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October 4, 1985

Director, Office of Nuclear Reactor Regulation
Attention: J. A. Zwolinski, Chief
Operating Reactors Branch No. 5
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Gentlemen:

Subject: Docket No. 50-206
Commitments to Complete Open Issues of Draft
NUREG-0829, Integrated Plant Safety Assessment
San Onofre Nuclear Generating Station
Unit 1

The actions and schedules as well as commitments for plant modifications resulting from the open issues of the San Onofre Unit 1 Systematic Evaluation Program (SEP) are described in enclosure 1. The majority of the analyses, evaluations, etc., were identified as a result of the Integrated Assessment phase of the SEP. The results of SCE's Integrated Assessment are contained in letters dated January 19, 1984, February 27, 1984, March 30, 1984 and May 7, 1984. Commitments for plant modification, evaluations, analyses or inspections not previously specified in those letters are included for the following topics:

III-3.A, Effects of High Water Level on Structures

III-3.C, Inservice Inspection of Water Control Structures

IV-4, Containment Isolation System

VI-7.B, Engineered Safety Feature Switchover from Injection
to Recirculation Mode

IX-3, Station Service and Cooling Water Systems

All other commitments of enclosure 1 are for dates by which previously committed actions will be completed. This information is provided in response to the results of the NRC's evaluations of SCE's proposed actions as published in Draft NUREG-0829, Integrated Plant Safety Assessment Report (IPSAR).

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Mr. J. A. Zwolinski

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October 4, 1985

Enclosure 2 provides a revision of Table 4.1 of the Draft IPSAR. It provides a summary of all actions described in enclosure 1 and includes descriptions of those areas not previously indicated as complete but where SCE now considers the issue closed. The list is intended to be all inclusive of those actions for which SCE is planning further work as a result of the SEP.

If there are any questions, please contact me.

Very truly yours,

M. E. Medford

Enclosures

Comments and Schedule Commitments
on Open Items of NUREG 0829,
Integrated Plant Safety Assessment Report
San Onofre Nuclear Generating Station, Unit 1

Introduction

Below are comments and schedule commitments to open issues of NUREG 0829, Integrated Plant Safety Assessment Report, San Onofre Unit 1. Included is a reference to the SEP Topic, and the NUREG section. SCE's comments or commitments for completion of further evaluations are listed with each corresponding open issue. The dates herein specified for major evaluations will be included in the next revision of the San Onofre Unit 1 Integrated Living Schedule

Comments and Commitments

1. Page 4-3,4,5, Section 4.4, Topic III-1, Classification of Structures, Components and Systems.

Open Issues

The staff has identified several systems and components for which inadequate information is available to justify a conclusion that the quality standards imposed during plant fabrication and construction meet the quality standards required for new facilities. The staff has requested that additional evaluations be completed as specified in NUREG-0829 or that, as an alternative, the safety significance of the components and systems in question be evaluated.

Response

SCE agrees with the NRC staff's proposed resolution of the remaining open issues and will perform the evaluations of section 4.4 of NUREG-0829, or if it is determined that such evaluations are not possible due to missing information or that it is not practical to do such evaluations, the safety significance of the component or system in question will be evaluated.

The results of the evaluations will be incorporated into the Final Safety Analysis update required by 10 CFR 50.71. If any modifications or changes to the inspection program at SONGS 1 are deemed necessary due to these evaluations, they will be separately reported to the NRC staff.

2. Page 4-6,7, Section 4.5, Topic III-2, Wind and Tornado Loadings

Open Issue

The staff will evaluate SCE's recommended windspeed and conceptual modifications from SCE's cost/safety benefit evaluation.

Response

It was previously indicated that the cost/benefit analysis would be completed on October 15, 1985. It should be noted that the analysis does include an evaluation of the effects of tornado missiles and is not limited to windspeed effects. The project is ongoing and is now expected to be complete by January 6, 1986. The results of SCE's study will be provided at that time.

