_t,) (20.2) psig~~ per ASME Section XI.

~~d. A combined leakage rate of less than or equal to (1 gpm times the total number of) (3 gpm for all) (ECCS and RCIC) containment isolation valves in hydrostatically tested lines which penetrate the primary containment, when tested at (1.10) Pa, (44.44) psig.~~

APPLICABILITY: When PRIMARY CONTAINMENT INTEGRITY is required per Specification 3.6.1.1.

ACTION:

With:

INSERT B

~~a. The measured overall integrated primary containment leakage rate exceeding 0.75 L_a or 0.75 L_t, as applicable, or~~

b. The measured combined leakage rate for all penetrations and all valves ~~listed in Table 3.6.3-1~~, except for main steam line isolation valves* ~~(and valves which are hydrostatically tested per Table 3.6.3-1)~~, subject to Type B and C tests exceeding 0.60 L_a, or

c. The measured leakage rate exceeding ~~(11.5)~~ {46} scf per hour for ~~(any one)~~ {all four} main steam line{s} through the} isolation valve{s}, ~~or~~

~~d. The measured combined leakage rate for all (ECCS and RCIC) containment isolation valves in hydrostatically tested lines which penetrate the primary containment exceeding (1 gpm times the total number of such valves) (3 gpm);~~

restore:

INSERT C

~~a. The overall integrated leakage rate(s) to less than or equal to 0.75 L_a or 0.75 L_t, as applicable, and~~

*Exemption ~~to~~ from Appendix "J" of 10 CFR 50.

INSERT A to Pg. 3/4 6-8:

3.6.1.2.b. A combined leakage rate of less than or equal to 0.60 La for all mechanical and electrical penetrations listed in Table 3.6.1.1-1 and piping penetration isolation valves listed as Type C, Gas Tested in Table 3.6.1.2-1, subject to Type B and C tests and pressurized to Pa (48.1) psig.

c. Exceptions to Type C Testing:

1) Main steam penetration isolation valves are sealed with a gas system that maintains an in-leakage. (The seal system does not include the main steam drain penetration isolation valves.)

2) Feedwater penetration isolation valves are sealed with a water seal system.

3) Piping penetration isolation valves that communicate with the containment and, terminate below the suppression chamber water level are Type C tested with water as a medium.

d. Less than or equal to 11.5 scf per hour leakage for each main steam containment isolation valve, when tested at 5 psig (seal system Δ P).

e. Less than or equal to (later) scf per hour leakage for each feedwater isolation valve when tested with gas at Pa (48.1) psig.

1) Less than or equal to 1 gpm water leakage for each feedwater header seal boundary. Feedwater seal boundary system leakage is to be included in the 10 gpm, Type C liquid leakage.

f. A combined liquid leakage rate of less than or equal to 10 gpm (total) for all containment penetration isolation valves that communicate with the containment below the suppression chamber water level and are Type C water tested at Pa (48.1) psig plus equivalent torus water head when the valve is located at an elevation below suppression chamber water level.

INSERT B to Pg. 3/4 6-8:

a. The measured overall integrated (ILRT) containment leakage rate exceeding 0.75 La, or

b. The measured combined leakage rate for all mechanical and electrical penetrations and penetration valves listed as Type B in Table 3.6.1.1-1 and as Type C in Table 3.6.1.2-1 (except for main steam, feedwater and Type C valves water tested) subject to containment leakage tests, exceeding 0.60 La, or

c. The measured leakage rate exceeding (11.5) scf per hour for any one main steam isolation valve, or

d. The measured leakage rate exceeding (later) scf per hour for any one feedwater isolation valve, or

e. The measured combined leakage rate for all Type C containment isolation valves with submerged piping, and feedwater seal boundary valves, tested with water, exceeding 10 GPM.

INSERT C to Pg. 3/4 6-8:

a. The overall integrated leakage rate to less than or equal to 0.75 La, and

b. The combined leakage rate for all electrical and mechanical penetrations listed in Table 3.6.1.1-1 and Type C gas tested valves in Table 3.6.1.2-1, except for main steam, feedwater and valves which are Type C water tested per Table 3.6.1.2-1, subject to Type B and C tests to less than or equal to 0.60 La, and

c. The leakage rate to less than or equal to (11.5) scf per hour for any one main steam isolation valve, and

d. The leakage rate to less than or equal to (later) scf per hour for any one feedwater isolation valve, and

e. The combined leakage rate for all Type C containment isolation valves with submerged piping, and feedwater seal boundary valves, tested with water, exceeding 10 GPM,

prior to increasing reactor coolant system temperature above 200°F.

SURVEILLANCE REQUIREMENTS (Continued)

d. Type B and C tests shall be conducted with gas at P_a, ~~(40.4)~~ 46.1 psig*, at intervals no greater than 24 months except for tests involving:

1. Air locks,

2. Main steam line isolation valves,

3. Valves pressurized with fluid from a seal system.

~~(3. Penetrations using continuous leakage monitoring systems;)~~

~~(4. Valves pressurized with fluid from a seal system;)~~

~~4.~~ 3. ~~(ECCS and RCIC)~~ Containment isolation valves in hydrostatically tested lines which penetrate the primary containment, and

~~5.~~ 4. Purge supply and exhaust isolation valves with resilient material seals.

e. Air locks shall be tested and demonstrated OPERABLE per Surveillance Requirement 4.6.1.3.

f. Main steam line isolation valves shall be leak tested at least once per 18 months.

