UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
612 EAST LAMAR BLVD, SUITE 400
ARLINGTON, TEXAS 76011-4125

September 30, 2010

EA 10-191

Mr. James J. Sheppard
Senior Vice President and
Chief Nuclear Officer
Southern California Edison Company
San Onofre Nuclear Generating Station
P.O. Box 128
San Clemente, CA 92674-0128

SUBJECT: SAN ONOFRE NUCLEAR GENERATING STATION - NRC TRIENNIAL FIRE INSPECTION REPORT 05000361/2010007 and 05000362/2010007 AND NOTICE OF VIOLATION

Dear Mr. Sheppard:

On August 16, 2010, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at the San Onofre Nuclear Generating Station. The enclosed inspection report documents the inspection results, which were discussed during an onsite debrief on July 2, 2010, with Mr. A. Hochevar, Station Manager, and in a telephonic exit meeting on August 16, 2010, with Mr. R. Ridenoure, Senior Vice President and Chief Nuclear Officer, and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, the NRC has identified an issue that was evaluated under the risk significance determination process as having very low safety significance (green). The NRC has also determined that a violation was associated with this issue. The violation was evaluated in accordance with the NRC Enforcement Policy. The current Enforcement Policy is included on the NRC's Web site at (http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html)."]

The violation is cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding it are described in detail in the subject inspection report. The violation is being cited in the Notice because of your failure to correct a significant noncompliance with your License Condition 2.C.(14), "Fire Protection," within the time period for enforcement discretion as described in NRC Enforcement Guidance Memorandum 07-004.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice of Violation when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In addition, a licensee-identified violation which was determined to be of very low safety significance is listed in this report. NRC is treating this violation as a noncited violation (NCV) consistent with Section VI.A.1 of the NRC Enforcement Policy because of the very low safety significance of the violation and because it is entered into your corrective action program. If you contest the noncited violation or its significance, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with copies to: (1) the Regional Administrator, Region IV, 612 East Lamar Blvd., Arlington, TX 76011-4125; (2) the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and (3) NRC Resident Inspector at the San Onofre Nuclear Generating Station. The information you provide will be considered in accordance with Inspection Manual Chapter 0305.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

Sincerely,

/RA/

Neil O'Keefe, Chief
Engineering Branch 2
Division of Reactor Safety

Docket No. 50-361, 50-362
License No. NPF-10, NPF-15

Enclosures:
1. Notice of Violation
2. Inspection Report No. 05000361/2010007 and 05000362/2010007
   w/Enclosure:

cc w/Enclosure:
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Sacramento, CA 95899-7414

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R:_REACTORS_SONGS\2010\SO2010007-RPT-JMM.docx ADAMS ML

ADAMS: ☐ No ☑ Yes		☑ SUNSI Review Complete		Reviewer Initials: NFO
		☑ Publicly Available		☑ Non-Sensitive
		☐ Non-Publicly Available		☐ Sensitive
RIV:SRI/EB2	PSB2	EB2	EB2	EB2
J. Mateychick	I. Anchondo	S. Alferink	N. Okonkwo	E. Uribe
/RA/	/RA/	/RA/	/RA/	/RA/
9/10/10	9/10/10	9/10/10	9/10/10	9/10/10
C:EB2	C:DRP/D	SRA	ACES	C:EB2
N. O'Keefe	R. Lantz	M. Runyan	R. Kellar	N. O'Keefe
/RA/	/RA/	/RA/	/RA/	/RA/
9/29/10	9/30/10	9/30/10	9/30/10	9/30/10

OFFICIAL RECORD COPY T=Telephone E=E-mail F=Fax

NOTICE OF VIOLATION

Southern California Edison
San Onofre Nuclear Generating Station

Docket No. 50-361/ 50-362
License No. NPF-10, NPF-15
EA 10-191

During an NRC inspection conducted from June 14, 2010 through August 16, 2010, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

> License Condition 2.C(14), "Fire Protection," for Units 2 and 3, requires that the licensee shall implement and maintain in effect all provisions of the approved fire protection program as described in the Updated Fire Hazards Analysis through Revision 3 and as approved in the NRC staff's Safety Evaluation Report dated February 1981. The Updated Fire Hazards Analysis through Revision 3 specifies, in part, that fire protection features are provided consistent with the fire hazards analysis for each fire area/zone and the functional requirements necessary to achieve safe shutdown. Methods for assuring that necessary structures, systems and components are free of fire damage are provided. Deviations from the requirements of 10 CFR 50, Appendix R, Section III.G were identified along with the basis for acceptability as providing an equivalent level of protection. For nonalternative shutdown areas other than Fire Area 2-AC-50-29, the fire protection program required compliance with the requirements of 10 CFR 50, Appendix R, Section III.G.1 or III.G.2, unless deviations were specifically requested and approved.
>
> Contrary to License Condition 2.C(14), since initial licensing of Unit 2 on February 16, 1982, the licensee failed to implement and maintain in effect all provisions of the approved fire protection program as described in the Updated Fire Hazards Analysis through Revision 3. Specifically, the licensee failed to ensure that one train of equipment necessary to achieve and maintain hot shutdown conditions from would remain free of fire damage. The licensee relied upon local manual actions to mitigate the effects of potential fire damage rather than provide the physical separation or protection required in the approved fire protection program.
>
> On July 24, 2007, the NRC documented that this noncompliance was identified in Inspection Report 05000361/2007008 and 05000362/2007008. The NRC exercised discretion not to cite this violation at that time because the licensee met the criteria described in Enforcement Guidance Memorandum (EGM) 98-002, Revision 2, and Supplement 2 to that revision. EGM 07-004, issued on June 30, 2007, superseded EGM 98-002 and required licensees to initiate corrective actions and implement compensatory measure for noncompliances related to post-fire operator manual actions, excluding those for multiple-spurious actuations, by September 6, 2007, and to complete corrective actions by March 6, 2009. This violation is being cited due to the failure to complete corrective actions and restore compliance within the required time.

This violation is associated with a Green significance determination process Finding 05000361 and 05000362/2010006-01.

Pursuant to the provisions of 10 CFR 2.201, Southern California Edison Company is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001 with a copy to the

Regional Administrator, Region IV, 612 East Lamar Blvd., Arlington, TX 76011-4125, and a copy to the NRC Resident Inspector at San Onofre Nuclear Generating Station within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation: EA 10-191" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken, and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington DC 20555-0001.

Because your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC's website at www.nrc.gov/reading-rm/pdr.html or www.nrc.gov/reading-rm/adams.html, to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated this 30th day of September 2010.

ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket:	50-361, 50-362
License:	NPF-10, NPF-15
Report Nos.:	05000361/2010007 and 05000362/2010007
Licensee:	Southern California Edison Company
Facility:	San Onofre Nuclear Generating Station, Units 1 and 2
Location:	5000 S Pacific Coast Hwy San Clemente, California
Dates:	June 14 through August 16, 2010
Team Leader:	J. Mateychick, Senior Reactor Inspector, Engineering Branch 2
Inspectors:	S. Alferink, Reactor Inspector, Engineering Branch 2 I. Anchondo, Reactor Inspector, Plant Support Branch 2 N. Okonkwo, Reactor Inspector, Engineering Branch 2 E. Uribe, Reactor Inspector, Engineering Branch 2
Accompanying Personnel:	S. Marquez, Nuclear Safety Professional Development Program, Engineering Branch 2
Approved By:	Neil O'Keefe, Branch Chief Engineering Branch 2 Division of Reactor Safety

SUMMARY OF FINDINGS

IR05000361/2010007 and 05000362/2010007; June 14, 2010, through August 16, 2010; Southern California Edison Company; San Onofre Nuclear Generating Station, Units 2 and 3: Triennial Fire Protection Team Inspection.

The report covered a two-week triennial fire protection team inspection by specialist inspectors from Region IV. One Green finding, which was a cited violation, was identified. The significance of most findings is indicated by their color (Green, White, Yellow, or Red) using Inspection Manual Chapter 0609, "Significance Determination Process." The crosscutting aspect was determined using Inspection Manual Chapter 0310, "Components Within the Cross Cutting Areas." Findings for which the significance determination process does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

Green. The team identified a cited violation of License Condition 2.C(14), "Fire Protection," for failure to correct a noncompliance. Specifically, Inspection Report 05000361;362/2007008 documented a noncompliance involving the failure to ensure that at least one train of safe shutdown equipment would remain free from fire damage in each fire area. The NRC exercised discretion not to cite this violation at that time because the licensee met the criteria described in Enforcement Guidance Memorandum 98-002, Revision 2, and Supplement 2 to that revision. Enforcement Guidance Memorandum 07-004 superseded Enforcement Guidance Memorandum 98-002 and required licensees to complete corrective actions for noncompliances related to post-fire operator manual actions by March 6, 2009. This violation is being cited due to the failure to complete corrective actions and restore compliance within the required time. This finding was entered into the licensee's corrective action program as Notification NN 200940265.

The failure to promptly restore adequate fire protection and/or separation of required safe shutdown systems was a performance deficiency. This performance deficiency was more than minor because it was associated with the protection against external factors (fire) attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events in order to prevent undesirable consequences. Because the violation involved multiple fire areas, the team could not evaluate this issue using Phase 2 of Inspection Manual Chapter 0609, Appendix F, and a Phase 3 significance determination process risk assessment was performed by a senior reactor analyst. The finding was determined to have very low risk significance (Green), with a delta-CDF of 3.2E-8/yr, because of a combination of the availability of long recovery times for feasible operator manual actions and low-probability fire damage scenarios in the nine fire areas with fire sources which could potentially damage cables of required safe shutdown components. This finding involved a cross-cutting aspect in the decision-making component in the human performance area because the licensee failed to make a risk-significant decision using a systematic process when considering the scheduling of corrective actions [H.1(a)] (Section 1R05.01)(EA 10-191).

B. Licensee-Identified Violations

A violation of very low safety significance that was identified by the licensee was reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. This violation and the corrective action tracking number are listed in Section 4OA7 of this report.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R05 Fire Protection (71111.05TTP)

This report presents the results of a triennial fire protection inspection conducted in accordance with NRC Inspection Procedure 71111.05TTP, "Fire Protection-NFPA Transition Period (Triennial)," at the San Onofre Nuclear Generating Station. The licensee committed to adopt a risk informed fire protection program in accordance with National Fire Protection Association (NFPA) 805, but has not yet completed the program transition. The inspection team evaluated the implementation of the approved fire protection program in selected risk-significant areas, with an emphasis on the procedures, equipment, fire barriers, and systems that ensure the post-fire capability to safely shutdown the plant.

Inspection Procedure 71111.05TTP requires the selection of three to five fire areas for review. The inspection team used the fire hazards analysis section of the San Onofre Nuclear Generating Station Individual Plant Examination of External Events to select the following three risk-significant fire areas (inspection samples) for review:

- Fire Area 2-AC-9-5 Cable Spreading Room
- Fire Area 2-AC-50-29 Auxiliary Building, Lobby/Motor Control Area
- Fire Area 2-DG-30-158 Diesel Generator Room A

The inspection team evaluated the licensee's fire protection program using the applicable requirements, which included plant Technical Specifications, Operating License Condition 2.C.(14), NRC safety evaluations, 10 CFR 50.48, and Branch Technical Position 9.5-1. The team also reviewed related documents that included the Final Safety Analysis Report (FSAR), Section 9.5; the fire hazards analysis; and the post-fire safe shutdown analysis.

Specific documents reviewed by the team are listed in the attachment. Three inspection samples were completed.

.1 Protection of Safe Shutdown Capabilities

a. Inspection Scope

The team reviewed the piping and instrumentation diagrams, safe shutdown equipment list, safe shutdown design basis documents, and the post-fire safe shutdown analysis to verify that the licensee properly identified the components and systems necessary to achieve and maintain safe shutdown conditions for fires in the selected fire areas. The team observed walkdowns of the procedures used for achieving and maintaining safe shutdown in the event of a fire to verify that the procedures properly implemented the safe shutdown analysis provisions. The team focused on the critical functions that must be ensured in order to achieve and maintain post-fire safe shutdown conditions.
For the sample fire areas, the team reviewed the separation of redundant safe shutdown cables, equipment, and components located within the same fire area. The team also

reviewed the licensee's method for meeting the requirements of Branch Technical Position 9.5-1, Appendix A; and 10 CFR Part 50, Appendix R, Section III.G. Specifically, the team evaluated whether at least one post-fire safe shutdown success path remained free of fire damage in the event of a fire. In addition, the team verified that the licensee met applicable license commitments.

b. Findings

Introduction. The team identified a Green, cited violation of License Condition 2.C(14), "Fire Protection," for failure to correct a noncompliance. Specifically, Inspection Report 05000361;362/2007008 documented a noncompliance involving the failure to ensure that at least one train of safe shutdown equipment would remain free from fire damage in each fire area. The NRC exercised discretion not to cite this violation at that time because the licensee met the criteria described in applicable Enforcement Guidance Memoranda. During this inspection, the team identified that the licensee failed to restore compliance by March 6, 2009, as required.