3. Page 4-7, Section 4.6, Topic III-3.A, Effects of High Water Level on Structures.

Open Issue

In subsection 4.6 the staff requests that safety-related structures should be evaluated to demonstrate that they remain functional and resist flotation for short-term hydrostatic loads for a groundwater level at plant grade.

Response

SCE's letter dated May 7, 1984 summarized the results of groundwater level measurements on and around the San Onofre Unit 1 site. From that data it was concluded that the maximum groundwater level to occur at the site was estimated as 7.0 feet MLLW. The grade elevation on the site varies from 14 feet MLLW to over 20 feet MLLW. SCE does not believe groundwater at grade is a credible event. However, an evaluation of the effects of groundwater will be done by first, very conservatively, assuming groundwater level at grade. Should the results of this evaluation not be acceptable, a more realistic extreme high water level will be postulated for further evaluation. This procedure for evaluating the effects of groundwater is the most efficient use of SCE resources. The results of this analysis will be submitted by May 1, 1986.

Open Issue

The effects of Probable Maximum Precipitation on fuel storage building and ventilation equipment building rooftops should be evaluated.

Response

Information indicating acceptable roof top capabilities was submitted by letter from SCE dated April 26, 1985. This item is considered closed.

4. Page 4-7, Section 4.7, Topic III-3.C, Inservice Inspection of Water Control Structures.

Open Issue

SCE submitted a description of the program developed to inspect water control structures necessary for SONGS 1 protection by letter dated June 5, 1984. The NRC staff requests changes to 1) add the north bluff area and service water reservoir to the list of areas to be examined to assure that drainage to the ocean is maintained and 2) change the requirement for checking the north drainage ditch to be annually before the rainy season.

Response

The program will be revised to incorporate the above comments prior to the next scheduled inspection.

Open Issue

During the return-to-service program in 1984, degradation of the intake structure rebar was discovered. SCE's letter dated October 18, 1984 indicated that details of the proposed intake structure surveillance program would be provided 90 days prior to the next refueling. The NRC staff in their SER supporting plant restart also requested that portions of the seawall should be inspected.

Response

Details of the intake structure surveillance program will be submitted by October 4, 1984. The seawall will be inspected during the refueling/backfit outage scheduled to start on November 30, 1985.

5. Page 4-8, Section 4.8, Topic III-4.A, Tornado Missiles.

Open Issue

The NRC staff requests that protection be provided for sufficient systems and components to achieve and maintain safe shutdown in the event of a tornado.

Response

SCE's ongoing evaluation to resolve section 4.5, Topic III-2, Wind and Tornado Loadings, is considering the effects of tornado missiles. The results of that analysis will be provided by January 6, 1986.

6. Page 4-9, Section 4.9, Topic III-5.A, Effects of Pipe Breaks on Structures Systems, and Components Inside Containment

Open Issue

A further evaluation of the unresolved interactions from SCE's inside containment High Energy Line Break Analysis should be performed. In addition, due to the several issues relating to electrical separation, a coordinated review of cable routing should be performed.

Response

SCE will perform a revised analysis of the effects of high energy line breaks inside containment. The analysis will take into consideration recent information and modifications implemented as part of the seismic reevaluation program and Appendix R Program. It will also consider the effects of breaks on cables. The analysis will be complete by August 31, 1986. As leak-before-break methods are expected to be used in resolving the interaction, any required changes in SONGS 1 leakage detection capabilities will also be determined.

7. Page 4-10, Section 4.10, Topic III-5.B, Pipe Break Outside Containment

Open Issue

A screening analysis of the effects of pipe breaks outside containment resulted in the identification of many unresolved interactions.

Response

SCE will perform an analysis similar to that for Topic III-5.A above. The revised analysis will be complete by August 31, 1986.

8. Page 4-10, 11, Section 4.11, Topic III-6, Seismic Design Considerations

Open Issue

The NRC staff's position is that the analyses and modifications necessary to achieve cold shutdown and provide accident mitigation capability should be complete by the end of the next refueling outage.

