

**SAN ONOFRE NUCLEAR GENERATING STATION
Units 2 and 3**

**2010 End-of-Cycle Plant Performance Summary/Agenda
Assessment Period: January 1 to December 31, 2010**

1. PERFORMANCE OVERVIEW

- A. Assessment Period Results** – SONGS Unit 2 remained in the Regulatory Response Column for most of the assessment period due to a white violation identified in IR 2008013. The Notice of Violation was closed in IR 2010011, returning Unit 2 to the Licensee Response Column on December 22, 2010. Unit 3 remained in the Licensee Response Column for the entire assessment period.

(b)(5)



A Chilling Effect Letter was issued to SONGS in March 2010. Region IV received an approved deviation to the Action Matrix from the EDO in April 2010 for increased oversight due to the significant number of cross cutting issues, high number of allegations, and the issuance of the chilling effect letter. The inspection (IR 2010005) to close the Deviation Memo was completed on December 10, 2010. The Deviation Memo was closed on December 31, 2010.

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Information in this record was deleted
in accordance with the Freedom of Information
Act, exemptions

	1 st Quarter 2010	2nd Quarter 2010	3rd Quarter 2010	4th Quarter 2010
Action Matrix Column	Unit 2: Regulatory Response Unit 3: Licensee Response	Unit 2: Regulatory Response Unit 3: Licensee Response	Unit 2: Regulatory Response Unit 3: Licensee Response	Unit 2: Regulatory Response* Unit 3: Licensee Response
Basis	Unit 2: 1 White finding Unit 3: All findings and PI's were Green.	Unit 2: 1 White finding Unit 3: All findings and PI's were Green.	Unit 2: 1 White finding Unit 3: All findings and PI's were Green.	Unit 2: 1 White finding Unit 3: All findings and PI's were Green.

*White Violation 05000361/2008013-05 Closed in IR 20100011 on Dec 22, 2010.

B. Signature Authority

The signature authority for the end of cycle assessment letter is the Division of Reactor Projects Director.

C. Summary of Previous Assessment Letters

Summary of Results from Previous Mid-Cycle Letter

Plant performance for Unit 2 was in the Regulatory Response Column of NRC's Action Matrix, based on one inspection finding being classified as having low to moderate safety significance (White). Plant performance for the Unit 3 was within the Licensee Response Column of NRC's Action Matrix.

The branch kept open all previously open substantive cross-cutting issues in the human performance area associated with the components of decision making, resources and work practices; and in the problem identification and resolution area, corrective action program component. The branch opened one new substantive cross-cutting issue in the Human performance area associated with the procedural compliance and communication aspect of the work practices component (H4B).

The branch observed a continuing high number of allegations.

Summary of Interim Assessment Letter (Inspection report 2010011)

On November 15 through November 19, 2010, the U.S. Nuclear Regulatory Commission staff performed the on-site portion of a supplemental inspection pursuant to Inspection Procedure 95001, "Inspection for One or Two White Inputs in a Strategic Performance Area," at the San Onofre Nuclear Generating Station, Unit 2 facility. The NRC determined that the corrective actions implemented to address the deficiencies leading to the White finding and to prevent recurrence were adequate to address the technical as well as organizational performance issues. Therefore, the White finding (05000361/2008013-05), "Failure to Establish Appropriate Instructions" is closed. This finding will continue to be considered for evaluation of NRC Action Matrix column status until December 31, 2010, in accordance with NRC Manual Chapter 0305, "Operating Reactor Assessment Program." As a result, the NRC determined the performance at San Onofre Nuclear Generating Station, Unit 2, to be in the Licensee Response Column (Column 1) of the Reactor Oversight Process Action Matrix as of the date of this letter. San Onofre Nuclear Generating Station, Unit 3 remains in the Licensee Response Column.

D. Public Outreach Efforts

03/24/10, Doubletree Suites, Doheney Beach, CA, Category 1 Public Meeting

- NRC held an End-of-Cycle meeting to discuss performance results for San Onofre Units 2 and 3 for calendar year 2009. (Open house and public meeting)
- Approximately 154 attended including NRC, members of public, SONGS representatives, local government, and media.

09/16/10 Doubletree Suites, Doheney Beach, CA, Category 1 Public Meeting

- Discuss San Onofre Nuclear Generation Station's progress in addressing Safety Conscious Work Environment concerns.
- Approximately 161 attended including NRC, members of public, SONGS representatives, local government, and media.