~~(g. Type B periodic tests are not required for penetrations continuously monitored by the Containment Penetration Pressurization System, provided the system is OPERABLE per Specification 3.6.1.9.)~~

~~h. Type B tests for penetrations employing a continuous leakage monitoring system shall be conducted at P_a, (40.4) psig, at intervals no greater than once per 3 years.~~ 46.1

~~(i. Leakage from isolation valves that are sealed with fluid from a seal system may be excluded, subject to the provisions of Appendix J, Section III.C.3, when determining the combined leakage rate provided the seal system and valves are pressurized to at least 1.10 P_a, (44.4) psig, and the seal system capacity is adequate to maintain system pressure for at least 30 days.)~~

~~g.~~ 5. ~~(ECCS and RCIC)~~ Containment isolation valves (and seal boundary valves in hydrostatically tested lines which pentrate the primary containment shall be leak tested at least once per 18 months. or seal penetrations from

~~h.~~ 6. Purge supply and exhaust isolation valves with resilient material seals shall be tested and demonstrated OPERABLE per Surveillance Requirements 4.6.1.8.~~1 and 4.6.1.8.4.)~~ and 4.6.1.8.3
2

i. The provisions of Specification 4.0.2 are not applicable to 24 month and 40 ± 10 month surveillance intervals.

*Unless a hydrostatic test is required per Table ~~3.6.2-1~~ 3.6.1.2-1.

Table 3.6.1.2-1

Containment Isolation Leak Testing

Penetration	System	Valves(s)	Notes
P1A	Main Steam	AB28, AB32, AB59, KP10	1
P1B	Main Steam	AB29, AB33, AB60, KP09	1
P1C	Main Steam	AB30, AB34, AB05, AB61, KP08	1
P1D	Main Steam	AB31, AB35, AB62, KP07	1
P2A	Feedwater	AE03, AE02	2
P2B	Feedwater	AE07, AE06	2
P3	RHR, Shutdown Cooling Suction	BC71, BC164 BC-PSV-4425	3
P4A	RHR, Shutdown Cooling Return	BC14, BC13, BC118	3
P4B	RHR, Shutdown Cooling Return	BC111, BC110, BC117	3
P5A	Core Spray	BE02, BE03, BE72	4
P5B	Core Spray	BE06, BE07, BE71, BJ01	4
P6A	RHR, LPCI	BC05, BC04, BC122	4
P6B	RHR, LPCI	BC17, BC16, BC120	4
P6C	RHR, LPCI	BC114, BC113, BC119	4
P6D	RHR, LPCI	BC102, BC101, BC121,	4
P7	HPCI, Turbine Steam	FD01, FD02, FD51	3

Table 3.6.1.2-1 (Cont'd)

Containment Isolation Leak Testing

Penetration	System	Valves(s)	Notes
P8A	Chilled Water, Drywell	GB82, GB46, GB-PSV-9523A	3
P8B	Chilled Water, Drywell	GB81, GB48, GB-PSV-9522A	3
P9	RWCU Pump Supply	BG01, BG02	3
P10	RHR, Reactor Head Spray	BC21, BC20	3
P11	RCIC, Turbine Steam	FC01, FC02, FC48	3
P12	Main Steam Drain	AB39, AB40	3
P17	Sampling, Reactor Recirc.	BB-SV-4310, BB-SV-4311	3
P18	SBLC	BH29, BH28, BH54	3
P19	Recirc. Pump Seal Water	BB43, BF98	3
P20	Recirc. Pump Seal Water	BB47, BF99	3
P22	Drywell Purge Inlet	GS09, GS20, GS21, GS22, GS23, GS04, GS05	3
P23	Drywell Purge Outlet	GS24, GS26, GS25, GS02, GS03	3
P24A	RHR, Containment Spray	BC19, BC18	4
P24B	RHR, Containment Spray	BC115, BC116	4
P25	Drywell Sump Discharge	HB05, HB06	3
P26	Drywell Sump Discharge	HB45, HB46	3
P27	Service Air Drywell	KA39, KA38	3

Table 3.6.1.2-1 (Cont'd)

Containment Isolation Leak Testing

Penetration	System	Valves(s)	Notes
P28A	Instr. Gas Drywell	KL26, KL35	3
P28B	Instr. Gas Drywell	KL28, KL27	3
P29	RACS Supply	ED20, ED19	3
P30	RACS Return	ED22, ED21	3
P31	Breathing Air Drywell	KG16, KG34	3
P34A	Tip Probe Guide Tube	SE026, SE021	3
P34B	Tip Probe Guide Tube	SE027, SE022	3,8
P34C	Tip Probe Guide Tube	SE028, SE023	3,8
P34D	Tip Probe Guide Tube	SE029, SE024	3,8
P34E	Tip Probe Guide Tube	SE030, SE025	3,8
P34G	Tip Purge	SE06, SE04	3
P38A	Chilled Water Drywell	GB83, GB70, GB-PSV-9522B	3
P38B	Chilled Water Drywell	GB84, GB21, GB-PSV-9523B	3
P39	Instr. Gas Drywell Suction	KL01, KL02, KL49	3
P201	HPCI Turbine Exhaust	FD06, FD04, FD07	5
P202	HPCI Pump Suction	BJ09	5
P203	HPCI Min. Flow	BJ16	5
P204	Vacuum Network	FC07, FD10	3
P207	RCIC Turbine Exhaust	FC05, FC03, FC06	5

Table 3.6.1.2-1 (Cont'd)