Response

The analyses and modifications necessary to complete the Seismic Reevaluation program at San Onofre Unit 1 will be complete by return-to-service from the refueling/backfit outage scheduled to begin on November 30, 1985.

9. Page 4-11,12, Section 4-12, Topic III-7.B, Design Codes, Criteria, Load Combinations and Reactor Cavity Design Criteria.

Open Issue

The NRC staff recommends that it should be demonstrated that the loads resulting from a seismic event will dominate those resulting from other loading combinations.

Response

The load combinations remaining to be reviewed involve other SEP open issues. In each of these issues the effects of the appropriate load combinations will be evaluated. The following load combinations are indicated in NRC letter September 21, 1982 as those necessary under the SEP to demonstrate that structural integrity is maintained. The terms are defined in the above letter.

<u>Structure</u>	<u>Load Combination Requiring Review</u>	<u>Topic Where Covered</u>
Containment Sphere	D+L+Ta+Pa+Ra+E'+Yr+Yj+Ym	III-5.A (for III-7.B, SCE letter 3/30/84 indicates acceptance of sphere structure)
Reactor Auxiliary Building	D+L+Ro+Wt D+L+Ta+Pa+Ra+E'+Yr+Yj+Ym	III-2 III-5.B
Control and Switchgear Rooms in Control and Administration Building	D+L+E' D+L+Wt	III-6 III-2
Intake Structure	D+L+Ro+E' D+L+Ro+Wt	III-6 III-2
Fuel Storage Building	D+L+E' D+L+Wt	III-6 III-2
Turbine Building	D+L+Ro+Wt D+L+Ta+Pa+Ra+E'+Yr+Yj+Ym	III-2 III-5.B
Vent Stack	D+L+To+Ro+E' D+L+To+Ro+Wt	III-6 III-2

10. Page 4-17,18,19,20, Section 4.18, Topic V-5, Reactor Coolant Pressure Boundary Leakage Detection

Open Issue

The conclusion stated in the IPSAR is that the sensitivities of the SONGS 1 leakage detection systems are adequate unless the review associated with Topic III-5.A demonstrate otherwise.

Response

The need for greater sensitivities of the SONGS 1 leakage detection system will be determined by Topic III-5.A.

Open Issue

The San Onofre Units 1 Technical Specifications do not contain limiting conditions for operation or surveillance requirements regarding the operability of leakage detection systems.

Response

Proposed Technical Specifications will be submitted by January 31, 1986.

Open Issue

The operability of the leakage detection systems following a seismic event has not been established. The NRC staff recommends that a system be provided that will remain operable following a seismic event, or that procedures should be developed to specify immediate action to be taken to determine leakage following a seismic event.

Response

SCE will review the seismic capabilities of the leakage detection systems to determine which if any should be relied upon immediately following a seismic event. If seismic capability cannot be demonstrated, alternate means of detecting leakage immediately following a seismic event will be investigated. The results of this review will be provided by November 30, 1985.

11. Page 4-25,26, Section 4.21, Topic V-11.B, Residual Heat Removal System Interlock Requirements.

Open Issues

No interlocks exist to prevent overpressurizing the RHR System once in-service. The NRC staff recognizes, however, the analysis performed for low temperature overpressure events and the availability of the Overpressure Mitigation System (OMS) to prevent excessive pressure transients when in a low pressure condition. The NRC staff recommends that the proposed Technical Specifications for the OMS be revised to provide protection for the RHR System.

Response

The proposed OMS Technical Specifications will be revised to require the OMS to be in operation when necessary to protect the integrity of the RHR system from overpressure transients. These revised Technical Specifications will be submitted by January 31, 1986.

12. Page 4-26, Section 4.22, Topic VI-1, Organic Materials and Post-Accident Chemistry.

Open Issue

The NRC staff requests details of the containment coatings inspection program.