12/14/10 Doubletree Suites, Doheney Beach, CA, Category 1 Public Meeting

- Discuss San Onofre Nuclear Generating Station's progress in addressing safety culture aspects in human performance, problem identification and resolution, and safety conscious work environment.
- Approximately 140 attended including NRC, members of public, SONGS representatives, local government, and media.

2. OPERATING SUMMARY

A. Power Operations

During this assessment period, Unit 2 operated at essentially 100 percent power with the exceptions noted below:

- April 9 Startup from Steam Generator replacement outage.
- April 18 Hold at 98% power for AMAG (feed flow measurement) repairs.
- May 1 Reduce power to 85% for waterbox cleaning. Back to 98% on May 3.
- May 18 100% power after AMAG repaired.
- September 28 Reduce to 94% for feed heater drain pump repairs. Back to full power October 17.

During this assessment period, Unit 3 operated at essentially 100 percent power with the exceptions noted below:

- March 5 Begin Decreasing power 7% per day for fuel management. Reach 50% power on March 11, hold at 50% until April 23.
- April 23 Begin raising power from 50% to 100%. Reach 100% on May 10.
- July 22 Reduce power to 94% due to sea grass. Back to 100% July 23.
- September 20 Begin coasting down to outage.
- October 9 Shutdown for S/G replacement outage.

B. Scheduled and Forced Outages

The following occurred at Unit 2 during the assessment period:

- Sept 26, 2009 Shutdown for a planned refueling and S/G replacement outage. Start-up April 9. 100% power reached on May 10.

The following occurred at Unit 3 during the assessment period:

- October 9, 2010 Shutdown for a planned refueling and S/G replacement outage. Shutdown as of 12/31/2010.

3. SAFETY-SIGNIFICANT INSPECTION AND PI RESULTS

There was one low to moderate finding during the assessment period and all performance indicators were Green throughout the assessment period.

A. Mitigating Systems

There was 1 White finding during the assessment period:

1. GREATER THAN GREEN FINDINGS

a. PIM Entry Data

The team identified a White violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," involving the failure to establish appropriate instructions for performing maintenance activities on safety-related 125 Vdc station battery Breaker 2D201. As a result, during replacement of the breaker in March 2004 electrical connection integrity was not adequate to ensure that the equipment would be able to perform its safety function. This condition existed for approximately four years. This issue was entered into the licensee's corrective action program as Root Cause Evaluation 800121216.

The finding is greater than minor because it is associated with the equipment performance attribute of the mitigating systems cornerstone and affects the associated cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The final significance determination performed by the senior reactor analyst and approved by the NRC significance and enforcement review panel determined the finding was of low to moderate safety significance (White). This finding has a crosscutting aspect in the area of human performance associated with resources because the licensee failed to establish adequate procedures and programs related to electrical connection integrity [H.2(c)] (Sections 2.1.5 and 3.5)

This violation is discussed in Inspection Report 2009003 in Section 4OA2.3.

On December 4, 2009, the U.S. Nuclear Regulatory Commission staff performed a supplemental inspection pursuant to Inspection Procedure 95001, documented in IR 2009008. During this supplemental inspection, the inspectors determined that the your staff performed a comprehensive evaluation of the events associated with inadequate standards and inadequate enforcement of station policies and procedures as they related to the loose bolts on the Battery 2B008 output breaker, and for the human performance deficiencies associated with the events which occurred on March 25, 2008, in efforts associated with recovery from the loose breaker bolts event. However, many of the corrective actions associated with the root and contributing causes, including cultural issues, were broadly defined and not fully developed. Several of the corrective actions had been revised or developed just prior to the inspection, and at least one of the supporting root cause evaluations was being revised due to an NRC evaluation that the root cause was too narrowly focused. The NRC lacks assurance that the corrective actions are fully developed and that their implementation will be effective. Therefore, the White finding will remain open until performance improvement provides assurance that the corrective actions are fully developed and will adequately address the performance deficiencies.