Discussion. On July 24, 2007, the NRC documented in Inspection Report 05000361/2007008 and 05000362/2007008 that the licensee was relying on operator manual actions to restore equipment required to achieve and maintain a safe shutdown condition in the event of fire because they had failed to ensure that at least one train of safe shutdown equipment was free of fire damage in each fire area. This was identified as a noncompliance with License Condition 2.C(14), "Fire Protection." The NRC exercised discretion not to cite this violation at that time because the licensee met the criteria described in Enforcement Guidance Memorandum (EGM) 98-002, Revision 2, and Supplement 2 to that revision. EGM 07-004, issued on June 30, 2007, superseded EGM 98-002 and required licensees to initiate corrective actions and implement compensatory measures for noncompliances related to post-fire operator manual actions, excluding those for multiple-spurious actuations, by September 6, 2007, and to complete corrective actions by March 6, 2009. This issue was placed into the corrective action program under Action Request 070600585 and supplemented the manual actions with compensatory measures in the form of hourly fire watches.

During this inspection, the team requested that the licensee provide the status of the corrective actions for the existing identified noncompliances subject to EGM 07-004. The licensee indicated the understood that the period of discretion was extended until they completed their transition to a risk-informed fire protection program under NFPA 805, since they had committed to adopt such a program after the violation was identified. Further, the licensee intended to use the processes allowed under NFPA 805 to address the issues, rather than to restore compliance under their existing fire protection program.

The team determined that the licensee had failed to meet the conditions of the applicable enforcement discretion, and that the timing of their commitment to adopt a risk-informed fire protection program would not change the required time to restore compliance, or allow using risk-informed methods to address the issue. The following discussion briefly summarizes the applicability of the enforcement guidance.

Enforcement Guidance Memorandum 98-002 provided enforcement guidance pertaining to noncompliances involving fire induced circuit failures. This guidance allowed exercising discretion while the generic issue was addressed with industry, provided that the noncompliances were entered into the corrective action program and compensatory

measures put in place. In 2007, the fire protection inspection team identified that the licensee's safe shutdown analysis relied upon manual actions to mitigate the effects of fire damage to redundant trains of safe shutdown equipment, rather than ensuring that one train of this equipment was free of fire damage. The NRC issued an apparent violation of License Condition 2.C(14) for this issue, and exercised enforcement discretion because the licensee met the criteria described in EGM 98-002, Revision 2, and Supplement 2 to that revision.

EGM 98-002, Revision 2, Supplement 2 stated that the discretionary period would be extended until the Commission approves a new enforcement discretion policy for circuit failure issues. EGM 07-004, issued on June 30, 2007, superseded EGM 98-002 and required licensees to initiate corrective actions and implement compensatory measure for noncompliances related to post-fire operator manual actions, excluding those for multiple-spurious actuations, by September 6, 2007, and to complete those corrective actions by March 6, 2009.

On March 28, 2008, the licensee submitted their letter of intent to adopt a risk-informed fire protection program under NFPA 805. However, the NRC's Interim Enforcement Discretion Policy allowed enforcement discretion for existing identified noncompliances only for licensees that submitted a letter of intent to transition to 10 CFR 50.48(c) by December 31, 2005. After December 31, 2005, this enforcement discretion was not available for existing identified noncompliances, and the requirements of 10 CFR 50.48(b) (and other requirements in fire protection license conditions) are to be enforced in accordance with normal enforcement practices.

The team concluded that the licensee failed to restore these noncompliances by the date required per EGM 07-004, and submitting a letter of intent to adopt a risk-informed fire protection program after December 31, 2005 did not qualify these NRC-identified noncompliances, which existed at the time of this commitment letter, to be covered by enforcement discretion under the NRC's Interim Enforcement Discretion Policy. This issue was entered into the licensee's corrective action program as Notification NN 200940265.

Analysis. The failure to promptly restore adequate fire protection and/or separation of required safe shutdown systems was a performance deficiency. This performance deficiency was more than minor because it was associated with the protection against external factors (fire) attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events in order to prevent undesirable consequences. Because the violation involved multiple fire areas, the team could not evaluate this issue using Phase 2 of Inspection Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," so a Phase 3 significance determination process risk assessment was performed by a senior reactor analyst.

The team identified components required for post-fire safe shutdown that were operated using manual actions to restore the required safe shutdown function due to potential fire damage. The team performed walk-downs of the cables associated with the credited pumps, valves, and electrical switchgear to identify possible fire sources that might damage those cables. The team identified potential fire source-target combinations and provided this information to the senior reactor analyst.

A total of nine fire scenarios in five fire areas were identified where the use of operator manual actions in lieu of protecting the equipment from fire damage added to the core damage frequency. In five of the fire scenarios, the time frame available to perform the actions exceeded 1 hour, and, in the absence of deficiencies associated with procedures or training, the analyst dismissed them from the risk quantification. The other four fire scenarios were assessed based on the fire frequency, the conditional core damage probability result of the SPAR model for the equipment targeted by the fire, credit for automatic detection and suppression, and the human error probability for the manual actions as determined by the SPAR-H method of assigning performance shaping factors. The overall result was a delta-CDF of 3.2E-8/yr. Therefore, the finding was determined to have very low risk significance (Green).

This finding involved a cross-cutting aspect in the decision-making component in the human performance area because the licensee failed to make a risk-significant decision using a systematic process when considering the scheduling of corrective actions [H.1(a)].

Enforcement. License Condition 2.C(14) "Fire Protection," states, in part, that the licensee shall implement and maintain in effect all provisions of the approved fire protection program as described in the Updated Fire Hazards Analysis through Revision 3 and as approved in the NRC staff's Safety Evaluation Report dated February 1981. The requirement of 10 CFR 50, Appendix R, Section III.G is that one train of equipment necessary to achieve and maintain hot shutdown conditions remain free of fire damage. The use of local operator manual actions were specifically submitted and approved by the NRC for alternative shutdown areas, as well as for one fire area (Fire Area 2-AC-50-29). For other nonalternative shutdown areas, the fire protection program was approved based upon compliance with the requirements of 10 CFR 50, Appendix R, Section III.G.1 or III.G.2.

Contrary to this requirement, the licensee failed to implement and maintain in effect all provisions of the approved fire protection program as described in the Updated Fire Hazards Analysis through Revision 3. Specifically, the licensee failed to ensure that one train of equipment necessary to achieve and maintain hot shutdown conditions would remain free of fire damage.

Because the licensee failed to correct this violation within the allowed enforcement discretion period, this violation is being treated as a cited violation, consistent with the NRC Enforcement Policy, Section VI.A.1, which states, in part, that a cited violation requiring a formal written response from a licensee will be considered if the licensee failed to restore compliance within a reasonable time after a violation was identified. The NRC Enforcement Manual further explains that the purpose of this criterion is to emphasize the need to take appropriate action to restore compliance in a reasonable period of time once the licensee becomes aware of the violation, and take compensatory measures until compliance is restored when compliance cannot be reasonable restored within a reasonable period of time. The licensee had compensatory measures in place; however, compliance had not been restored.