Response

The inspection program to be performed coincides with type A testing and will consist of a visual inspection similar to that performed during the 1982 outage.

13. Page 4-26 thru 4-34, Section 4.23, Topic VI-4, Containment Isolation System

Comments

- a. It should be noted that the line associated with penetration number 49 (see top of page 4-30) has now been capped but will be returned to service during the upcoming refueling/backfit outage.
- b. It is stated that the Component Cooling Water (CCW) System is hydrotested each refueling to check for leakage (top paragraph page 4-32). This statement is not correct. The CCW System undergoes a leak test at normal temperature and pressure every 40 months and is hydrotested at 110% of design pressure once every 10 years in accordance with the SONGS 1 In-Service Testing Program.

Open Issue

Procedures for sequencer doors control panel access should be developed prior to the next refueling.

Response

As stated in our January 19, 1984 letter, the necessary procedures will be in-place prior to return-to-service from the upcoming refueling outage.

Open Issue

Lines using penetrations 15 and 16 should be included in the seismic reevaluation program.

Response

These lines are included in the seismic reevaluation program. Any identified modifications will be implemented during the upcoming outage.

Open Issue

Lines associated with penetrations 29 through 41 should be included in the seismic reevaluation program.

Response

These lines are included in the seismic reevaluation program. Any identified modifications will be implemented during the upcoming outage.

Open Issue

The NRC staff recommends that procedures be developed to identify lines in the CCW System that would need to be isolated following an accident (either short term or long term) to ensure containment integrity.

Response

The provisions to isolate the CCW System lines penetrating containment either immediately or long after an accident will be evaluated. This evaluation will take into account post accident radiation levels and accessibility. This review and changes or additions to any procedures will be implemented by May 1, 1986.

Open Issue

The lines associated with penetrations 4, 5 and 6 should be included in the seismic reevaluation program.

Response

These lines are included in the seismic reevaluation program. Any identified modifications will be implemented during the upcoming outage.

Open Issue

On page 4-33 the configuration of the line through penetration 1, Refueling Water Supply Line, is described. There are several small lines which connect to this line before the containment isolation valve. The NRC staff recommends that either locks or administrative controls be used to ensure that these lines are closed during operation.

Response

SCE has implemented a program to verify that normally closed valves are indeed closed. Procedures S01-12.3-43, "Containment Integrity" and S01-12.3-34, "Containment Sphere Safety-Related Alignment" provide assurance that containment isolation valves are closed and monthly surveillance of valve alignments. This item is considered complete.

Open Issue

The Refueling Water Return Line is described on page 4-33. This line uses penetration 2 and serves as the long term recirculation path for emergency core cooling. The NRC staff is concerned that long after the postulated accident leaking valves, pumps, etc. may provide a path for radioactivity release.

Response

An evaluation of when to close the valves on the refueling water return line will be complete by May 1, 1986.

Open Issue

The branch lines off the main steamline may not be normally closed following a steam generator tube rupture. The NRC staff's concern is particularly with the lines to the evaporator, air ejector and various small drain tap lines.

Response

Emergency Operating Instruction S01-1.0-40, Steam Generator Tube Rupture, includes provisions to isolate lines outside containment. In the case of small drain lines, valves on these lines are not normally open and would not provide a potential release path.

14. Page 4-34,35, Section 4.24, Topic VI-7.B, Engineered Safety Feature Switchover from Injection to Recirculation Mode. (Automatic Emergency Core Cooling Realignment)

Open Issue

The NRC staff is concerned that there is not sufficient margin in the time available to the operator to complete the switchover from primary injection mode to recirculation mode of safety injection. The critical aspect is termination of primary injection flow at the appropriate time.

Response

An automatic trip feature will be added to the Safety Injection System to terminate primary injection on low Refueling Water Storage Tank level. The details of the modification have not been determined at this time but will be developed as part of preliminary engineering. This modification will be scheduled in the next Integrated Living Schedule (ILS) update in accordance with the ILS Plan.