On November 15 through November 19, 2010, the U.S. Nuclear Regulatory Commission staff performed the on-site portion of a supplemental inspection pursuant to Inspection Procedure 95001. The report is documented in IR

2010011. The objective of this supplemental inspection was to provide assurance that objective number 3; "Corrective actions were or will be sufficient to address and preclude repetition of the root and contributing causes," of NRC Inspection Procedure 95001 was met. The inspection consisted of examination of activities conducted under your license as they related to safety, compliance with the Commission's rules and regulations, and the conditions of your license. Based on the results of this inspection, no findings of significance were identified. The NRC determined that the corrective actions implemented to address the deficiencies leading to the White finding and to prevent recurrence were adequate to address the technical as well as organizational performance issues. Therefore, the White finding (05000361/2008013-05), "Failure to Establish Appropriate Instructions" is closed. This finding will continue to be considered for evaluation of NRC Action Matrix column status until December 31, 2010, in accordance with NRC Manual Chapter 0305, "Operating Reactor Assessment Program." As a result, the NRC determined the performance at San Onofre Nuclear Generating Station, Unit 2, to be in the Licensee Response Column (Column 1) of the Reactor Oversight Process Action Matrix as of the date of this letter. San Onofre Nuclear Generating Station, Unit 3 remains in the Licensee Response Column.

- b. Additional findings
None.

2. NEGATIVE/ADVERSE PI RESULTS AND/OR TRENDS

None.

3. DESCRIBE THE NRC'S AND LICENSEE'S FOLLOW-UP ACTIONS (to include planned actions) FOR FINDINGS AND PI DATA.

A supplemental inspection was completed on December 4, 2009, and documented in NRC Inspection Report 0500361; 362/2009008. The supplemental inspection concluded that objective numbers 1 and 2 of NRC Inspection Procedure 95001 were met, but that objective number 3 was not met in that the NRC lacked assurance that the corrective actions were fully developed and that their implementation would be effective. A second supplemental inspection was completed in November, 2010. The objective of this supplemental inspection was to provide assurance that objective number 3; "Corrective actions were or will be sufficient to address and preclude repetition of the root and contributing causes," of NRC Inspection Procedure 95001 was met. The inspection consisted of examination of activities as they related to safety, compliance with the Commission's rules and regulations, and the conditions of the license. The second supplemental inspection (IR 2010011) closed the white finding.

4. DRS INSIGHTS

Brief Background and Assessment

The last CDBI team inspection at San Onofre was conducted in July 2008. Since that time, overall performance at San Onofre has deteriorated in some areas. Insights and assessment of the engineering area has been limited to the ROP inspections performed by the resident inspectors along with other ROP inspections that touch on engineering. A detailed and extensive inspection of San Onofre engineering has not been completed since 2008. As a result, assessment of current performance in the area of engineering is based upon incomplete and indirect information.

Recommendations for Follow-Up Actions

It is recommended that the upcoming CDBI at San Onofre, scheduled to be performed in June and July of this year (2011), be supplemented by adding a second mechanical contractor to the inspection team. This will allow a more extensive and in-depth inspection to be conducted in the same time frame as a normal CDBI. The NRR program office originally proposed this approach and the resources have already been allocated and scheduled. It is expected that this will result in an overall assessment of the engineering program at San Onofre based on current data.

5. ENFORCEMENT SUMMARY

a. Chilling Effect Letter

On March 2, 2010 the NRC issued a chilling effect letter to the licensee. This letter was issued in response to numerous observations including employees expressing difficulty or inability to use the corrective action program, a lack of knowledge or mistrust of the Nuclear Safety Concerns Program (NSCP), a substantiated case of a supervisor creating a chilled work environment in his/her work group, and a perceived fear of retaliation for raising safety concerns. During calendar year 2009 the NRC received an elevated number of SCWE related allegations from SONGS. The chilling effect letter contained a number of requirements for SONGS to improve its working environment, including and action plan to address SCWE issues, a communication plan aimed at SCE and contract personnel, and a public meeting which was held in September, 2010. NRC inspectors are performing an additional inspection in January, 2011 to assess the progress of SONGS corrective actions regarding the chilling effect letter.

b. Confirmatory Order

By letter dated January 11, 2008 the NRC issued a Confirmatory Order to the licensee as part of a settlement agreement through the NRC's alternative dispute resolution process. The settlement was in regards to the falsification, by a contract fire protection specialist, of firewatch certification sheets on numerous occasions from April 2001 to December 2006 at SONGS. All items of the confirmatory order (EA 07-232) have been completed as documented in IR

2010005. NRC will close the Confirmatory Order by letter signed by RA in February 2011.

c. Severity Level IV NCV's

Note: NRC should consider performing inspection procedure 92723 to follow up on the NCVs listed below due to 3 or more traditional enforcement violations in a 12 month period in the same area (impeding the regulatory process).

