ENCLOSURE 1

EXISTING TECHNICAL SPECIFICATION 3.6.2

"CONTAINMENT ISOLATION VALVES"

3.6.2 CONTAINMENT ISOLATION VALVES

Applicability: Applies to the containment isolation valves listed in Table 3.6.2-1 for MODES 1, 2, 3, and 4.

Objective: To provide assurance that containment isolation will function when initiated by appropriate sensors.

Specification:

A. The containment isolation valves specified in Table 3.6.2-1 shall be OPERABLE.

B. With one or more of the isolation valve(s) specified in Table 3.6.2-1 inoperable, maintain at least one isolation valve OPERABLE in each affected penetration that is open and either:

1. Restore the inoperable valve(s) to OPERABLE status within 4 hours, or

2. Isolate each affected penetration within 4 hours by use of at least one deactivated automatic valve secured in the isolation position, or

3. Isolate each affected penetration within 4 hours by use of at least one closed manual valve or blind flange, or

4. Be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

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Basis: The OPERABILITY of the containment isolation valves ensures that the containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material to the containment atmosphere or pressurization of the containment. Containment isolation ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analyses for a LOCA.

References:

(1) NRC letter dated July 2, 1980, from D. G. Eisenhut to all pressurized water reactor licensees.

TABLE 3.6.2-1

POWER OPERATED OR AUTOMATIC CONTAINMENT ISOLATION VALVE SUMMARY

	DESCRIPTION	INSIDE SPHERE	ALIGNMENT*	OUTSIDE SPHERE	ALIGNMENT*
1.	Sphere Sump Discharge	CV-102 (SV-108)	B	CV-103 (SV-109)	A
2.	RCS Dr Tk Discharge	CV-104 (SV-110)	B	CV-105 (SV-111)	A
3.	RCS Dr Tk Vent	CV-106 (SV-112)	B	CV-107 (SV-113)	A
4.	N_2 to RCS Drain Tank and PRT	CV-536	A	CV-535	B
5.	ORMS 1211/1212 Sphere Sample Supply	CV-147 (SV-1212-7)	B	SV-1212-9	A
6.	ORMS 1211/1212 Sphere Sample Return	CV-146 (SV-1212-6)	B	SV-1212-8	A
7.	A Stm. Gen. Stm. Sample	None		SV-119	A
8.	B Stm. Gen. Stm. Sample	None		SV-120	A
9.	C Stm. Gen. Stm. Sample	None		SV-121	A
10.	A Stm. Gen. Blowdown Sample	None		SV-123	A
11.	B Stm. Gen. Blowdown Sample	None		SV-122	A
12.	C Stm. Gen. Blowdown Sample	None		SV-124	A
13	Service Water to Sphere	CV-537	A	CV-115 (SV-126)	B
14.	Service Air to Sphere	Check Valve		SV-125	A
15.	SI Loop C Vent	SV-702B	A	SV-702A	B
16.	SI Loop B Vent	SV-702D	A	SV-702C	B
17.	PRT Gas Sample	CV-948**	A	CV-949 (SV-949)	B
18.	RC Loop Sample	(CV-955, CV-956, CV-962)**	A	CV-957 (SV-957)	B
19.	Pressurizer Sample	(CV-951, CV-953)**	A	CV-992 (SV-992)	B
20.	Sphere Purge Air Supply	-		POV-9 (SV-29)	A
21.	Sphere Purge Air Outlet	-		POV-10 (SV-30)	A
22.	Sphere Equalizing/Sphere Vent Inst. Air Vent	CV-116 (SV-27) CV-40 (SV-19)	B B	CV-10 (SV-28)	A
23.	Primary Makeup to Press Rlf. Tk.	CV-533	A	CV-534	B
24.	Cont. Cooling Out	-	-	CV-515**	A
25.	Cont. Cooling In	-	-	CV-516**	B
26.	N_2 Supply to PORV	Check Valve	-	CV-532**	B
27.	Letdown	CV-525**	A	CV-526**	B
28.	Seal Water Return	CV-527**	A	CV-528**	B

* Logic Nest C, Train A is aligned to power train F; Logic Nest D, Train B is aligned to power train G.