15. Page 4-36, Section 4.25, Topic VI-7.C.2, Failure Mode Analysis (Emergency Core Cooling System)

Open Issue

Several unresolved issues remain from studies performed by SCE relating to ECCS single failures and LOCA environment. Several of the issues have been resolved by other SEP topics. The remaining issues should be evaluated to determine if a safety concern exists.

Response

Each of the remaining issues will be evaluated for safety significance. The evaluation will be completed by May 1, 1986.

16. Page 4-39, Section 4.26, Topic VI-10.A, Testing of Reactor Trip System and Engineered Safety Features, Including Response-Time Testing

Open Issue

Reactor Protection System Testing now done by procedure should be incorporated into the Technical Specifications. Containment Spray Actuation System testing is not included in the Technical Specifications.

Response

The suggested Technical Specifications will be submitted by January 31, 1986.

17. Page 4-42 thru 45, Section 4.28, Topic VII-3, Systems Required for Safe Shutdown

Open Issue

The results of this evaluation concluded that an additional train of auxiliary feedwater should be supplied to increase system reliability.

Response

A third train of auxiliary feedwater will be partially installed during the upcoming outage as part of the Appendix R backfits. The system will not be automatic and fully safety related until additional modifications are performed during the refueling backfit outage for Cycle 10. This modification has been scheduled in accordance with the ILS.

18. Page 4-44,45, Section 4.29, Topic VIII-1.A, Potential Equipment Failures Associated with Degraded Grid Voltage

Open Issue

A voltage monitoring program has been established to verify the results of analysis of optimized tap settings for the auxiliary transformer. The results should be submitted for NRC staff review.

Response

The results will be submitted by October 31, 1985.

19. Page 4-47, Section 4.31, Topic VIII-4, Electrical Penetrations of Reactor Containment

Comment

It should be noted in the Final IPSAR that the low voltage Viking electrical containment penetrations are being replaced as part of the environmental qualification program during the upcoming refueling/backfit outage. Also, monthly penetration testing is not done. The penetrations are checked once per month and tested as part of the Integrated Leak Rate Test.

20. Page 4-47 thru 4-50, Section 4.32, Topic IX-3, Station Service and Cooling Water Systems

Open Issue

The Component Cooling Water (CCW) System is susceptible to single passive failures in the common supply and return headers. Even though the risk associated with this event has been determined to be acceptably low, the modifications associated with the seismic reevaluation have provided a means of safely shutting-down the plant without the CCW System and the modifications due to Appendix R will also provide the capability to shutdown without this system.

Response

The modifications associated with the Seismic Reevaluation Program and the Appendix R Program provide adequate shutdown capability in the event of loss of the CCW System.

Open Issue

Independence of MOV720A and MOV720B has not been demonstrated but will be covered under Topic VI-7.C.2 above.

Response

SCE agrees that the independence of these valves will be verified as part of the VI-7.C.2 analysis. This will be complete by May 1, 1986.

Open Issue

Due to the record of failures of the Saltwater Cooling (SWC) System, the NRC staff recommends that a reliability evaluation be performed.

Response

A reliability evaluation of the SWC System will be performed by May 1, 1986.

21. Page 4-50, Section 4.33, Topic IX-5, Ventilation Systems

Open Issue

By letter dated August 21, 1984, SCE committed to a temperature monitoring program for the 480 V and 4 kV rooms. The NRC staff requests details of the program to perform a confirmatory review.

Response

Details of the temperature monitoring program will be submitted by December 16, 1985.

Open Issue

The NRC staff recommends that procedures be developed for Administration Building (Battery Room and Inverter Room) cooling and hydrogen dispersion.

Response

The August 21, 1984 analysis concluded that even with a loss of ventilation, the ambient room temperature would not exceed 104°F. Therefore no monitoring program or procedures are necessary. In the case of hydrogen dispersion in the battery room, the NRC staff was previously provided with a copy of procedure S01-13-13 which indicates general actions to be taken in the case of a hydrogen buildup in this room. No further action is planned.