Containment Isolation Leak Testing

Penetration	System	Valves(s)	Notes
P208	RCIC Pump Suction	BD03	5
P209	RCIC Min. Flow	BD07	5
P210	RCIC Vac. Pump Disch.	FC11, FC10	5
P211A	RHR Pump Suction	BC01	5
P211B	RHR Pump Suction	BC06	5
P211C	RHR Pump Suction	BC103	5
P211D	RHR Pump Suction	BC98	5
P212A	RHR Torus Cooling	BC26, BC27, BC28, BC31, BC34, BC260,	5
		BC-PSV-025B	6
		BC-PSV-025D	6
P212B	RHR Torus Cooling	BC124, BC125, BC126, BC128, BC131, BC206,	5
		BC-PSV-025A	6
		BC-PSV-025C	6
P213A	RHR Thermal Relief	PSV4431A	6
P213B	RHR Thermal Relief	PSV4431B	6
P214A	RHR Torus Spray	BC15	3
P214B	RHR Torus Spray	BC112	3
P216A	Core Spray Pump Suction	BE19	5
P216B	Core Spray Pump Suction	BE20	
P216C	Core Spray Pump Suction	BE18	
P216D	Core Spray Pump Suction	BE17	

Table 3.6.1.2-1 (Cont'd)

Containment Isolation Leak Testing

Penetration	System	Valves(s)	Notes
P217A	Core Spray Test & Min. Flow	BE26, BE36	5
P217B	Core Spray Test & Min. Flow	BE?? , BE35	5
P219	Cont. Purge & Vent	GS28, GS27, GS76 GS80, GS-PSV-5030 GS07, GS06	3
P220	Cont. Purge & Vent	GS22, GS20, GS38, GS-PSV-5032, GS10, GS8	3
P222	Torus Cleanup	EE02, EE01	5
P223	Torus Cleanup	EE03, EE04	5
P227	Post Accident Sampling Return	RC-SV-0643A, RC-SV-0643B	3
J3B	H_2/O_2 Analyzer Sample	GS31, GS32	3
J5A	RCPB Gas Sample	SK8, SK9	3
J6A	Drywell Pressure Instr. Root Valve	BB563	7
J7A	Drywell Pressure Instr. Root Valve	BB565	7
J7D	H_2/O_2 Analyzer Gas Inlet	GS33, GS34	3
J7E	Post Accident Gas Sample	RC-SV-0730A, RC-SV-0730B	3
J8C	RCPB Leak Detection	SK05, SK06	3
J8D	Drywell Pressure Instr. Root Valve	BB564	7
J9E	H_2/O_2 Analyzer Gas Sample	GS45, GS46	3

Table 3.6.1.2-1 (Cont'd)

Containment Isolation Leak Testing

Penetration	System	Valves(s)	Notes
J10C	H_2/O_2 Analyzer Gas Sample	GS47, GS48	3
J10D	Drywell Pressure Instr. Root Valve	BB566	7
J10E	Post Accident Gas Sample	RC-SV-0731A, RC-SV-0731B	3
J36C	ILRT Test Lines	GP120, GP122	3
J36D	ILRT Test Lines	GP01, GP02	3
J37F	Jet Pump, Liquid Sample	RC-SV-8903A, RC-SV-8903B	3
J201	H_2/O_2 Analyzer Sample Return	GS51, GS52	3
J202	H_2/O_2 Analyzer Sample Return	GS42, GS43	3
J206	Post Accident Gas Sample	RC-SV-0728A, RC-SV-0728B	3
J207	Supp. Chamber Press. Instr. Root	GS44	7
J208	Supp. Chamber Press. Instr. Root	GS87	7
J209	ILRT Test Lines Level Inst. Root Valve	GP04, GP05 BJ500	3 7
J210	H_2/O_2 Gas Sample	GS40, GS41	3
J211	Instr. Air to Torus	KL19, KL18	3
J212	H_2/O_2 Analyzer Sample	GS49, GS50	3
J217	Supp. Chamber Level Inst. Root Valve	BJ502	7

Table 3.6.1.2-1 (Conc'd)

Containment Isolation Leak Testing

Penetration	System	Valves(s)	Notes
J219	Supp. Chamber Level Instr. Root Valve	BJ503	7
J220	Post Accident Gas Return	RC-SV-0707A, RC-SV-0707B	3
J221	Post Accident Gas Sample	RC-SV-0729A, RC-SV-0729B	3
J228	Supp. Chamber Level Instr. Root Valve	BJ501	7

Note: 1. Main Steam Isolation Valves are sealed with a seal system that maintains positive 5 PSIG P over reactor pressure. Leakage is in-leakage and is not added to 0.60a allowable leakage.

2. Feedwater isolation valves are sealed with a water seal from the HPCI and RCIC system. Isolation valves are gas type C tested to evaluate disc/seat leakage condition. Leakage is not added to 0.60a allowable leakage. The water seal boundary valves are tested with water at Pa (48.1) psig to ensure seal boundary will prevent by-pass leakage. Seal boundary liquid leakage will be added to the Type C, water test leakage.

3. Containment isolation valve, Type C gas test at Pa (48.1) psig. Leakage added to 0.60La allowable leakage.

4. ECCS isolation valve, Type C gas test. Leakage test to determine valve leakage condition. Leakage is not added to 0.60La allowable leakage.