** These valves do not receive an automatic containment isolation signal. They are operated by remote manual switch (RMS).

Typo Revision: 7/9/82
Revised: 12/23/81

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ENCLOSURE 2

PROPOSED TECHNICAL SPECIFICATION 3.6.2

"CONTAINMENT ISOLATION VALVES"

3.6.2 CONTAINMENT ISOLATION VALVES

Applicability: Applies to the containment isolation valves listed in Table 3.6.2-1 for MODES 1, 2, 3, and 4.

Objective: To provide assurance that containment isolation will function when initiated by appropriate sensors.

Specification:

A. The containment isolation valves specified in Table 3.6.2-1 shall be OPERABLE, unless otherwise specified.

B. With one or more of the isolation valve(s) specified in Table 3.6.2-1 inoperable, maintain at least one isolation valve OPERABLE in each affected penetration that is open and either:

1. Restore the inoperable valve(s) to OPERABLE status within 4 hours, or

2. Isolate each affected penetration within 4 hours by use of at least one deactivated automatic valve secured in the isolation position, or

3. Isolate each affected penetration within 4 hours by use of at least one closed manual valve or blind flange, or

4. Be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

Basis: The OPERABILITY of the containment isolation valves ensures that the containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material to the containment atmosphere or pressurization of the containment. Containment isolation ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analyses for a LOCA.

The isolation valves of the Sphere Purge Air Supply and Air Outlet Lines have not been demonstrated capable of closure under the differential pressures generated by a design basis accident. For this reason, containment isolation in these lines shall be maintained. This configuration shall be accomplished by locking closed manual isolation valves CVS-301 and CVS-313 of these lines. These valves shall remain locked closed during MODES 1, 2, 3, and 4 until they can be demonstrated capable of performing their containment isolation function under post accident conditions.

References:

(1) NRC letter dated July 2, 1980, from D. G. Eisenhut to all pressurized water reactor licensees.

MThomas:6227

TABLE 3.6.2-1

POWER OPERATED OR AUTOMATIC CONTAINMENT ISOLATION VALVE SUMMARY

	DESCRIPTION	INSIDE SPHERE	ALIGNMENT*	OUTSIDE SPHERE	ALIGNMENT*
1.	Sphere Sump Discharge	CV-102 (SV-108)	B	CV-103 (SV-109)	A
2.	RCS Dr Tk Discharge	CV-104 (SV-110)	B	CV-105 (SV-111)	A
3.	RCS Dr Tk Vent	CV-106 (SV-112)	B	CV-107 (SV-113)	A
4.	N_2 to RCS Drain Tank and PRT	CV-536	A	CV-535	B
5.	ORMS 1211/1212 Sphere Sample Supply	CV-147 (SV-1212-7)	B	SV-1212-9	A
6.	ORMS 1211/1212 Sphere Sample Return	CV-146 (SV-1212-6)	B	SV-1212-8	A
7.	A Stm. Gen. Stm. Sample	None		SV-119	A
8.	B Stm. Gen. Stm. Sample	None		SV-120	A
9.	C Stm. Gen. Stm. Sample	None		SV-121	A
10.	A Stm. Gen. Blowdown Sample	None		SV-123	A
11.	B Stm. Gen. Blowdown Sample	None		SV-122	A
12.	C Stm. Gen. Blowdown Sample	None		SV-124	A
13	Service Water to Sphere	CV-537	A	CV-115 (SV-126)	B
14.	Service Air to Sphere	Check Valve		SV-125	A
15.	SI Loop C Vent	SV-702B	A	SV-702A	B
16.	SI Loop B Vent	SV-702D	A	SV-702C	B
17.	PRT Gas Sample	CV-948**	A	CV-949 (SV-949)	B
18.	RC Loop Sample	(CV-955, CV-956, CV-962)**	A	CV-957 (SV-957)	B
19.	Pressurizer Sample	(CV-951, CV-953)**	A	CV-992 (SV-992)	B
20.	Sphere Purge Air Supply ***	-		POV-9 (SV-29)	A
21.	Sphere Purge Air Outlet ***	-		POV-10 (SV-30)	A
22.	Sphere Equalizing/Sphere Vent	CV-116 (SV-27)	B	CV-10 (SV-28)	A
	Inst. Air Vent	CV-40 (SV-19)	B		
23.	Primary Makeup to Press Rlf. Tk.	CV-533	A	CV-534	B
24.	Cont. Cooling Out	-	-	CV-515**	A
25.	Cont. Cooling In	-	-	CV-516**	B
26.	N_2 Supply to PORV	Check Valve	-	CV-532**	B
27.	Letdown	CV-525**	A	CV-526**	B
28.	Seal Water Return	CV-527**	A	CV-528**	B