22. Page 4-52, 53, Section 4.34, Topic IX-6, Fire Protection

Open Issue

Install modification to enable safe shutdown following a fire.

Response

SCE will install modifications during the upcoming outage to assure the capability of shutting down in the event of a fire.

23. Page 4-53, Section 4.35, Topic XV-1, Decrease in Feedwater Temperature, Increase in Feedwater Flow, Increase in Steam Flow, and Inadvertent Opening of a Steam Generator Relief or Safety Valve

Open Issue

An increase in feedwater flow event may be terminated by a safety injection signal due to rapid primary system cooling. However, the steam generator may become overfilled before the SI is initiated. This could lead to RCS cooldown more severe than for the design basis steamline break.

Response

The results of the analysis of the increase in feedwater flow event indicate that 10 minutes is not available for operator action to terminate the event. Corrective measures will be identified by January 31, 1986 and any modifications will be scheduled in accordance with the Integrated Living Schedule.

24. Page 4-54, Section 4.36, Topic XV-2, Spectrum of Steam System Piping Failures Inside and Outside Containment (PWR)

Open Issue

Review of Steamline break scenarios has revealed the need for a third train of auxiliary feedwater.

Response

A third train of auxiliary feedwater is being installed in the upcoming November 30, 1985 outage. However, it will not be completely safety grade and totally automatic until the following refueling/backfit outage as indicated in SCE's Integrated Living Schedule.

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Revision to
Table 4.1 Integrated Assessment Summary

SEP Topic No.	IPSAR Section No.	Title	Tech. Spec. Changes Required	Modification or Analysis Requirements	Licensee Agrees	Completion Date
III-1	4.4	Classification of Structures, Components, and Systems (Seismic and Quality)		Perform the following analyses as practical, otherwise evaluate component safety significance.	Yes	Per 10 CFR 50.71 (e)(3)(ii)
	4.4.1	Radiography Requirements	No	Verify that specified components have been radiographed or volumetrically inspected; otherwise perform volumetric inspection.	Yes	Per 10 CFR 50.71 (e)(3)(ii)
	4.4.2	Pressure Vessels	No	Show compliance with fatigue analysis requirements.	Yes	Per 10 CFR 50.71 (e)(3)(ii)
	4.4.3	Fracture Toughness	No	Evaluate to determine if material toughness is sufficient to prevent failure.	Yes	Per 10 CFR 50.71 (e)(3)(ii)
	4.4.4	Piping	No	Assess impact on usage factor of gross discontinuities in Class 1 piping for cyclic loads.	Yes	Per 10 CFR 50.71 (e)(3)(ii)
	4.4.5	Valves	No	Verify on sampling basis that Class 1 valve stress limits meet criteria for body shape and Service Level C conditions; verify pressure-temperature rating of Class 2/3 valves.	Yes	Per 10 CFR 50.71 (e)(3)(ii)
	4.4.6	Pumps	No	Demonstrate fatigue analysis compliance for reactor coolant pumps; evaluate design of other pumps.	Yes	Per 10 CFR 50.71 (e)(3)(ii)
	4.4.7	Storage Tanks	No	Evaluate tanks to determine if specified stress limits are met.	Yes	Per 10 CFR 50.71 (e)(3)(ii)

Table 4.1 (Continued)