- 2010002-09 SL-IV NCV Failure to notify the NRC within 8 hours of a non-emergency event. Traditional Enforcement due to effect on NRC's ability to regulate.
- 2010002-10 SL-IV NCV Failure to a safety system functional failure. Traditional Enforcement due to effect on NRC's ability to regulate.
- 2010002-11 SL-IV NCV Failure to obtain a license amendment for a Technical Specification Basis change. Traditional Enforcement due to effect on NRC's ability to regulate.
- 2010006-04 SL-IV NCV Failure to report condition that could have prevented fulfillment of safety function. Traditional Enforcement due to effect on NRC's ability to regulate.

d. Notices of Violation

- 2010006-08 Green NOV Failure to maintain written procedures covered in Regulatory Guide 1.33.
- 2010007-01 Green NOV Failure to ensure at least one train of equipment necessary to achieve hot shutdown conditions is free of fire damage.

6. STATUS OF OPEN ITEMS

A. Unresolved Items

The following unresolved items are open:

05000361;362/2008010-03 Omission of Station Black Out Profile During Battery Service Tests

The following LERs are open:

05000361;362/2010-006-00 Breakers left in non-seismically qualified condition prohibited by tech specs.

05000361;362/2010-005-00 Refueling water storage tank alignment to non-seismic piping

- 05000361;362/2010-004-00 EDG vent fan nose cone corrosion results in fan damage
- 05000361;362/2010-003-00 Typo results in conflicting TS actions and TS violation
- 05000361/2010-001-00 Broken manual valve prevents timely condensate storage tank isolation
- 05000361/2010-002-00 Non qualified part in TDAFW pump
- 05000361/2009-003-00 Pressurizer aux spray failed inservice test
- 05000362/2009-001-00 Component declared inop after LCO

The following violations are open:

- 2010006-08 Failure to maintain written procedures covered in Regulatory Guide 1.33.
- 2010007-01 Failure to ensure at least one train of equipment necessary to achieve hot shutdown conditions is free of fire damage
- 2009001-02 Failure to assess and manage risk for maintenance that could impact offsite power supply

B. Performance Indicators

There are no performance indicators close to crossing a significance threshold and/or open PI-related frequently asked questions.

C. Temporary Instructions

The following temporary instructions are open:

TI 2690/010	Due 6/30/11
TI 2690/008	Due 6/30/11
TI 2515/177	Due 12/31/12
TI 2515/145	Due 6/30/12
TI 2515/139	Due 6/30/12
TI 2515/120	Due 6/30/12
TI 2515/113	Due 6/30/12
TI 2515/110	Due 6/30/12
TI 2515/103	Due 6/30/12
TI 2515/101	Due 6/30/12

TI 2515/091	Due 6/30/12
TI 2515/087	Due 6/30/12
TI 2515/066	Due 6/30/12
TI 2515/065	Due 6/30/12

D. Miscellaneous

None.

7. OPERATING EXPERIENCE

There were no operating experiences impacting SONGS during the assessment period.

8. CROSS-CUTTING AREAS -

A. Substantive Cross-Cutting Issues

i. HUMAN PERFORMANCE

Conclusion

The criteria outlined in MC 0305 for a human performance substantive crosscutting issue was met based on the presence of four themes.

(b)(5)

Inspection findings persist in the component of work practices associated with the themes of lack of properly defining and effectively communicating expectations regarding procedural compliance resulting in personnel following procedures [H.4(b)] and in the theme of management oversight of work activities [H.4(c)].

(b)(5)

Details

A review of PIM entries between January 1 and December 31, 2010 revealed the following trends:

Eleven of the thirty findings in the cross-cutting area of human performance were within the decision making component. Five had the common theme of not using a systematic process in decision making [H.1(a)].

(b)(5)
Six findings had the common theme of not using conservative assumptions and validating underlying assumptions in decision making [H.1(b)]. Two of the supporting findings for this theme were identified in the fourth quarter, 2010.

(b)(5) Also, there is an increasing trend in the number of findings in this area (5 at MC and 6 at EOC).

(b)(5)

Two of the thirty findings in the cross-cutting area of human performance were within the resources component. The mid-cycle assessment held open one substantive cross cutting issue in the area of not having complete, accurate, and up-to-date design documentation, procedures, and work packages, and correct labeling of components [H.2(c)]. The branch recommends keeping this theme open based on a lack of improvement in the area of procedure quality. The branch would like to see results of the licensee's ongoing gap analysis and corrective actions before closing this theme.