* Logic Nest C, Train A is aligned to power train F; Logic Nest D, Train B is aligned to power train G.

** These valves do not receive an automatic containment isolation signal. They are operated by remote manual switch (RMS).

*** Manual valves CVS-301 and CVS-313 of the Sphere Purge Air Supply and Air Outlet lines, respectively, shall be locked closed during MODES 1, 2, 3 and 4 in order to ensure that the containment purge lines maintain containment isolation.

DESCRIPTION OF PROPOSED CHANGE NO. 124 AND SAFETY ANALYSIS

This is a request to revise Section 4.3, "Containment Systems" of Appendix A Technical Specifications for San Onofre Nuclear Generating Station Unit 1.

Description

SCE letter dated April 21, 1976 requested certain exemptions to the containment testing requirements of Appendix J to 10 CFR Part 50. These exemption requests were denied and transmitted by NRC letter dated August 3, 1982. Included in this letter the NRC requested that SCE resubmit revised Technical Specifications that reflect the requirements of Appendix J with no exceptions.

SCE has developed a revised Technical Specification Section 4.3.1 which reflects the testing requirements of Appendix J. When this change is implemented, there will be assurance that the proper requirements for containment testing will be implemented.

Existing Specification

The existing specification is provided as Enclosure 1

Proposed Specification

The proposed specification is provided as Enclosure 2. Change bars are used to indicate the modifications to this Technical Specification.

Safety Analysis

The proposed change discussed above is deemed not to constitute a significant hazards consideration based on the fact that the proposed change constitutes additional restrictions and controls not presently included in the technical specifications. Further discussion regarding this position is provided below:

1. Will operation of the facility in accordance with this proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

   Response: No

   The testing and operational procedures required by this proposed change will enhance the reliability of this isolation function and the timely detection of incipient deterioration of function occuring in components of the containment isolation system. Accordingly, implementation of this proposed change will not involve an increase in the probability or consequences of an accident previously evaluated.

2. Will operation of the facility in accordance with this proposed change create the possibility of a new or differenct kind of accident from any accident previously evaluated?

   Response: No

   This proposed change incorporates testing requirements and acceptance criteria as specified in 10 CFR 50 Appendix J, into the Technical Specifications. Compliance with these requiements will not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Will operation of the facility in accordance with this proposed change involve a significant reduction in a margin of safety?

   Response: No

   Compliance with the current containment testing requirements of 10 CFR 50, Appendix J, will ensure that the degree of conservatism used to establish the margin of safety for the containment isolation system will not be reduced.

Safety and Significant Hazards Consideration Determination

Based on the Safety Analysis, it is concluded that: (1) the proposed change does not involve a significant hazards consideration as defined by 10 CFR 50.92; and (2) there is reasonable assurance that the health and safety of the public will not be endangered by the proposed change; and (3) this action will not result in a condition which significantly alters the impact the station on the environment as described in the NRC Environmental Statement.

MJThomas:8596

ENCLOSURE 1

EXISTING TECHNICAL SPECIFICATION 4.3

"CONTAINMENT SYSTEMS"

4.3 CONTAINMENT SYSTEMS

4.3.4 CONTAINMENT TESTING

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Applicability: Applies to containment leakage.

Objective: To verify that leakage from the containment sphere is maintained within specified values.

Specification:

I. Integrated Leakage Rate Tests, Type A

A. Test Pressure

Peak pressure tests are conducted at a test pressure greater than or equal to 49.4 psig, and reduced pressure tests are conducted at a test pressure greater than or equal to 24.7 psig.