5. Containment isolation valve, Type C water test at Pa (48.1) psig Δ P. Leakage added to 10 gpm allowable leakage.

6. Containment isolation is discharge nozzle or relief valve, leakage tested during Type A test.

7. Drywell and suppression chamber pressure and level instrument root valves, leakage tested during Type A.

8. Explosive shear valves (SE21 though SE-25) not Type C tested.

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CONTAINMENT SYSTEMS

DRYWELL AND SUPPRESSION CHAMBER PURGE SYSTEM ~~(Optional)~~

LIMITING CONDITION FOR OPERATION

3.6.1.8 The drywell and suppression chamber ~~(6) inch~~ purge supply and exhaust isolation valves shall be OPERABLE and

~~a.~~ Each ~~(20)~~ 24- and 26- inch purge valve shall be sealed closed.*

~~b. Each (6) inch purge valve may be open for purge system operation for inerting, deinerting and pressure control.~~

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 3.

INSERT A

ACTION:

~~a. With a (20) inch drywell and suppression chamber purge supply and/or exhaust isolation valve(s) open or not sealed closed, close and/or seal the (20) inch valves or otherwise isolate the penetration within four hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.~~

~~b. With a (6) inch drywell and suppression chamber purge supply and/or exhaust isolation valve(s) inoperable or open for more than (90) hours per 365 days for other than inerting, deinerting or pressure control, close the open (6) inch valves or otherwise isolate the penetrations within four hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.~~

~~a~~ b. With a drywell and suppression chamber purge supply and/or exhaust isolation valve~~(s)~~ with resilient material seals having a measured leakage rate exceeding the limit of Surveillance Requirements 4.6.1.8.2 ~~and/or 4.6.1.8.4~~, restore the inoperable valve~~(s)~~ to OPERABLE status within 24 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.8.1 Each ~~(20)~~ 24- and 26- inch drywell and suppression chamber purge supply and exhaust isolation valve shall be verified to be sealed closed at least once per 31 days.

INSERT B

~~4.6.1.8.2 At least once per 6 months on a STAGGERED TEST BASIS each sealed closed (20) inch drywell and suppression chamber purge supply and exhaust isolation valve with resilient material seals shall be demonstrated OPERABLE by verifying that the measured leakage rate is less than or equal to 0.05 L_a when pressurized to P_a.~~

~~4.6.1.8.3 At least once per 92 days each (20) inch drywell and suppression chamber purge supply and exhaust isolation valve with resilient material seals shall be demonstrated OPERABLE by verifying that the measured leakage rate is less than or equal to (0.01) 0.05 L_a when pressurized to P_a.~~

* The sealed closed requirement does not apply to the inboard 26 inch drywell purge outlet valve which must be opened, as required, along with the 2 inch vent line bypass valve for pressure control purposes.

INSERT A TO PG. 3/4 6-18:

a. With a 26 inch drywell or a 24 inch suppression chamber purge supply and/or exhaust isolation valve open or not sealed closed, close and/or seal the valve closed or otherwise isolate the penetration within four hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours. This ACTION does not apply to the 26 inch drywell purge outlet valve when opened for pressure control purposes.

INSERT B TO PG. 3/4 6-18:

4.6.1.8.2 At least once per 6 months, on a STAGGERED TEST BASIS, each drywell and suppression chamber purge supply and exhaust isolation valve with resilient material seals shall be demonstrated OPERABLE by verifying that the measured leakage rate of any penetration isolation boundary is less than or equal to 0.05La when pressurized to Pa (48.1) PSIG.

4.6.1.8.3 Each operated drywell and suppression chamber purge supply and exhaust isolation valve, with resilient material seals, shall be demonstrated OPERABLE within 24 hours after each closing of the valve except when being used for multiple cycles then at least once per 72 hours by verifying that the measured leakage rate for the penetration leakage boundary is less than or equal to 0.05La when pressurized to Pa (48.1) PSIG.

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Valve Function and Number	Maximum Isolation time (seconds)
11. Group II - Recirculation Pump System	
a) Recirculation Pump Seal Water Isolation Valves	
Loop A: HV-3800A (BF-V098)	29
Loop B: HV-3800B (BF-V099)	29
12. Group 12 - Containment Atmosphere Control System	
a) Drywell Purge Supply Isolation Valves	
HV-4956 (GS-V009) ~~(B)~~ A	9
HV-4979 (GS-V021) ~~(B)~~ A	9
b) Drywell Purge Exhaust Isolation Valves	
HV-4951 (GS-V025)	15
HV-4950 (GS-V026) ~~(B)~~ A	9
HV-4952 (GS-V024) ~~(B)~~ A	9
c) Suppression Chamber Purge Supply Isolation Valves	
HV-4980 (GS-V020) ~~(B)~~ A	9
HV-4958 (GS-V022) ~~(B)~~ A	9
d) Suppression Chamber Purge Exhaust Isolation Valves	
HV-4963 (GS-V076)	15
HV-4962 (GS-V027) ~~(B)~~ A	9
HV-4964 (GS-V028) ~~(B)~~ A	9
e) Nitrogen Purge Isolation Valves	
HV-4974 (GS-V053)	29
HV-4978 (GS-V023)	9
13. Group 13 - Hydrogen/Oxygen (H2/02) Analyzer System	
a) Drywell H2/02 Analyzer Inlet Isolation Valves	
Loop A: HV-4955A (GS-V045)	29
HV-4983A (GS-V046)	29
HV-4984A (GS-V048)	29
HV-5019A (GS-V047)	29
Loop B: HV-4955B (GS-V031)	29
HV-4983B (GS-V032)	29
HV-4984B (GS-V034)	29
HV-5019B (GS-V033)	29