Sixteen of the thirty findings in the cross-cutting area of human performance were within the work practices component. Of these, three were related to the aspect of not using adequate human error prevention techniques [H.4(a)]. The branch recommends keeping open the theme in Human Performance / work practices associated with human error prevention techniques due lack of confidence in to licensee's corrective actions in this area. Nine of the findings in the work practices component were associated with the theme of not defining, and communicating expectations regarding procedural compliance or personnel not following procedures [H.4(b)].

(b)(5)
The other four findings in the work practices component were within the work oversight component [H.4(c)].

(b)(5)
Though there is an improving trend in the number of findings associated with this theme, allegation data incomplete corrective actions associated with management field observations indicate that more corrective actions are needed.

Table 1.0 – CROSSCUTTING AREA - HUMAN PERFORMANCE		
Decision Making Component – H.1		
Finding	Documented Contributing Cause/ Crosscutting Aspect	Cornerstone
Failure to properly implement procedure requirements to ensure that applicable risk significant operating experience was entered into the corrective action program for timely evaluation (IR2010002-03, PIM#79311).	OE review team did not use a systematic process when making safety significant decisions. H.1(a)	Mitigating Systems
Failure to report conditions that could have prevented fulfillment of safety function (IR 2010006-04, PIM# 79349).	The licensee did not make safety-significant decision using a systematic process, especially when faced with uncertainty. [H.1(a)]	Miscellaneous
Failure to establish goals and monitor for Auxiliary Feedwater trains (IR 2010006-09, PIM#79345)	Failure to use a formal decision making process to determine how to count unavailable hours for the maintenance rule. [H.1(a)]	Mitigating Systems
Failure to Define Authorities and Responsibilities of Work Process Area Operator (IR 2010010-01, PIM#79364)	Failure to make safety-significant decisions using a systematic process, including formally defining the authority and roles for decisions affecting nuclear safety [H.1(a)].	Initiating Events
Failure to Ensure At Least One Train of Equipment Necessary to Achieve Hot Shutdown Conditions Is Free of Fire Damage (IR 2010007-01, PIM#79365)	Failure to make a risk-significant decision using a systematic process when considering the scheduling of corrective actions [H.1(a)]	Mitigating Systems
Failure to Follow Procedure for Modifying Work Clearance Applications (IR 2010005-02, PIM#79360)	Failure to use conservative assumptions and formally validate and verify plant conditions and associated tagging boundaries [H.1(b)]	Occupational Radiation Safety
Inadequate Control of Foreign Material over the Spent Fuel Pool during Surveillance Testing (IR 2010005-03, PIM#79361)	Failure to demonstrate that nuclear safety is an overriding priority through the use of conservative assumptions in decision making and adopting a requirement to demonstrate that the proposed action is safe in order to proceed rather than a requirement to	Barrier Integrity

Table 1.0 - CROSSCUTTING AREA - HUMAN PERFORMANCE		
	demonstrate that it is unsafe in order to disapprove the action [H.1(b)]	
Unavailability Time for Component Cooling Water Incorrectly Counted (IR 2010003-01, PIM#79324)	Failure to demonstrate that nuclear safety was an overriding priority through the use of conservative assumptions in decision making and adopting a requirement to demonstrate that a proposed action is safe in order to proceed rather than a requirement to demonstrate that it is unsafe in order to disapprove the action [H.1(b)].	Mitigating Systems
Inadequate Operability Determination for Safety-Related Concrete Cracks (IR 2010003-06, PIM#79331)	Failure to demonstrate that nuclear safety was an overriding priority through the use of conservative assumptions in decision making and adopting a requirement to demonstrate that a proposed action is safe in order to proceed rather than a requirement to demonstrate that it is unsafe in order to disapprove the action [H.1(b)].	Mitigating Systems
Inadequate operability determination of the turbine driven auxiliary feed water pump steam admission valves (IR 2010006-01, PIM#79341).	Failure to demonstrate that nuclear safety was an overriding priority through the use of conservative assumptions in decision making and adopting a requirement to demonstrate that a proposed action is safe in order to proceed rather than a requirement to demonstrate that it is unsafe in order to disapprove the action [H.1(b)].	Mitigating Systems
Failure to identify and correct the use of deficient relays (IR 2010006-10, PIM#79346)	Failure to demonstrate that nuclear safety was an overriding priority through the use of conservative assumptions in decision making and adopting a requirement to demonstrate that a proposed action is safe in order to proceed rather than a requirement to demonstrate that it is unsafe in order to	Mitigating Systems