This violation is identified as VIO 05000361/2010007-01 and 05000362/2010007-01, "Failure to Ensure At Least One Train of Equipment Necessary to Achieve Hot Shutdown Conditions Is Free of Fire Damage." (EA 10-191)

.2 Passive Fire Protection

a. Inspection Scope

The team walked down accessible portions of the selected fire areas to observe the material condition and configuration of the installed fire area boundaries (including walls, fire doors, and fire dampers) and verify that the electrical raceway fire barriers were appropriate for the fire hazards in the area. The team compared the installed configurations to the approved construction details, supporting fire tests, and applicable license commitments.

The team reviewed installation, repair, and qualification records for a sample of penetration seals to ensure the fill material possessed an appropriate fire rating and that the installation met the engineering design. The team also reviewed similar records for the rated fire wraps to ensure the material possessed an appropriate fire rating and that the installation met the engineering design.

b. Findings

No findings were identified.

.3 Active Fire Protection

a. Inspection Scope

The team reviewed the design, maintenance, testing, and operation of the fire detection and suppression systems in the selected fire areas. The team verified the manual and automatic detection and suppression systems were installed, tested, and maintained in accordance with the NFPA code of record or approved deviations, and that each suppression system was appropriate for the hazards in the selected fire areas.

The team performed a walkdown of accessible portions of the detection and suppression systems in the selected fire areas. The team also performed a walkdown of major system support equipment in other areas (e.g., fire pumps and Halon supply systems) to assess the material condition of these systems and components.

The team assessed the fire brigade capabilities by reviewing training, qualification, and drill critique records. The team also reviewed pre-fire plans and smoke removal plans for the selected fire areas to determine if appropriate information was provided to fire brigade members and plant operators to identify safe shutdown equipment and instrumentation, and to facilitate suppression of a fire that could impact post-fire safe shutdown capability. In addition, the team inspected fire brigade equipment to determine operational readiness for fire fighting.

The team observed an unannounced fire drill, conducted on July 1, 2010, and the subsequent drill critique using the guidance contained in Inspection Procedure 71111.05AQ, “Fire Protection Annual/Quarterly.” The team observed fire brigade members fight a simulated fire in the Unit 3 diesel generator building. The team verified that the licensee identified problems, openly discussed them in a self-critical manner at the drill debrief, and identified appropriate corrective actions. Specific attributes evaluated were: (1) proper wearing of turnout gear and self-contained

breathing apparatus; (2) proper use and layout of fire hoses; (3) employment of appropriate fire fighting techniques; (4) sufficient fire fighting equipment was brought to the scene; (5) effectiveness of fire brigade leader communications, command, and control; (6) search for victims and propagation of the fire into other areas; (7) smoke removal operations; (8) utilization of pre-planned strategies; (9) adherence to the preplanned drill scenario; and (10) drill objectives.

b. Findings

No findings were identified.

.4 Protection From Damage From Fire Suppression Activities

a. Inspection Scope

The team performed plant walkdowns and document reviews to verify that redundant trains of systems required for hot shutdown, which are located in the same fire area, would not be subject to damage from fire suppression activities or from the rupture or inadvertent operation of fire suppression systems. Specifically, the team verified that:

- A fire in one of the selected fire areas would not directly, through production of smoke, heat, or hot gases, cause activation of suppression systems that could potentially damage all redundant safe shutdown trains.

- A fire in one of the selected fire areas or the inadvertent actuation or rupture of a fire suppression system would not directly cause damage to all redundant trains (e.g., sprinkler-caused flooding of other than the locally affected train).

- Adequate drainage is provided in areas protected by water suppression systems.

b. Findings

No findings were identified.

.5 Alternative Shutdown Capability

a. Inspection Scope

Review of Methodology

The team reviewed the safe shutdown analysis, fire hazards analysis, operating procedures, piping and instrumentation drawings, electrical drawings, FSAR, and other supporting documents to verify that hot and cold shutdown could be achieved and maintained for fires in areas where the licensee's post-fire safe shutdown strategy relied on manipulating shutdown equipment from outside the control room. The team verified that hot and cold shutdown could be achieved and maintained with or without offsite power available.

The team conducted plant walkdowns to verify that the plant configuration was consistent with the description contained in the safe shutdown and fire hazards analyses. The team focused on ensuring the adequacy of systems selected for

reactivity control, reactor coolant makeup, reactor decay heat removal, process monitoring instrumentation, and support systems functions.

The team also verified that the systems and components credited for shutdown would remain free from fire damage. Finally, the team verified that the transfer of control from the control room to the alternative shutdown location would not be affected by fire-induced circuit faults. Specifically, the team verified that electrical isolation from the control room would occur to ensure fire-induced circuit faults would not affect alternative shutdown capabilities (e.g., by the provision of separate fuses and power supplies for alternative shutdown control circuits).

Review of Operational Implementation

The team verified that licensed and nonlicensed operators received training on the alternative shutdown procedure. The team also verified that a sufficient number of personnel, exclusive of those assigned as fire brigade members, are trained and available onsite at all times to perform an alternative shutdown.

The team reviewed the adequacy of the procedures utilized for alternative shutdown and performed an independent walkthrough of the procedure to ensure the adequacy of implementation. The team also verified that the operators could be reasonably expected to perform specific short-term actions within the time required to maintain plant parameters within specified limits. Some of the short-term actions verified include the restoration of alternating current electrical power, establishing control at the remote shutdown panel, establishing reactor coolant makeup, and establishing decay heat removal.

The team reviewed periodic surveillance testing of the alternative shutdown transfer capability, including transfer and isolation of instrumentation and control functions, to verify that the tests were adequate to demonstrate the functionality of the alternative shutdown capability.

b. Findings

No findings were identified.

.6 Circuit Analysis

a. Inspection Scope

This segment of the inspection is suspended for plants in transition to a risk-informed fire protection program in accordance with NFPA 805. Therefore, the team did not evaluate this area.

b. Findings

No findings were identified.

.7 Communications

a. Inspection Scope

The team reviewed the adequacy of the communication systems to support plant personnel in the performance of alternative shutdown functions and fire brigade duties. The team evaluated the environmental impacts such as ambient noise levels, coverage patterns, and clarity of reception. The team verified that the design and location of communications equipment such as repeaters, private branch exchanges, and transmitters would not cause a loss of communications during a fire.

The team also verified the contents of designated storage lockers and reviewed the alternative shutdown procedure to verify that portable radio communications and fixed emergency communications systems were available, operable, and adequate for the performance of designated activities.

b. Findings

No findings were identified.

.8 Emergency Lighting

a. Inspection Scope

The team reviewed the portion of the emergency lighting system required for alternative shutdown to verify that it was adequate to support the performance of manual actions required to achieve and maintain safe shutdown conditions and to illuminate access and egress routes to the areas where manual actions would be required. The team evaluated the locations and positioning of the fixed emergency lights during walkthroughs of the alternative shutdown procedures.