B. Acceptance Criteria

For the peak pressure test program the containment sphere leakage rate measured is less than 0.090 wt%/24 hours of the initial content of the containment air at the calculated peak pressure of 49.4 psig. For the reduced pressure test program to be conducted at 24.7 psig, the measured leakage rate shall be less than 0.064 wt%/24 hours of the initial content of the containment atmosphere at the calculated peak pressure of 49.4 psig.

The accuracy of each Type A test is verified by a supplemental test which (1) confirms the accuracy of the Type A test by verifying that the difference between supplemental and Type A test data is within 25% of 0.12 wt%/24 hours for the peak pressure test or 0.085 wt%/24 hours for the reduced pressure test, and (2) requires the quantity of air injected into the containment during the supplemental test to be equivalent to at least 75 percent of the total allowable leakage rate at 49.4 psig.

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C. Frequency

1. An integrated leak rate test shall be performed as follows:

   a. Within 24 months from the date of initial criticality.

   b. Within 26 months from the date of the test in "a" above.

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c. Within 39 months from the date of the test in "b" above.

d. Within every 39 months from the date of the previous test.

The intervals specified in a, b, c, and d may be varied within an allowance of plus-4 months and minus-8 months to coincide with planned shutdown. In the event it is determined during any one test that the containment leakage rate does not meet the acceptability limit specified in "B" above, the condition shall be corrected, a retest made, and the testing frequency shall revert back to item "a" of the above schedule. 33 2/18/77

II. Penetration Testing

The combined leakage rate of all penetrations and all containment isolation valves subject to leakage rate tests shall not exceed 0.072 wt%/24 hours off the initial content of the containment atmosphere at the calculated peak pressure of 49.4 psig.

A. Types D, E, and Electrical Penetrations

1. Tests

Leakage tests of types D, E, and electrical penetrations through the containment sphere shall be performed at an initial pressure (beginning of test) of 49.4 psig. 33 2/18/77

2. Frequency

For Type D penetration, testing shall be accomplished during shutdown when the reactor is depressurized if the test has not been performed within the previous 6 months but in no case at intervals greater than 2 years. 15 10/15/74

B. Personnel Air Locks

1. Test

Leakage tests of personnel air locks shall be performed at an initial pressure (beginning of test) of approximately 10 psig.

2. Frequency

During operation, personnel air locks shall be tested at a frequency of at least every 6 months.

C. Isolation Valve Testing

1. Tests

All isolation valves shall be tested for leak rate characteristics. Isolation valves normally operating with pressure less than 50 psig shall be tested at an initial pressure (beginning of test) of 49.4 psig. | 64 12/16/81

D. Fuel Transfer Tube (Type F Penetration)

1. Fuel transfer tube flange tests shall be performed at an initial pressure of 49.4 psig. 33 2/18/77

2. Frequency

The fuel transfer tube tests shall be performed after refueling and after any other time sealing flange is removed and replaced.

E. Containment Sphere Equipment Door

1. Test

Leakage tests of the equipment door shall be performed at an initial pressure (beginning of test) of 49.4 psig. 33 2/18/77

2. Frequency

The equipment door shall be tested after each time it is removed and replaced or at least every 6 months.

III. Recirculation System

A. Test

1. Tests shall be performed on portions of the Safety Injection System used for recirculation at a hydrostatic pressure equal to or greater than the operating pressure under accident conditions.

2. Visual inspection shall assure that leakage is maintained at an insignificant level.

B. Frequency

The Safety Injection Recirculation System shall be tested at the same frequency as the integrated leakage rate tests. In addition, whenever components of this system are used during normal operation, visual inspections for leakage shall be made.

Basis:

The Containment System is one of the major engineering safeguards and is a consequence limiting system. It represents the final physical barrier which, in the event of a loss of coolant accident, protects against the inadvertent release of fission products.

Leak Rate Testing

Periodic leakage rate tests will be performed at or above 49.4 psig for the peak pressure test program or at or above 24.7 psig for the reduced pressure test program. 33 2/18/77

A typical integrated leak rate test will be performed by utilizing the reference vessel method. Comparison by calculated leakage values will be made by pumping air back into the containment sphere through a calibrated meter.