Table 1.0 - CROSSCUTTING AREA - HUMAN PERFORMANCE		
	disapprove the action [H.1(b)].	
Resources Component - H.2		
Finding	Documented Contributing Cause/ Crosscutting Aspect	Cornerstone
Lack of preventive maintenance results in valve failure and inoperable condensate storage tank (IR 2010006-03, PIM#79343)	Failure to ensure that equipment was available and adequate to assure nuclear safety by minimization of long standing equipment issues in that the valve was not being maintained through a preventive maintenance program. [H.2(a)]	Mitigating Systems
Improper Risk Assessment and Management for Emergent Work (IR 2010003-03, PIM#79326)	Failure to ensure that procedures were adequate to support nuclear safety, including complete, accurate, and up-to-date work packages [H.2(c)]	Initiating Events
Work Control Component - H.3		
Finding	Documented Contributing Cause/ Crosscutting Aspect	Cornerstone
Failure to secure loose items in the electrical switchyard (IR 2010006-11, PIM#79340)	Failure to appropriately plan work activities involving job site conditions which may impact plant structures, systems and components. [H.3(a)]	Initiating Events
Work Practices Component - H.4		
Finding	Document Contributing Cause/ Crosscutting Aspect	Cornerstone
Licensee failed to follow procedures for operating the component cooling water system (IR 2010002-14, PIM#79323).	Operations personnel failed to use proper human error prevention techniques in the face of unexpected circumstances H.4(a)	Mitigating Systems
Licensee failed to follow station procedures on written instruction use and adherence while performing testing on a feed heater (IR 2010003-11, PIM#79336).	Licensee failed to communicate human error prevention techniques such that work activities were performed safely. H.4(a)	Initiating Events
Failure to Properly Store C-Panels in the Radwaste Building (IR 2010005-04, PIM#79362)	Failure to properly check the procedural requirements prior to staging C-panels near the hydrogen line [H.4(a)]	Initiating Events

Table 1.0 - CROSSCUTTING AREA - HUMAN PERFORMANCE		
Licensee contractors and station personnel failed to properly implement the requirements of a station fire protection procedure for control of hot work activities (IR 2010002-01, PIM#79309).	Licensee did not define and effectively communicate expectations regarding procedural compliance. H.4(b)	Initiating Events
Licensee operations and work control personnel failed to adequately assess and manage the increase in risk associated with maintenance activities in the electrical switchyard (IR2010002-04, PIM#79312).	Licensee did not define and effectively communicate expectations regarding procedural compliance. H.4(b)	Initiating Events
Licensee maintenance planning personnel failed to develop and specify an adequate post-maintenance test in the work instructions used to perform maintenance on the backup nitrogen regulator for the component cooling water surge tank (IR 2010002-06, PIM#79315).	Licensee failed to follow procedures to develop adequate work instructions to perform maintenance on safety related equipment. H.4(b)	Mitigating Systems
Licensee failed to adequately implement foreign material exclusion controls (IR 2010002-07, PIM#79316).	Licensee did not define and effectively communicate expectations regarding procedural compliance. H.4(b)	Barrier Integrity
Licensee failed to assess and manage risk associated with maintenance on emergency diesel generators (IR 2010003-02, PIM#79325).	Licensee did not define and effectively communicate expectations regarding procedural compliance. H.4(b)	Mitigating Systems
Licensee failed to define the control room as required in technical specifications (IR 2010003-04, PIM#79327).	Licensee did not maintain up to date design documentation, procedures, and work packages. H.4(b)	Initiating Events
Licensee failed to follow work control procedures requiring approved work orders for work on safety related components (HP, IR	Licensee did not define and effectively communicate expectations regarding procedural	Mitigating Systems

Table 1.0 – CROSSCUTTING AREA - HUMAN PERFORMANCE		
2010003-05, PIM#79330).	compliance. H.4(b)	
Licensee failed to appropriately identify and classify degraded voltage on a class 1E battery (IR 2010003-09, PIM# 79334).	Licensee did not define and effectively communicate expectations regarding procedural compliance. H.4(b)	Mitigating Systems
Failure to Follow Procedures While Implementing a Design Change (IR 2010004-01, PIM#79354)	Failure to define and effectively communicate expectations regarding procedural compliance, and that personnel follow procedures [H.4(b)]	Mitigating Systems
Licensee failed to adequately implement a Work Order and provide adequate oversight to transmission and distribution personnel while performing work in the electrical switchyard (IR 2010002-13, PIM#79322).	licensee failed to ensure supervisory and management oversight of work activities, including contractors, such that nuclear safety is supported [H.4(c)]	Mitigating Systems
Control room operators failure to adhere to conduct of operations procedural requirements (IR 2010006-05, PIM#79338)	Failure to ensure supervisory and management oversight of work activities. [H.4(c)]	Initiating Events
Failure to provide adequate procedure for boron dilution activities (IR 2010006-06, PIM#79339)	Failure to ensure activities associated with re-activity control were performed in a controlled manner such that nuclear safety was assured. [H.4(c)]	Initiating Events
Failure to meet action plan for substantive crosscutting issues (IR 2010006-13, PIM#79350)	Failure to ensure management oversight of work activities. [H.4(c)]	Miscellaneous