The team verified that the licensee installed emergency lights with an 8-hour capacity, maintained the emergency light batteries in both fixed and portable configurations in accordance with manufacturer recommendations, and tested and performed maintenance in accordance with plant procedures and industry practices.

b. Findings

No findings were identified.

.9 Cold Shutdown Repairs

a. Inspection Scope

The team reviewed the licensee's safe shutdown analysis and plant procedures for responding to fires and implementing safe shutdown activities in order to determine if any repairs were required in order to achieve cold shutdown. The updated fire hazards analysis report identified repairs to replace two instruments needed to support operations of the shutdown cooling system that might be damaged by fire. The repairs were potentially required in order to reach cold shutdown based on the safe shutdown methodology implemented.

The team verified that the replacement instruments, fittings and tools were available and calibrated, and the procedure to install them would work as intended. The team also evaluated whether cold shutdown could be achieved within the required time using the licensee's procedures and repair methods.

b. Findings

No findings were identified.

.10 Compensatory Measures

a. Inspection Scope

The team verified that compensatory measures were implemented for out of service, degraded, or inoperable fire protection and post-fire safe shutdown equipment, systems, or features (e.g., detection and suppression systems and equipment; passive fire barriers; or pumps, valves, or electrical devices providing safe shutdown functions). The team also verified that the short-term compensatory measures compensated for the degraded function or feature until appropriate corrective action could be taken and that the licensee was effective in returning the equipment to service in a reasonable period of time.

b. Findings

No findings were identified.

.11 B.5.b Inspection Activities

a. Inspection Scope

The team reviewed the licensee's implementation of guidance and strategies intended to maintain or restore core cooling, containment cooling, and spent fuel pool cooling capabilities under the circumstances associated with loss of large areas of the plant due to explosions or fire as required by Section B.5.b of the Interim Compensatory Measures Order, EA-02-026, dated February 25, 2002, and 10 CFR 50.54(hh)(2).

The team reviewed licensee's strategies to verify that they continued to maintain and implement procedures, maintain and test equipment necessary to properly implement the strategies, and ensure station personnel are knowledgeable and capable of implementing the procedures. The team performed a visual inspection of portable equipment used to implement the strategy to ensure availability and material readiness of the equipment, including the adequacy of portable pump trailer hitch attachments, and verify the availability of onsite vehicles capable of towing the portable pump. The team assessed the offsite ability to obtain fuel for the portable pump, and foam used for firefighting efforts. The strategies and procedures selected for this inspection sample included:

- SOG-EO-0014, "Firewater to Plant Systems-Condensate Storage Tank (CST) Make-up," Revision 1

- SO23-V-5.100, “Engineering Procedure,” Revision 1, Attachment 11, “Makeup to Condensate Storage Tanks (CSTs)”

b. Findings

A licensee-identified violation related to B.5.b is discussed in Section 4OA7 of this report. No other findings were identified.

4. OTHER ACTIVITIES [OA]

4OA2 Identification and Resolution of Problems

Corrective Actions For Fire Protection Deficiencies

a. Inspection Scope

The team selected a sample of condition reports associated with the licensee's fire protection program to verify that the licensee had an appropriate threshold for identifying deficiencies. In addition the team reviewed the corrective actions proposed and implemented to verify that they were effective in correcting identified deficiencies. The team also evaluated the quality of recent engineering evaluations through a review of condition reports, calculations, and other documents during the inspection.

b. Findings

No findings were identified.

4OA6 Meetings, Including Exit

Debrief Meeting Summary

The team presented the preliminary inspection results to Mr. A. R. Hochevar, Station Manager, and other members of the licensee staff at a debrief meeting on July 2, 2010. The licensee acknowledged the findings presented. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

Exit Meeting Summary

The team presented the inspection results to Mr. R. T. Ridenoure, Senior Vice President and Chief Nuclear Officer, and other members of the licensee staff at an exit meeting on August 16, 2010. The licensee acknowledged the findings presented. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

4OA7 Licensee-Identified Violations

The following violation of very low safety significance (Green) was identified by the licensee and is a violation of NRC requirements which meets the criteria of Section VI of the NRC Enforcement Policy, for being dispositioned as a noncited violation.

License Condition 2.C(26) and 2.C(27), “Mitigation Strategy License Condition,” for Units 2 and 3 respectively, requires the licensee to develop and maintain strategies for addressing large fires and explosions. One strategy relied on a skid mounted pump with a non-collapsible hose to provide makeup for the reactor water storage tank. Contrary to the above, on June 9, 2010, the licensee identified during a flow/pressure test that the strategy was unavailable because the hose was not rated for the system pressure and uncoupled during the test. The finding is greater than minor because a strategy was unavailable and unrecoverable, as defined by Inspection Manual Chapter 0609, Appendix L, “B.5.b Significance Determination Process.” The finding is Green because the failure to assess the adequacy of fire fighting assets would have caused an unrecoverable unavailability of only one mitigating strategy. The issue was entered into the licensee’s corrective action program as Nuclear Notifications (NN) 200960081 and 200959384.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel
R. Abesamis, Design Engineering
J. Appel, Engineer, Licensing
D. Arai, Maintenance/Systems Engineering
A. Bates, Manager, Systems Engineering
D. Bauder, Site Vice President and Station Manager
K. Brockman, Consultant
J. Carnes, Fire Department
G. Chung, Probabalistic Risk Assessment
L. Conklin, Manager, Nuclear Regulatory Affairs
G. Cook, Manager, Compliance
R. Corbett, Director, Performance Improvement
J. Dahl, Shift Manager, Operations
A. Dharmapal, Licensing
M. DeMarco, Site Representative, San Diego Gas & Electric
A. Dharmapal, Nuclear Oversight
D. Ensminger, Manager, Site Emergency Preparedness
F. Giaco, Supervisor, Design Engineering
A. Hochevar, Station Manager
M. Hojati, Manager, Design Engineering
E. Hubley, Director, Maintenance
A. Kline, Operations
G. Kline, Senior Director, Engineering
B. MacKissock, Director, Operations
J. Madigan, Director, Recovery Projects
M. McBrearty, Project Manager, Nuclear Regulatory Affairs
T. McCool, Plant Manager
J. McGaw, Manager, Maintenance/Systems Engineering
A. Ockert, Maintenance/Systems Engineering
T. O'Meara, Manager, Nuclear Safety Culture
R. Richter, Supervisor, Maintenance/Systems Engineering
R. Ridenoure, Senior Vice President and Chief Nuclear Officer
S. Root, Project Manager, Nuclear Regulatory Affairs
C. Ryan, Manager, Maintenance
S. Ryba, Project Manager, Performance Improvement
R. St. Onge, Director, Nuclear Regulatory Affairs
D. Spires, Director, Work Control
M. Steinkamp, Manager, Operations
C. Vadoli, Design Engineering
B. Wallace, Director, Nuclear Training