Valve Function and Number

e. Bypass Valves on LPCI Injection Lines

HV-F146A	(BC-V119)
HV-F146B	(BC-V120)
HV-F146C	(BC-V121)
HV-F146D	(BC-V122)

f. Bypass Valves on Shutdown Cooling Return Lines

HV-F122A	(BC-V117)
HV-F122B	(BC-F118)

7. Group 27 - Standby Liquid Control

HV-F006A	(BH-V028)
HV-F006B	(BH-V054)

8. Group 28 - Containment Atmosphere Control System

Suppression Chamber Vacuum Relief

HV-5031	(GS-V038)
HV-5029	(GS-V080)

9. Group 69 - TIP System

Explosive Shear Valves

SE-V021	SE-XV-J004B1 ~~(NA)~~
SE-V022	SE-XV-J004B2 ~~(NA)~~
SE-V023	SE-XV-J004B3 ~~(NA)~~
SE-V024	SE-XV-J004B4 ~~(NA)~~
SE-V025	SE-XV-J004B5 ~~(NA)~~

10. Group 29 - HPCI System

Suppression Pool Level Instrumentation Isolation

HV-4803	(BJ-V500)	~~(NA)~~
HV-4804	(BJ-V501)	~~(NA)~~
HV-4865	(BJ-V502)	~~(NA)~~
HV-4866	(BJ-V503)	~~(NA)~~

11. Group 30 - Post-Accident Sampling System

Liquid Sampling

RC-SV-0643A
RC-SV-0643B
RC-SV-8903A
RC-SV-8903B

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Valve Function and Number

7. Group 37 - HPCI System

   HPCI Turbine Exhaust
   FD-V004

8. Group 38 - RCIC System

   RCIC Turbine Exhaust FC-V003
   Vacuum Pump Discharge FC-V010

9. Group 39 - RHR System

   a. Thermal Relief Valves

      Loop A BC-PSV-V025A ~~(1)~~
      Loop B BC-PSV-V025B ~~(1)~~
      Loop C BC-PSV-V025C ~~(1)~~
      Loop D BC-PSV-V025D ~~(1)~~

   b. Jockey Pump Discharge Check Valves

      Loops A & C (BC-V206)
      Loops B & D (BC-V260)

   c. RHR Heat Exchanger Thermal Relief Valves

      BC-PSV-4431A
      BC-PSV-4431B

   d. RHR Shutdown Cooling Suction Thermal Relief Valve

      BC-PSV-4425

   e. LPCI Injection Line Check Valves

      HV-F041A (BC-V114)
      HV-F041B (BC-V017)
      HV-F041C (BC-V102)
      HV-F041D (BC-V005)

   f. Shutdown Cooling Return Line Check Valves

      HV-F050A (BC-V111)
      HV-F050B (BC-V014)

Valve Function Number

10. Group 40 - Core Spray System

a. Thermal Relief Valves

Loop A&C BE-PSV-F012A
Loop B&D BE-PSV-F012B

b. Core Spray Injection Line Check Valves

HV-F006A (BE-V006)
HV-F006B (BE-V002)

11. Group 41 - Drywell Pressure Instrumentation

BB-V563
BB-V564
BB-V565
BB-V566

12. Group 42 - Integrated Leak Rate Testing System

GP-V001 GP-V004
GP-V002 GP-V005
GP-V120
GP-V122

13. Group 43 - Suppression Chamber Pressure Instrumentation

GS-V044 ~~(AO)~~
GS-V087 ~~(AO)~~

14. Group 44 - Chilled Water System Thermal Relief Valves

GB-PSV-9522A
GB-PSV-9522B
GB-PSV-9523A
GB-PSV-9523B

15. Group 45 - Recirculation Pump Seal Purge Line Valves

BB-V043
BB-V047

D. Excess Flow Check Valves ~~(AO)~~

1. Group 46 - Nuclear Boiler

BB-XV-3649
AB-XV-3666A through D
AB-XV-3667A through D
AB-XV-3668A through D
AB-XV-3669A through D

Valve Function and Number

7. Group 52 - Residual Heat Removal System

   BC-XV-4411A thru D
   BC-XV-4429A thru D

8. Group 53 - Core Spray System

   BE-XV-F018A and B

9. Group 54 - High Pressure Coolant Injection System

   FD-XV-4800A thru D

Notes:
(A) Surveillances to be performed per Technical Specifications Surveillance Requirement 4.6.1.8.1.

~~(A) Type C - Test not required~~

~~(A) (B)~~ ~~During Operational Conditions 1, 2, and 3, these containment purge valves must be secured closed and verified closed every 24 hours. Valves GS-V024 and GS-V028 may be opened on an intermittent basis under Administrative Control.~~

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CONTAINMENT SYSTEMS

3/4.6.6 PRIMARY CONTAINMENT ATMOSPHERE CONTROL

~~DRYWELL AND SUPPRESSION CHAMBER~~ CONTAINMENT HYDROGEN RECOMBINER SYSTEMS ~~(Optional)~~

LIMITING CONDITION FOR OPERATION

3.6.6.1 Two independent ~~drywell and suppression chamber~~ containment hydrogen recombiner systems shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1 and 2.

ACTION:

With one ~~drywell and/or suppression chamber~~ containment hydrogen recombiner system inoperable, restore the inoperable system to OPERABLE status within 30 days or be in at least HOT SHUTDOWN within the next 12 hours.