Table 1.1 - Basis for Conclusion on MC 0305 Criteria [H:#{a,b,c,d}]		
MC 0305 Guidance on Substantive Cross-Cutting (SCC) Issues	Performance Observations in the Human Performance Area - XYZ Component	Met Criteria
Criterion 1: Contributing Causes have a common theme corroborated by more than three (3) findings and from more than one cornerstone (exception is Mitigating System)	30 findings with aspects of human performance.	
	H.1(a) 5 findings in Decision-Making / formal decision making process; MS and IE cornerstones.	YES
	H.1(b) 6 findings in Decision-Making / using conservative assumptions; MS, BI, and ORS cornerstones.	YES
	H.2(a) 1 finding in Resources / minimizing long standing plant equipment issues and preventive maintenance deferrals.	NO
	H.2(c) 1 findings in Resources / providing complete, accurate, and up-to-date design documentation, procedures, and work packages.	NO
	H.3(a) 1 finding Work Control / planning work activities by incorporating risk insights, job site conditions, and contingency plans.	NO
	H.4(a) 3 findings in Work Practices / using human error prevention techniques and not proceeding in the face of uncertainty. MS, IE cornerstones.	NO
	H.4(b) 9 findings in Work Practices / defining and communicating expectations regarding procedural compliance or personnel not following procedures. MS, IE, BI Cornerstones.	YES
H.4(c) 4 findings in the Work Practices / ensuring adequate supervisory oversight of work activities; MS and IE cornerstones.	YES	

Criterion 2: The agency has a concern with the licensee's scope of efforts or progress in addressing the cross-cutting area performance deficiency	H.1(a) Based on the licensee's preemptive actions to address this new issue.	NO
	H.1(b) Based on the previous high number of findings in this area and 2 new findings in the 4 th quarter.	YES
	H.2(c) Based on concerns with the licensee's procedural quality	YES
	H.4(a) Based on concerns with the licensee's corrective actions to address this theme.	YES
	H.4(b) Based in the high number of findings covering 3 cornerstones.	YES
	H.4(c) Based on no new findings in this area in the 3 rd and 4 th quarter resident reports.	YES

ii. PROBLEM IDENTIFICATION AND RESOLUTION

Conclusion

(b)(5)

Details

A review of PIM entries between January 1 and December 31, 2009, indicated an improving trend in this area. There were 9 findings in this area during the assessment period. During the mid-cycle assessment period there were 19 findings in the PI&R crosscutting area. Four of the inspection findings in this area had a theme of not having a low threshold for raising issues and for not identifying these issues in a complete, accurate, and timely manner commensurate with their safety significance [P. 1(A)].

(b)(5)

All of the findings in this aspect occurred during the first half of 2010, and CAP numbers point to a lower threshold for raising issues (5200 corrective actions generated in 2010 vsa 4600 in 2009). Also, the licensee has made efforts to make the CAP more accessible to more people. Four of the inspection findings in this area had a theme of failing to thoroughly

evaluate problems such that the resolutions address causes and extent of conditions [P.1(C)].

(b)(5)

An additional theme for failure to take appropriate corrective actions to address safety issues and adverse trend in a timely manner [P.1(d)] was opened for the assessment cycle.

(b)(5)