NRC personnel
G. Warnik, Senior Resident Inspector
J. Reynoso, Resident Inspector
E. Ruesch, Resident Inspector

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

05000361 and 05000362/2010007-01 VIO Failure to Ensure At Least One Train of Equipment Necessary to Achieve Hot Shutdown Conditions Is Free of Fire Damage (Section 1R05) (EA 10-191)

LIST OF DOCUMENTS REVIEWED

CALCULATIONS

Number	Title	Revision/ Date
E4C-110	Common Power Analysis for Appendix R Compliance	2
FHAC – 23	Fire Hazard Analysis SONGS 2&3	January 3, 1984
M-8910-TARL-WL-029	GL 89-10 Weak Link Evaluation of MOV Group No. 29	0
M-8910-WKMT-WL-032	GL 89-10 Weak Link Evaluation of MOV Group No. 32	0
M-8910-WKMT-WL-039	GL 89-10 Weak Link Evaluation of MOV Group No. 39	0
M-DSC-340	Seismic Evaluation of MOV 2/3HV9336 for New Operator	0
N-0220-038	Plant Transient Response to Selected Appendix R Scenarios	2

DRAWINGS

Number	Title	Revision/ Date
30119, Sheet 1	One Line Diagram, 800 MHz Radio Equipment, 2Q800N and 3Q800N	3
30119, Sheet 2	One Line Diagram, 800 MHz Radio Equipment, 2Q800N and 3Q800N	3
30137	One Line Diagram 480 V Motor Control Center	38
30137	One Line Diagram 480 Volt Motor Control Center	38
30142	One Line Diagram 480V Motor Control Center 2BJ	31

Number	Title	Revision/ Date
30164	One Line Diagram 480 Volt Motor Control Center	42
30177	One Line Diagram, N1E 125V DC Distribution Panels 2D5P1, 2D5P2, 2D5P3 & 2D5P4	35
30190	One Line Diagram, Non-1E 125V DC & 250V DC Power System	30
30191	Elementary Diagram, Circuit Breaker, Internal Mechanism	14
30330	Elementary Diagram, Diesel Generator 2G002 Protection DC System	29
30342, Sheet 1	Elementary Diagram, Diesel Generator 2G002 Control DC System	12
30342, Sheet 3	Elementary Diagram, Diesel Generator 2G002 Control DC System	11
30345	Elementary Diagram Diesel Generator 2G002 Accessories	7
30641	Elementary Diagram, Reactor Low Pressure Safety Injection Pump P015	17
30649	Elementary Diagram, Reactor-LPSI Header TO Reactor Coolant Loop 2B HV9331	15
30701	Elementary Diagram Reactor Auxiliaries Component Cooling Water Pump P024	24
30703	Elementary Diagram, Reactor Auxiliaries, Component cooling Water Pump P026	22
30747	Elementary Diagram Reactor Auxiliaries Charging Pump P190	21
30798	Elementary Diagram, Reactor Aux – Component Cooling Water Critical Loop to Letdown Heat Exchanger Solenoid	8
30920	Elementary Diagram Feedwater and Condensate Auxiliary Feedwater to Steam Generator	13
30946	Elementary Diagram Feewater & Condensate Auxiliary Feedwater	17
31101	Elementary Diagram Plant Auxiliaries, Auxiliary Feedwater Pump Motor P141	23

Number	Title	Revision/ Date
31374	Elementary Diagram Heating, Ventilation and Air Conditioning (HVAC) Plant-Diesel Generator Building Emergency Cooling Fan A274	14
33374	Elementary Diagram Heating, Ventilation and Air Conditioning (HVAC) Plant-Diesel Generator Building Emergency Cooling Fan A274	15
35068	Unit 3 Diesel Generator Building Exposed Conduit Plan	10
35100	Area 2C1, Conduit and Tray Plan, Elevation (-) 15'-0" to 8'- 0"	21
35101	Area 2C1, Conduit and Tray Plan, Elevation 8-0" to 30'-6"	20
35104	Area 2C2, Conduit and Tray Plan, Elevation (-) 15'-6" to 8'-0"	18
35105	Area 2C2, Conduit and Tray Plan, Elevation (-) 2'-6" to 30'- 6"	22
35172	Area 2C5, Conduit and Tray Plan Mechanical, Electrical Penetration Room Elevation 30'-0"-45-0"	22
35173	Area 2C9, Conduit and Tray Plan Mechanical, Electrical Penetration Room Elevation 30'-6" to 45'-0"	25
35194	Area 2C5, Conduit and Tray Plan, Electrical Penetration Room Elevation 45' – 0"	29
35195	Area 2C9, Conduit and Tray Plan, Electrical Penetration Room Elevation 45'- 0"	27
35197	Area 2C5, Conduit and Tray Plan, Electrical Penetration Room Elevation 63'-6"	31
35198	Area 2C9, Conduit and Tray Plan, Electrical Penetration Room Elevation 45'-0"	17
35200	Area 2C7 Conduit Plan	9
35201	Area 2C7 Conduit & Tray Plan	20
35203	Area 2C11 Conduit & Tray Plan	14
35262	Area 2C13, Conduit and Tray Plan, Electrical Penetration Room Elevation 63'-6"	31

Number	Title	Revision/ Date
35264	Area 2C13, Conduit and Tray Plan, Electrical Penetration Room Elevation 63'-6"	18
35420	Area CA3, Conduit and Tray Plan, Elevation 9'-0" to 24'- 0"	31
35421	Area CA3, Conduit and Tray Plan, Elevation 24-0" to 37'- 0"	27
35422	Area CA3, Conduit and Tray Plan, Elevation 37'-0" to 50'- 0"	20
35423	Area CA3, Conduit and Tray Plan, Elevation 50'-0" to 63'- 6"	22
35424, Sheet 1	Area CA3, Conduit and Tray Plan, Elevation 63'-0" to 85'- 0"	23
35428, Sheet 1	Area CA5, Conduit and Tray Plan, Elevation 24'-0" to 37'- 0"	24
35429	Area CA5, Conduit and Tray Plan, Elevation 37'-0" to 50'- 0"	26
35430	Area CA5, Conduit and Tray Plan, Elevation 50'-0" to 63'- 6"	22
35431, Sheet 1	Area CA5, Conduit and Tray Plan, Elevation 63'-6" to 85'- 0"	21
35474	Area CA7 Conduit & Tray Plan	8
35474, Sheet 1	Area CA7 Conduit & Tray Plan	42
35474, Sheet 2	Area CA7 Conduit & Tray Plan	9
35475, Sheet 1	Area CA7 Conduit & Tray Plan	29
35480, Sheet 1	Control Bldg. – Area CA9 Conduit & Tray Plan	39
35481	Area CA9, Conduit and Tray Plan, Elevation 30'-0" to 50'- 0"	37
35482, Sheet 1	Area CA9 Conduit & Tray Plan	39 and 40
35483, Sheet 1	Control Bldg. – Area CA9 Conduit & Tray Plan	17
35502, Sheet 1	Area CA7 Conduit & Tray Plan	37
35502, Sheet 2	Area CA8 Conduit & Tray Plan	6
35503, Sheet 1	Area CA8 Conduit & Tray Plan	20