SEP Topic No.	IPSAR Section No.	Title	Tech. Spec. Changes Required	Modification or Analysis Requirements	Licensee Agrees	Completion Date
III-2	4.5	Wind and Tornado Loadings	No	Perform cost-benefit analysis of upgrading for different windspeeds.	Yes	1/6/86
III-3.A	4.6	Effects of High Water Level on Structures				
	4.6.1	Groundwater	No	Evaluate short-term hydrostatic load at grade. Evaluate and justify lower levels if necessary.	Yes	5/1/86
	4.6.2	Roof Loadings	No	Demonstrate roofs can withstand ponding load, or propose corrective measures.	Yes	Complete 4/26/85
III-3.C	4.7	Inservice Inspection of Water Control Structures	No	Revise inspection program in accordance with staff comments.	Yes	Prior to next inspection
			No	Provide details of Intake Structure Surveillance Program	Yes	10/4/85
			No	Inspect Seawall	Yes	During 11/30/85 Outage
III-4.A	4.8	Tornado Missiles	No	Perform cost-benefit analysis of upgrading for different windspeeds -- See III-2 analysis.	Yes	1/6/86
III-5.A	4.9	Effects of Pipe Break on Structures, Systems, and Components Inside Containment	--	Perform fracture mechanics analyses, systems analyses, etc. Determine leak detection system sensitivity. (Integrate Topic V-5.)	Yes	8/31/86
III-5.B	4.10	Pipe Break Outside Containment	--	Perform fracture mechanics analyses, systems analyses, etc.	Yes	8/31/86

Table 4.1 (Continued)

SEP Topic No.	IPSAR Section No.	Title	Tech. Spec. Changes Required	Modification or Analysis Requirements	Licensee Agrees	Completion Date
III-6	4.11	Seismic Design Considerations	No	Complete analysis of remaining safety related piping and implement necessary modifications	Yes	During 11/30/85 outage
III-7.B	4.12.1	Design Codes, Criteria, and Load Combinations	No	Confirm that seismic loads dominate tornado loads and that correct combinations were used. (Integrate Topics II-3.B.1, II-4.F, III-2, III-5.A, III-5.B, and III-6 for structural upgrade.) To be completed with other open SEP topics.	Yes	See related topics
V-5	4.18	Reactor Coolant Pressure Boundary (RCPB) Leakage Detection				
	4.18.1.1	System Sensitivity	No	See Topic III-5.A	Yes	8/1/86
	4.18.1.2	Operability Requirements	Yes	Provide Technical Specifications (TS) for surveillance regarding operability of leak detection systems.	Yes	1/31/86
	4.18.1.3	Seismic Qualification	No	Provide procedures or qualify one leak detection system.	Yes	11/30/85
V-11.B	4.21	Residual Heat Removal System Interlock Requirements				
	4.21.2	Overpressurization Protection of Residual Heat Removal System	Yes	Provide TS for operability of overpressure protection system when necessary to protect residual heat removal system.	Yes	1/31/86
VI-1	4.22	Organic Materials and Post-Accident Chemistry	No	Institute periodic inspection program. Program to be done with Type A testing and will be visual inspection.	Yes	Complete

Table 4.1 (Continued)

SEP Topic No.	IPSAR Section No.	Title	Tech. Spec. Changes Required	Modification or Analysis Requirements	Licensee Agrees	Completion Date
VI-4	4.23	Containment Isolation System				
	4.23.1.2	Key Control and Control Panel Access Procedures for Sequencer Doors	No	Provide procedures for control panel access.	Yes	RTS from upcoming outage
	4.23.4	Valve Location	No	Seismically qualify lines. See Topic III-6.	Yes	During 11/30/85 outage
	4.23.5	Isolation of Closed Systems	No	Seismically qualify lines. See Topic III-6	Yes	During 11/30/85 outage
	4.23.6	Isolation Air Handling Unit Cooling Lines	No	Seismically qualify lines. See Topic III-6	Yes	During 11/30/85 outage
	4.23.5	Isolation of Closed Systems	No	Develop procedures to identify when CCW valves need to be closed for containment integrity.	Yes	5/1/86
	4.23.7	Isolation of Branch Lines				
	4.23.7.1	Refueling Water Supply Line	No	Provide administrative procedures and/or locking devices for refueling water line.	Yes	Complete
		Refueling Water Return Line	No	Evaluate when to close valves in refueling water return line and incorporate in procedures as necessary.	Yes	5/1/86
	4.23.7.2	Main Steamlines	No	Provide procedures for isolation following SG tube rupture.	Yes	Complete