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The time intervals and acceptable leakage values have been established based upon a leakage rate of 0.12 wt%/24 hours of the initial content of the containment atmosphere at 49.4 psig. A containment leakage rate of 0.12 wt%/24 hours will maintain public exposure below 10 CFR 100 values in the event of a hypothetical loss of coolant accident. This leakage rate will also limit public exposure to 10 CFR 100 values. 33 2/18/77

Penetration Types A, B, and C are welded solid to the sphere and are tested as an integral part of the sphere. Types D, E, and F, the air lock, the equipment door, isolation valves, and the electrical penetrations are provided with test connections for periodic tests.(1)

Recirculation System Testing

The portion of the Recirculation System outside the containment sphere is effectively an extension of the boundary of the containment.(2) 33 2/18/77

References:

(1) Final Engineering Report and Safety Analysis, Paragraph 5.3.

(2) Final Engineering Report and Safety Analysis, Paragraph 5.1. 33 2/18/77

ENCLOSURE 2

PROPOSED TECHNICAL SPECIFICATION 4.3

"CONTAINMENT SYSTEMS"

4.3 CONTAINMENT SYSTEMS

4.3.1 CONTAINMENT TESTING

Applicability: Applies to containment leakage.

Objective: To verify that leakage from the containment sphere is maintained within specified values.

Specification: I. Integrated Leakage Rate Tests, Type A

A. Test Pressure

In order to verify leakage from the containment sphere, a Type A test shall be performed. Type A tests shall consist of a peak pressure test or a reduced pressure test.

Peak pressure tests are conducted at a test pressure greater than or equal to 49.4 psig, and reduced pressure tests are conducted at a test pressure greater than or equal to 24.7 psig.

B. Acceptance Criteria

For the peak pressure test program the containment sphere leakage rate measured is less than 0.090 wt%/24 hours of the initial content of the containment air at the calculated peak pressure of 49.4 psig. For the reduced pressure test program to be conducted at 24.7 psig, the measured leakage rate shall be less than 0.064 wt%/24 hours of the initial content of the containment atmosphere at the calculated peak pressure of 49.4 psig.

The accuracy of each Type A test is verified by a supplemental test which (1) confirms the accuracy of the Type A test by verifying that the difference between supplemental and Type A test data is within 25% of 0.12 wt%/24 hours for the peak pressure test or 0.085 wt%/24 hours for the reduced pressure test, and (2) requires the quantity of air bled from or injected into the containment during the supplemental test to be equivalent to at least 75% of the total allowable leakage rate at 49.4 psig.

C. Frequency

A set of 3 periodic Type A tests are performed at 40± 10 month intervals during each 10-year service period. The third test of each set is performed when the plant is shut down for the 10-year plant inservice inspection. The permissible period for Type A testing shall be limited to periods when the plant facility is nonoperational and secured in the shutdown condition.

If any periodic Type A test fails to meet the acceptance criteria above, the test schedule applicable to subsequent Type A tests shall be submitted to the NRC for review and approval. If two consecutive periodic Type A tests fail to meet the above acceptance criteria, a type A test is performed at each plant shutdown for refueling or approximately every 18 months, whichever occurs first, until two consecutive Type A tests meet the acceptance criteria, after which time the normal test schedule may be resumed.

II. Containment Penetration Leakage Rate Tests (Type B)

A. Test Pressure

Type B tests, except personnel locks, are conducted at a test pressure at or above 49.4 psig. Personnel locks are tested at approximately 10 psig.

B. Acceptance Criteria (Maximum acceptable value)

The combined leakage rate of all penetrations subject to Type B tests and all containment isolation valves subject to Type C tests is less than .072 wt%/24 hours of the initial content of the containment atmosphere at the calculated peak pressure of 49.4 psig.

C. Test Schedule

Type B tests, except for airlocks, are performed during every reactor shutdown for refueling, or other convenient intervals, but in no case at intervals greater than approximately two years. Airlock volumes between the doors are tested: (1) at least every six months during operation and (2) within 72 hours following each opening, except when the air lock is being used for multiple entries, then at least once per 72 hours.