Number	Title	Revision/ Date
35506, Sheet 1	Control Bldg Area CA10	37
35507, Sheet 1	Area CA10, Conduit and Tray Plan, Elevation 30'-0" to 50"-0"	36
35508, Sheet 1	Area CA10, Conduit and Tray Plan, Elevation 50'-0" to 70"-0"	35
35509, Sheet 1	Area CA10 Conduit & Tray Plan	18
35754	Area 3C5, Conduit and Tray Plan, Electrical Penetration Room Elevation 45'- 0"	20
35755	Area 3C9, Conduit and Tray Plan, Electrical Penetration Room El 45'-0"	23
35757, Sheet 1	Area 3C5, Conduit and Tray Plan, Electrical Penetration Room Elevation 63'- 6"	21
35758, Sheet 1	Area 3C9, Conduit and Tray Plan, Electrical Penetration Room Elevation 63 -6"	26
35780	Area 3C7 Conduit Plan	7
35781	Area 3C7 Conduit & Tray Plan	12
36602 Sheet 6	Fire Zones Diesel Generator Bldg. Unit 2 Elevation 30'-6"	1
36602 Sheet 23	Fire Zones Control Bldg. Units 2 & 3 Elevation 9'-0"	1
36602 Sheet 26	Fire Zones Control Bldg. Units 2 & 3 Elevation 50'-0"	2
40111A	P&I Diagram Reactor Coolant System	41
40111B	P&I Diagram Reactor Coolant System	31
40111C	P&I Diagram Reactor Coolant System	23
40112A	P&I Diagram Safety Injection System	35
40112B	P&I Diagram Safety Injection System	36
40112BS03	P&I Diagram Safety Injection System	37
40112C	P&I Diagram Safety Injection System	24
40112D	P&I Diagram Safety Injection System	25
40112DSO3	P&I Diagram Safety Injection System	24
40113A	P&I Diagram Safety Injection System	17

Number	Title	Revision/ Date
40113B	P&I Diagram Safety Injection System	16
40114A	P&I Diagram Containment Spray System	15
40114B	P&I Diagram Containment Spray System	18
40114D	P&I Diagram Containment Spray System	20
40123A	P&I Diagram Reactor Coolant Chemical and Volume Control System	37
40123B	P&I Diagram Reactor Coolant Chemical and Volume Control System	42
40124A	P&I Diagram Reactor Coolant Chemical and Volume Control System	27
40124B	P&I Diagram Reactor Coolant Chemical and Volume Control System	33
40125A	P&I Diagram Reactor Coolant Chemical and Volume Control System	17
40125B	P&I Diagram Reactor Coolant Chemical and Volume Control System	21
40126A	P&I Diagram Component Cooling Water System	28
40126B	P&I Diagram Component Cooling Water System	28
40127A	P&I Diagram Component Cooling Water System	29
40127C	P&I Diagram Component Cooling Water System	45
40127D	P&I Diagram Component Cooling Water System	17
40127E	P&I Diagram Component Cooling Water System	22
40127F	P&I Diagram Component Cooling Water System	35
40127G	P&I Diagram Component Cooling Water System	16
40127J	P&I Diagram Component Cooling Water Safety Related Makeup System	4
40130A	P&I Diagram Reactor Coolant Pump	29
40141A	P & I Diagram, Main Steam System	36
40141AS03	P & I Diagram, Main Steam System	28
40141C	P & I Diagram, Main Steam System	39

Number	Title	Revision/ Date
40141D	P & I Diagram, Main Steam System	46
40141G	P & I Diagram, Main Steam System, Electro-Hydraulic Valve 2HV-8204 System	20
40141H	P & I Diagram, Main Steam System, Electro Hydraulic valve 2HV-8205 System	22
40150DS03	P&I Diagram Condensate Pump System	40
40156B	P & I Diagram, High Pressure Feedwater System	38
40156C	P & I Diagram, High Pressure Feedwater Safety System	15
40156D	P & I Diagram, High Pressure Feedwater System, Eectro Hydraulic Valve 2HV-4052	18
40160A	P&ID Auxiliary Feedwater System	43
40160AS03	P & I D Auxiliary Feedwater System	37
40160B	P&I Diagram Auxiliary Feedwater Steam System	24
40160C	P&ID Auxiliary Feedwater System	8
40172B	P & I Diagram, Containment HVAC System (Emergency)	17
40178A	P & I Diagram, Misc Ventilating System	14
40179A	P & I Diagram, Aux BLDG Emergency Chilled Water System, Loop A	31
40180D	P & I Diagram, Aux BLDG Emergency Chilled System, Water Chiller E335	15
40183A	P & I Diagram Fire Protection System	26
40184B	P & I Diagram Fire Protection System	37
40188A	P & I Diagram Fire Protection System	18
476129-1	800 MHz SONET OC-3Ring	June 8, 2006
5160013-A	Block & Level Diagram, 450/800 MHz Antenna Distribution System	July 16, 2003
FDG-J2-FT-0306	Isometric For 2FT-0306	10
S2-1204-ML-038,	Isometric Drawing S2-1204-ML-038-14” – C-KE1	19

Number	Title	Revision/ Date
Sheet 2		
SO23-403-24-278	Station Fire Protection Surveillance Sprinkler Nozzles	1
SO23-403-24-282	Station Fire Protection Surveillance Sprinkler Nozzles	1
SO23-403-24-293	Station Fire Protection Surveillance Sprinkler Nozzles	1
SO23-403-24-322	Station Fire Protection Surveillance Sprinkler Nozzles	5
SO23-403-24-323	Station Fire Protection Surveillance Sprinkler Nozzles	3
SO23-403-24-324	Station Fire Protection Surveillance Sprinkler Nozzles	2
SO23-403-24-330	Station Fire Protection Surveillance Sprinkler Nozzles	1

ENGINEERING REPORTS

Number	Title	Revision
90035AK	Appendix R Compliance, Alternative Shutdown Capability	3
90035AO	Manual Action Feasibility Evaluation	9
90035BH	Valve Stroke Time Calculation	1
90035BI	Appendix R Time Line Calculations for Manual Actions	5
90035BS	SO23-13-21 Fire Area Summary	5
90035CA	Unit 2 Safe Shutdown Logic Diagram	1
90035CB	Unit 2 Safe Shutdown Logic Diagram	3
SO23-307-10A-1-M61	800 MHz Radio Coverage Survey	0