SURVEILLANCE REQUIREMENTS

4.6.6.1 Each ~~drywell and suppression chamber~~ containment hydrogen recombiner system shall be demonstrated OPERABLE:

a. At least once per 6 months by verifying during a ~~reaction chamber gas~~ recombiner system functional test that the minimum ~~(heater sheath)~~ temperature increases to greater than or equal to ~~(700)~~ 1150 °F within ~~(90)~~ 120 minutes. ~~(Upon reaching (700)°F, increase the power setting to maximum power for (2) minutes and verify that the power meter reads greater than or equal to (60) kW.)~~ Maintain ≥ ~~(700)~~ 1150 °F for at least ~~(4)~~ 2 hours.

b. At least once per 18 months by:

1. Performing a CHANNEL CALIBRATION of all ~~(control room)~~ recombiner control panel ~~(operating)~~ instrumentation and control circuits.

2. Verifying the integrity of all heater electrical circuits by performing a resistance to ground test within 30 minutes following the above required functional test. The resistance to ground for any heater phase shall be greater than or equal to ~~(10,000) ohms.~~ 1 megohm

~~(3. Verifying through a visual examination that there is no evidence of abnormal conditions within the recombiner enclosure; i.e, loose wiring or structural connections, deposits of foreign materials, etc.)~~

c. By measuring the system leakage rate:

INSERT A →

1. ~~As a part~~ of the overall integrated leakage rate test required by Specification 3.6.1.2, or

2. By measuring the leakage rate of the system outside of the containment isolation valves at Pa, ~~(40.4)~~ 48.1 psig, on the schedule required by Specification 4.6.1.2, and including the measured leakage as a part of the leakage determined in accordance with Specification 4.6.1.2.

Insert A to pg. 3/4 6-52:

1. As part of the Leakage Reduction Program for Reactor Coolant and Radioactive Gas Systems outside containment that must function during an accident, and,

2. Taking corrective maintenance actions to eliminate system external leakage and maintain system internal leakage to as low as practical levels.

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3/4.7.7 FIRE SUPPRESSION SYSTEMS

FIRE SUPPRESSION WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.7.1 The fire suppression water system shall be OPERABLE with:

a. Two OPERABLE fire suppression pumps, one electric motor driven and one diesel engine driven, each with a capacity of 2500 gpm, with their discharge aligned to the fire suppression header,

b. Two Separate fire water supplies, each with a minimum contained volume of 328,000 gallons, and

c. An OPERABLE flow path capable of taking suction from either or both of the supply tank ~~and the ____ tank~~ and transferring the water through distribution piping with OPERABLE sectionalizing control or isolation valves to the yard hydrant curb valves, the last valve ahead of the water flow alarm device on each sprinkler or hose standpipe and the last valve ahead of the deluge valve on each deluge or spray system required to be OPERABLE per Specifications 3.7.7.2 and 3.7.7.4. ~~and 3.7.7.6).~~

APPLICABILITY: At all times.

ACTION:

a. With one fire pump and/or one water supply inoperable, restore the inoperable equipment to OPERABLE status within 7 days or, in lieu of any other report required by specification 6.9.1, prepare and submit a special report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the plans and procedures to be used to restore the inoperable equipment to OPERABLE status or to provide an alternate backup pump or supply. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

b. With the fire suppression water system otherwise inoperable, establish a backup fire suppression water system within 24 hours.

SURVEILLANCE REQUIREMENTS

4.7.7.1.1 The fire suppression water system shall be demonstrated OPERABLE:

a. At least once per 7 days by verifying the minimum contained water supply volume.

b. At least once per 31 days ~~(on a STAGGERED TEST BASIS)~~ by starting ~~(each)~~ the electric motor driven fire suppression pump and operating it for at least 15 minutes ~~on recirculation flow.) with flow through a test manifold.~~ to test the operability of the pump to insure the proper static head in the sensing line.

c. At least once per 31 days by verifying that each valve, manual, power operated or automatic, in the flow path that is not electrically supervised is in its correct position.

SURVEILLANCE REQUIREMENTS (Continued)

d. At least once per 12 months by performance of a system flush.

e. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel.

f. At least once per 18 months by performing a system functional test which includes simulated automatic actuation of the system throughout its operating sequence, and:

1. Verifying that each automatic valve in the flow path actuates to its correct position,

2. Verifying that each fire suppression pump develops at least 2500 gpm at a system head of 288 feet, with flow through a test manifold.

3. Cycling each valve in the flow path that is not testable during plant operation through at least one complete cycle of full travel, and

4. Verifying that each fire suppression pump starts sequentially to maintain the fire suppression water system pressure greater than or equal to 100 psig.

g. At least once per 3 years by performing a flow test of the water system in accordance with Chapter 5, Section 11 of the Fire Protection Handbook, 15th Edition, published by the National Fire Protection Association, or National Fire Code NFPA-13, Appendix B, 1983 Edition.

4.7.7.1.2 The diesel driven fire suppression pump shall be demonstrated OPERABLE:

a. At least once per 31 days by:

1. Verifying the fuel storage tank contains at least 1357 gallons of fuel.

2. Starting the diesel driven pump from ambient conditions and operating for greater than or equal to 30 minutes ~~on with flow recirculation flow through a test manifold~~ to test the operability of the pump to insure the proper static head in the sensing line.

b. At least once per 92 days by verifying that a sample of diesel fuel from the fuel storage tank, obtained in accordance with ASTM-D270-~~75~~65 is within the acceptable limits specified in Table 1 of ASTM D975-~~77~~74 when checked for viscosity, water and sediment.

c. At least once per 18 months, ~~during shutdown,~~ by subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for the class of service.