Table 4.1 (Continued)

SEP Topic No.	IPSAR Section No.	Title	Tech. Spec. Changes Required	Modification or Analysis Requirements	Licensee Agrees	Completion Date
VI-7.B	4.24	Engineered Safety Feature Switchover From Injection to Recirculation Mode (Automatic Emergency Core Cooling System Realignment)	No	Provide automatic termination of injection and a backup to the single refueling water storage tank level indicator; review procedures and training.	Yes	To be determined in accordance with ILS
VI-7.C.2	4.25	Failure Mode Analysis (Emergency Core Cooling System)				
	4.25.4	Other Modifications	No	Evaluate benefits of incorporating recommended modifications.	Yes	5/1/86
VI-10.A	4.26	Testing of Reactor Trip System and Engineered Safety Features, Including Response-Time Testing				
	4.26.1	Response-Time Testing of Reactor Protection System	Yes	Include testing now in procedures in TS.	Yes	1/31/86
	4.26.2	Testing of Engineered Safety Features	Yes	Include test for Containment Spray Actuation System in TS.	Yes	1/31/86
VII-3	4.28	Systems Required for Safe Shutdown				
	4.28.3	TMI Task Action Plan Item II.E.1.1, "Auxiliary Feedwater System Evaluation"	Yes	Integrated into Topics III-1, III-2, III-4.A, III-5.A, III-5.B, III-6, VIII-3, and XV-2. Install third train auxiliary feedwater.	Yes	Refueling for Cycle 10
VIII-1.A	4.29	Potential Equipment Failures Associated With Degraded Grid Voltage	Yes	Implement modifications and TS for undervoltage protection. Provide voltage monitoring program for tap settings.	Yes	10/31/85

Table 4.1 (Continued)

SEP Topic No.	IPSAR Section No.	Title	Tech. Spec. Changes Required	Modification or Analysis Requirements	Licensee Agrees	Completion Date
VIII-4	4.31	Electrical Penetrations of Reactor Containment	No	No Modifications are required; however, as part of the Environmental Qualification Program, the penetrations of concern will be replaced during the upcoming outage.	Yes	During 11/30/85 outage
IX-3	4.32	Station Service and Cooling Water Systems				
	4.32.3	Component Cooling Water System Passive Failure	No	Install dedicated shutdown system. (Integrated with Seismic and Appendix R requirements.)	Yes	During 11/30/85 outage
	4.32.5	Independence of Salt Water Cooling System Components	No	See Topic VI-7.C.2	Yes	5/1/86
	4.32.7	Salt Water Cooling System Reliability	No	Perform a reliability evaluation of salt water cooling system.	Yes	5/1/86
IX-5	4.33	Ventilation Systems				
	4.33.2	Switchgear and Cable Spreading and 480-V Switchgear Rooms	No	Implement temperature-monitoring program and procedures.	Yes	12/16/85
	4.33.3	Administration Building (Battery and Inverter Room)	No	Develop a procedure for room hydrogen dispersion.	Yes	Complete
IX-6	4.34	Fire Protection	--	Provide dedicated system.	Yes	During 11/30/85 outage

Table 4.1 (Continued)

SEP Topic No.	IPSAR Section No.	Title	Tech. Spec. Changes Required	Modification or Analysis Requirements	Licensee Agrees	Completion Date
XV-1	4.35	Decrease in Feedwater Temperature, Increase in Feedwater Flow, Increase in System Flow, and Inadvertent Opening of a Steam Generator Relief or Safety Valve	No	Determine corrective measures.	Yes	1/31/86
XV-2	4.36	Spectrum of Steam System Piping Failures Inside and Outside Containment (PWR)	--	Install additional train of motor-driven auxiliary feedwater.	Yes	Refueling for Cycle 10

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