FIRE IMPAIRMENTS

09010043-00	10030077-00			

MISCELLANEOUS DOCUMENTS

Number	Title	Revision
DBD-SO23-TR-AR	Appendix R Safe Shutdown Topical Design Basis Document	13

Number	Title	Revision
DBD-SO23-TR-FP	Fire Protection	12
Lesson Plan 2AO702	SO23-13-2, Shutdown from Outside the Control Room	6-7
SD-SO23-780	Auxiliary Feedwater System	11
SD-SO23-390	Chemical & Volume Control System	18
SD-SO23-750	Emergency Diesel Generators	17
SD-SO23-360	Reactor Coolant System	19
SD-S023-740	Safety Injection, Containment Spray and Shutdown Cooling System	18
SOG-EO-0014	Standard Operating Guideline, Firewater to Plant System – Condensate Storage Tank (CST) Make-up	
SOG-TR-0034	Standard Operating Guideline, Akron Style 9301 Portable Flow Meter Operating Instruction	0
Unit 2 LCS 3.3.106	Fire Detection Instrumentation (FDI)	6
Unit 2 LCS 3.7.102	Fire Hose Stations and Hydrants	8
Unit 2 LCS 3.7.103	Spray and/or Sprinkler Systems	7
Unit 2 LCS 3.7.104	Fire Rated Assemblies	5
Unit 2 LCS 3.7.105	Fire Suppression Water System	13
Unit 2 LCS 3.7.113	10 CFR 50 Appendix R Safe Shutdown Components	21
Unit 2 LCS 3.7.114	10 CFR 50 Appendix R Safe Shutdown Emergency Lighting Units	1
UFHA 2/3	Updated Fire Hazard Analysis Report	28

MODIFICATIONS

Number	Title	Revision
ECP 070400998-5	Wrap 3 Inch Conduit IHBK20 and IVBK20 to Meet Appendix R Criteria	0
NECP 800130452	Addition of 1E, Seismic 1, 750kVA, Transformer and Load Center to the existing 4.16 kV supply breaker 2A0420 [Unit 2 Train AB]	0
NECP 800130487	Addition of 1E, Seismic 1, 750kVA, Transformer and Load Center to the existing 4.16 kV supply breaker 2A0620 [Unit 2 Train B]	0

NUCLEAR NOTIFICATIONS (NN)

200887620	200684929	200858144	200500947	*200976839
200923326	200929745	*200938593	200953051	*200954553
200959384	*200962868	200966158	*200966649	*200976839
*200929745	*200963651	*200949737	*200944050	*200940938
*200937915	*200962805	*200950853	*200942930	*200941222
*200938593	*200957549	*200948329	*200941156	*200940265
*200952727	*200954831	*200948419	*200941154	*200968613
*200959802	*200954583	*200947987	*200940937	*200938922
*200960081	*200945723	*200948373	*200941277	*200938508
*200938603	*200938604	*200938510	*200938605	*200938606
*200938607	*200938512	*200938609	*200938610	*200937919
*200935063	*200936117	*200936122	*200936164	*200934173
*200933650	*200933565	*200931299	*200931302	*200968390
*200968207	*200967570	*200967718	*200937915	*200966580
*200970304	*200970858	*20090815	*200970854	*200970645
*200971007	*200970645	*200992874	*200977800	*200977802
*200968884	*200969752	200723257	200099019	200721327
200003211	200002340	200002765	200006635	200001071
200002041	200002085	200003846	200006163	2000016413
200017987	200023002	200023288	200028414	200029570
200030022	200030281	200099019	200718479	200995363
200627595				

*Notifications generated due to preparations for the inspection or inspection activities.

PROCEDURES

Number	Title	Revision
AUD-9	Units 2 and 3 Safe Shutdown Locker Monthly Audit	14
SCE 90055BR	Sound Power Phone Routing	0

Number	Title	Revision
SO-V-5.100	Engineering Procedure	1
SO-V-5.100	Engineering Procedure	2
SO23-3-3.23.1	Diesel Generator Refueling Interval Tests	36
SO23-3-3.30.6	Auxiliary Feedwater Online Valve List	9
SO23-3-3.51.6	Surveillance Operating Instruction	4
S023-7-1	Fire Suppression Water System Operation	35
SO23-12-1	Standard Post Trip Actions	22
SO23-12-2	Reactor Trip Recovery	19
SO23-12-7	Loss of Forced Circulation/Loss of Offsite Power	21
SO23-13-2	Shutdown From Outside The Control Room	13 and 14
SO23-13-21	Fire	20 and 21
SO123-FP-1	Fire Protection Program	9
SO23-XIII-4.100	Units 2 and 3 Fire Monitoring System (FMS) Computer Use and Impairment Scope Identification	17
SO23-XIII-4.200	Units 2 and 3 Fire Rated Assemblies Impairment Scope Identification	6
SO23-XIII-4.300	Units 2 and 3 Safe Shutdown Components Impairment Scope Identification	13
SO23-XIII-4.400	Units 2 and 3 Fire Detection Instrumentation and Fire Suppression Systems Impairment Scope Identification	23
SO23-XIII-4.600	Fire Protection Impairment	10
SO23-XIII-22	Lighting System Test	15
SO123-VIII-0.201	EPIP	19
SO123-XIII-4.10.1	Fire Department Communications, Protected Area (PA) Entry and Radiologically Controlled Area Entry	7
SO123-XIII-4.10.2	Fire Department Dispatch	14
SO123-XIII-4.10.3	Fire Department Fire Fighting Response	8
SO123-XIII-20	Fire Department Training Program	13
SO123-XIII-4.10.2	Fire Department Drills	11
SO123-XX-5	Work Process Procedure	30

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SOG-EO-0002	Firewater to Plant Systems – Steam Generator Make-up	11
SOG-EO-0003	Water Spray Scrubbing – Fog Stream Application	3
SOG-EO-0011	Firewater to Plant Systems – Containment Spray Make-up	5
SOG-EO-0012	Firewater to Plant Systems – Unit 2/3 RWST Make-up	5
SOG-EO-0014	Firewater to Plant Systems – Condensate Storage Tank (CST) Make-up	1 and 3

WORK ORDERS (NSVOs)

800373176	800290367	800405833	800212599	800266627
800319915	800360733	800409265	800205095	800253684
800310772	800401551	800401552	800206094	800257927
800364921	800408871	800307872	800059352	800054354
800049149	07032837000	800061427	800068019	800402190
800070582	800262252	800059353	800401552	800200651
800060935	800061635	800253619	800431641	800413853
800335933	800516957			