PLANT SYSTEMS

SPRAY AND/OR SPRINKLER SYSTEMS

LIMITING CONDITION FOR OPERATION

3.7.7.2 The following spray and sprinkler systems shall be OPERABLE:

~~a. (Plant dependent - to be listed by name and location.)~~

~~b.~~ INSERT

~~c.~~

APPLICABILITY: Whenever equipment protected by the spray and/or sprinkler systems is required to be OPERABLE.

ACTION:

a. With one or more of the above required spray and/or sprinkler systems inoperable, within one hour establish a continuous fire watch with backup fire suppression equipment for those areas in which redundant systems or components could be damaged; for other areas, establish an hourly fire watch patrol.

b. The provisions of Specification 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.7.2 Each of the above required spray and sprinkler systems shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying that each valve, manual, power operated or automatic, in the flow path is in its correct position. that is not electrically supervised

b. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel.

c. At least once per 18 months:

1. By performing a system functional test which includes simulated automatic actuation of the system, and:

a) Verifying that the automatic valves in the flow path actuate to their correct positions on a ~~xxxxxxxxx~~ test signal, and

b) Cycling each valve in the flow path that is not ~~testable~~ accessible during plant operation through at least one complete cycle of full travel.

PLANT SYSTEMS

CO_2 SYSTEMS

LIMITING CONDITION FOR OPERATION

3.7.7.3 The following low pressure ~~and high pressure~~ CO_2 systems shall be OPERABLE:

~~a. (Plant dependent - to be listed by name and location.)(*)~~

~~b.~~ INSERT

~~c.~~

APPLICABILITY: Whenever equipment protected by the CO_2 systems is required to be OPERABLE.

ACTION:

a. With one or more of the above required CO_2 systems inoperable, within one hour establish a continuous fire watch with backup fire suppression equipment for those areas in which redundant systems or components could be damaged; for other areas, establish an hourly fire watch patrol.

b. The provisions of Specification 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.7.3.1 Each of the above required CO_2 systems shall be demonstrated OPERABLE at least once per 31 days by verifying that each valve, manual, power operated, or automatic, in the flow path is in its correct position.

4.7.7.3.2 Each of the above required low pressure CO_2 systems shall be demonstrated OPERABLE:

a. At least once per 7 days by verifying the CO_2 storage tank level to be greater than 55% and pressure to be greater than 275 psig, and

b. At least once per ~~18~~ 12 months by verifying:

1. The system, including associated ventilation system fire dampers and fire door release mechanisms, actuates, manually and automatically, upon receipt of a simulated actuation signal, and

2. Flow from each {accessible} nozzle during a "Puff Test."

~~(*Accessible nozzles.)~~

PLANT SYSTEMS

FIRE HOSE STATIONS

LIMITING CONDITION FOR OPERATION

3.7.7.~~5~~4 The fire hose stations shown in Table 3.7.7.~~5~~4-1 shall be OPERABLE.

APPLICABILITY: Whenever equipment in the areas protected by the fire hose stations is required to be OPERABLE.

ACTION:

a. With one or more of the fire hose stations shown in Table 3.7.7.~~5~~4-1 inoperable, provided gated wye(s) on the nearest OPERABLE hose station(s). One outlet of the wye shall be connected to the standard length of hose provided at the hose station. The second outlet of the wye shall be connected to a length of hose sufficient to provide coverage for the area left unprotected by the inoperable hose station. Where it can be demonstrated that the physical routing of the fire hose would result in a recognizable hazard to operating technicians, plant equipment, or the hose itself, the fire hose shall be stored in a roll at the outlet of the OPERABLE hose station. Signs shall be mounted above the gated wye(s) to identify the proper hose to use. The above ACTION shall be accomplished within 1 hour if the inoperable fire hose is the primary means of fire suppression; otherwise route the additional hose within 24 hours.

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.7.~~5~~4 Each of the fire hose stations shown in Table 3.7.7.~~5~~4-1 shall be demonstrated OPERABLE:

a. At least once per 31 days by a visual inspection of the fire hose stations accessible during plant operation to assure all required equipment is at the station.

b. At least once per ~~10~~ 12 months, ~~by:~~ for fire hose stations accessible during plant operation, by:

~~1. Visual inspection of the fire hose stations not accessible during plant operation to assure all required equipment is at the station.~~

1. Removing the hose for inspection and re-racking, and

2. Inspecting all gaskets and replacing any degraded gaskets in the couplings.

Insert A → C.

d. At least once per 3 years by:

1. Partially opening each hose station valve to verify valve OPERABILITY and no flow blockage.

2. Conducting a hose hydrostatic test at a pressure of 150 psig or at least 50 psig above the maximum fire main operating pressure, whichever is greater.