III. Containment Isolation Valve Leakage Rate Tests (Type C)

A. Test Pressure

Type C tests are conducted in accordance with the criteria specified in Appendix J of 10 CFR 50.

These Type C tests are conducted at a test pressure at or above 49.4 psig.

B. Acceptance Criteria (Maximum acceptable value)

The combined leakage rate of all penetrations subject to Type B tests and all containment isolation valves subject to Type C tests is less than .072wt%/24 hours of the initial content of the containment atmosphere at the calculated peak pressure of 49.4 psig.

C. Test Schedule

Type C tests are performed during each reactor shutdown for refueling, or other convenient intervals, but in no case at intervals greater than approximately 2 years.

Seal tests conducted on active and passive containment ventilation isolation valves shall be performed every six months.

IV. Recirculation System

A. Test Pressure

Leak tests shall be performed on portions of the Safety Injection System used for recirculation at a pressure equal to or greater than the operating pressure under accident conditions. The test fluid shall be water.

B. Acceptance Criteria

Visual inspection for leakage shall be made and if leakage can be detected, measurements of such leakage shall be made. The maximum effective leakage shall be maintained in accordance with Section 3.3.1.A(4) of Appendix A Technical Specifications.

C. Test Schedule

Visual inspections of the recirculation loop outside containment (including the Containment Spray System) shall be made at intervals not to exceed the normal plant refueling interval. In addition, pumps and valves of the recirculation loop outside containment which are used during normal operation, shall be visually inspected for leakage at intervals not to exceed once every six months.

V. Test Result Report

The results of Type A, B, and C leakage rate tests are submitted to the NRC in a summary technical report approximately three months after the conduct of the Type A tests. This report contains an analysis and interpretation of the Type A test results and a summary of periodic Type B and C tests performed since the last Type A test. Leakage rate test results from Type A tests that fail to meet the acceptance criteria specified in Section I.B above are reported in a separate attached summary report that includes an analysis of the test data, an instrumentation error analysis, and the structural conditions of the containment or components, if any, which contributed to failure in meeting the acceptance criteria. Results and analysis of the supplemental verification test used to demonstrate the validity of the Type A test measurements are included.

VI. Containment Modification

Any major modification or replacement of a component that is part of the containment boundary is followed by Type A, B, or C tests as applicable. The results of such tests are included in the test result report described above and meet the respective acceptance criteria. Minor modifications or replacements performed directly prior to the conduct of a scheduled Type A test do not require a separate test.

Bases:

The containment system is one of the major engineered safety features and is a consequence-limiting system. It represents the final physical barrier that, in the event of a loss-of-coolant accident (LOCA), protects against the inadvertent release of fission products.

I. Leakage Rate Testing

Periodic containment integrated leakage rate tests are performed at or above 49.4 psig or at or above 24.7 psig for the reduced pressure test program. The leak rate will be calculated using the formulas of Reference 2 (Total Time) and Reference 3 (Mass Point).

Test schedules and the acceptance criteria specified herein are established based on the requirements of 10CFR50, Appendix J[1]. A containment leakage rate of 0.12 wt% of the initial content of containment atmosphere at 49.4 psig/24 hours maintains public exposure well below 10CFR100 values in the event of a hypothetical LOCA.[4] This leakage rate also limits public exposure to 10CFR100 values even if a complete core meltdown is postulated.

The acceptance criteria for

(1) Type A test is 75% of the containment leakage rate specified above

(2) Type B and Type C tests combined is 60% of the containment leakage rate specified above

to allow for possible deterioration of the containment boundary between tests.

II. Recirculation System Testing

The portion of the Recirculation system outside the containment sphere is effectively an extension of the boundary of the containment.

Leakage from this system shall be maintained at as low as practical levels. The effective leakage of this system shall be maintained in accordance with the maximum leakage limitations established in Section 3.3.1.A(4) of Appendix A Technical Specifications.

References

(1) 10 CFR 50, Appendix J.

(2) ANSI N45.4-1972

(3) ANSI/ANS 56.8-1981

(4) Final Engineering Report and Safety Analysis, Paragraph 5.3.