INSERT TO PG. 3/4 7-26:

c. At least once per 18 months for fire hose stations not accessible during plant operation, by:

1. Visual inspection of the fire hose stations to assure all required equipment is at the station.

2. Removing the hose for inspection and re-racking, and

3. Inspecting all gaskets and replacing any degraded gaskets in the couplings.

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TABLE 3.7.7.~~8~~4-1

FIRE HOSE STATIONS

~~LOCATION(*)~~	~~ELEVATION~~	HOSE RACK INDENTIFICATION

(INSERT SEE NEXT PAGE)

~~(*List all fire hose stations required to ensure the OPERABILITY of safety related equipment.)~~

INSERT TO PG. 3/4 7-27

LOCATION ELEVATION	COLUMN'	HOSE RACK IDENTIFICATION'
Reactor Building		
54'	W-14R	1AHR200
54'	W-23R	1BHR200
54'	P-23R	1CHR200
54'	P-14R	1DHR200
77'	W-14R	1EHR200
77'	W-24.2	1FHR200
77'	N-24.2	1GHR200
77'	V-14R	1HHR200
77'	R-23R	1BHR202
77'	V-18.9	1CHR202
77'	P-18.9	1DHR202
77'	R-14R	1EHR202
102'	W-14R	1JHR200
102'	W-24.2	1KHR200
102'	N-23R	1LHR200
102'	Q-15R	1MHR200
102'	U-14R	1NHR200
102'	U-22R	1PHR200
102'	N-14R	1ZHR200
102'	Q-21R	1AHR201
132'	U-20R	1QHR200
132'	Q-20R	1RHR200
132'	R-14R	1YHR200
145'	P-17R	1BHR201
145'	U-20R	1SHR200
145'	Q-15R	1THR200
162'	Q-15R	1UHR200
162'	U-20R	1VHR200
178'	Q-15R	1AHR202
201'	N-19R	1CHR201
201'	U-20R	1WHR200
201'	Q-15R	1XHR200
Auxiliary Building Control & D/G Areas		
54'	Va-29	1AHR400
54'	S-29	1BHR400
54'	V-25	1CHR400
54'	S-25	1DHR400
54'	N-25	1EHR400

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INSERT TO PG. 3/47-27 (CONT'D.)

LOCATION ELEVATION	LOCATION COLUMN	HOSE RACK IDENTIFICATION
77'	Va-29	1FHR401
77'	V-25	1GHR400
77'	N-25	1HHR400
77'	S-25	1LHR400
77'	T-29	1MHR400
102'	N-25	1AHR401
102	V-25	1BHR401
102'	S-25	1DHR401
102'	T-30	1SHR401
102'	Vd-28.1	1QHR400
124'	N-25	1RHR400
124'	R-25	1HHR401
130'	W-29	1SHR400
130'	T-29	1CHR401
130'	X-25	1GHR401
130'	U-29	1THR401
137'	R-24.2	1THR400
146'	W-29	1JHR401
146'	U-29	1UHR401
146'	S-29	1VHR400
150'	X-25	1UHR400
155'-3"	N-25	1YHR400
163'	V-29	1WHR400
163'	T-29	1XHR400
163'	U-29	1KHR401
163	V-26	1PHR401
178'	S-29	1RHR401
178'	V-29	1QHR401
Auxiliary Building Radwaste & Service Areas		1JHR400
77'	Md-21.4	1NHR400
102'	Md-21.4	~~0PHR400~~ 1PHR400
102'	Mc-19	0MHC301
137'	Mc-29	0GHC301
137'	K-21.4	1FHR400
54'	Md-21.4	0AHR300
54'	L-15.8	0QHC300
102'	L-15.8	
Intake Structure		
100'	—	1AHR500
100'	—	1BHR500

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USE → (Option 2)

(INSERT)

PLANT SYSTEMS

3/4.7.8 FIRE BARRIER PENETRATIONS

LIMITING CONDITION FOR OPERATION

3.7.8 All fire barrier penetrations, including cable penetration barriers, fire doors and fire dampers, in fire zone boundaries protecting safety related areas shall be functional.

APPLICABILITY: At all times.

ACTION:

a. With one or more of the above required fire barrier penetrations non-functional, within one hour ~~establish a continuous fire watch on at least one side of the affected penetration or verify the OPERABILITY of fire detectors on at least one side of the non-functional fire barrier and establish an hourly fire watch patrol.~~ Restore the non-functional fire barrier penetrations(s) to functional status within 7 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the non-functional penetration and plans and schedule for restoring the fire barrier penetration(s) to functional status.

INSERT A →

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.8 Each of the above required fire barrier penetrations shall be verified to be functional:

INSERT B →

d. ~~X~~. At least once per 18 months by a visual inspection, and

e. At least once per 18 months by a functional test of fire dampers.

f. ~~X~~. Prior to restoring a fire barrier penetration to functional status following repairs or maintenance, by performance of a visual inspection of the affected fire barrier penetration.

of at least 10 percent of each type of sealed penetration. If apparent changes in appearance or abnormal degradations are found, a visual inspection of an additional 10 percent of each type of sealed penetration shall be made. This inspection process shall continue until a 10 percent sample with no apparent changes in appearance or abnormal degradation is found. Samples shall be selected such that each penetration seal will be inspected at least once per 15 years.

INSERT A TO PG. 3/4 7-28:

1. Verify the OPERABILITY of fire detectors on both sides of the affected penetration and establish a daily fire watch patrol, or

2. Verify the OPERABILITY of fire detectors on at least one side of the affected penetration and establish an hourly fire watch patrol, or

3. Establish a continuous fire watch on at least one side of the affected penetration.

INSERT B TO PG. 3/4 7-28:

a. Fire doors with automatic hold-open and release mechanisms inspected daily to verify that doorways are free of obstructions.

b. Fire doors kept closed are inspected daily to verify that they are in closed position.

c. Automatic hold-open, release and self-closing mechanisms of fire doors are inspected semiannually to verify OPERABILITY.

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