Table 2.0 - CROSSCUTTING AREA - PROBLEM IDENTIFICATION AND RESOLUTION		
Corrective Action Program Component - P.1		
Finding	Documented Contributing Cause/ Crosscutting Aspect	Cornerstone
Licensee failed to enter conditions adverse to quality into the corrective action program (IR 2010002-12, PIM#79321).	Licensee failed to implement the corrective action program with a low threshold for identifying issues. P.1(a)	Mitigating Systems
Licensee failed to follow the conduct of operations procedure direction to control operator aids (IR 2010003-07, PIM#79332).	Licensee failed to implement the corrective action program with a low threshold for identifying issues. P.1(a)	Mitigating Systems
Failure to translate design basis information into procedures for the turbine-driven auxiliary feed water pump steam admission valves (IR 2010006-02, PIM#79342)	Licensee failed to implement the corrective action program with a low threshold for identifying issues. P.1(a)	Mitigating Systems
Failure to establish component cooling water radiation monitoring procedures (IR 2010006-07, PIM#79348)	Plant operators did not have a low threshold for identifying deficiencies in procedures. [P.1(a)]	Public Radiation Safety
Licensee operations personnel failed to follow procedures to approve and document operability determinations using adequate or technically correct information (IR2010002-05, PIM#79314).	Licensee failed to evaluate problems such that the resolution addressed the cause and extent of condition. P.1(c)	Mitigating Systems
Licensee failed to notify the NRC within 8 hours of a nonemergency event (IR 2010002-09, PIM#79318).	Licensee failed to evaluate problems such that the resolution addressed the cause and extent of condition. P.1(c)	Miscellaneous
Licensee failed to maintain procedures such that outdated procedures with known technical errors were in use in the plant after plant modifications (IR2010006-08, PIM#79344).	Licensee failed to evaluate problems such that the resolution addressed the cause and extent of condition. P.1(c)	Mitigating Systems

Table 2.0 - CROSSCUTTING AREA - PROBLEM IDENTIFICATION AND RESOLUTION		
Failure to Appropriately Classify Conditions Adverse to Quality for Significance (IR 2010005-01, PIM#79359)	Failure to thoroughly evaluate problems such that the resolutions address causes and extent of conditions, and failed to properly classify, prioritize, and evaluate for operability and reportability conditions adverse to quality [P.1(c)]	Mitigating Systems
Operating Experience Component - P.2		
Finding	Documented Contributing Cause/ Crosscutting Aspect	Cornerstone
Licensee failed to translate design basis information into affected calculations and procedures (IR 2010006-12, PIM#79347).	Licensee failed to implement and institutionalize operating experience information through changes to plant processes, procedures, equipment, and training programs. P.2(b)	Mitigating Systems
Self and Independent Assessments - P.3		
Finding	Documented Contributing Cause/ Crosscutting Aspect	Cornerstone
none		

Table 2.0 - CROSSCUTTING AREA - PROBLEM IDENTIFICATION AND RESOLUTION

Table 2.1 - Basis for Conclusion on MC 0305 Criteria [P. # (a,b,c,d,e)]

MC 0305 Guidance on Substantive Cross-Cutting (SCC) Issues	Performance Observations in the Human Performance Area - XYZ Component	Met Criteria
<p>Criterion 1: Contributing Causes have a common theme corroborated by more than three (3) findings and from more than one cornerstone (exception is Mitigating System)</p>	<p>9 findings in the area of Problem Identification and Resolution were found in this inspection cycle.</p>	
	<p>P.1(a) 4 findings in Corrective Action Program / low threshold for identifying issues in the MS and PRS cornerstones.</p>	YES
	<p>P.1(c) 4 findings in the area of thorough problem evaluation in the MS cornerstone.</p>	YES
<p>Criterion 2: The agency has a concern with the licensee's scope of efforts or progress in addressing the cross-cutting area performance deficiency</p>	<p>P.1(a) Based on no new findings in this area in the 3rd and 4th quarter resident reports and NRC inspection efforts looking into the licensee's corrective actions.</p>	NO
	<p>P.1(c) Based on NRC inspection efforts to review the licensee's corrective actions for this issue.</p>	NO

iii. **SAFETY CONSCIOUS WORK ENVIRONMENT**

Conclusion

The criteria outlined in MC 0305 for a safety conscious work environment substantive crosscutting issue were not met. Because the NRC has issued a Chilling Effect Letter to SONGS, a cross-cutting theme exists for the licensee in the area of safety conscious work environment. The branch does not wish to open a substantive crosscutting issue in the area of SCWE at this time because the licensee is in the process of taking action to improve their working environment such that employees feel free and unencumbered in raising safety concerns.

B. Cross-Cutting Themes

There were no safety significant findings with a cross-cutting aspect in safety conscious work environment during the assessment period. However, on March 2, 2010 the NRC issued a chilling effect letter to the licensee. This letter was issued in response to numerous observations including employees expressing difficulty or inability to use the corrective action program, a lack of knowledge or mistrust of the Nuclear Safety Concerns Program (NSCP), a substantiated case of a supervisor creating a chilled work environment in his/her work group, and a perceived fear of retaliation for raising safety concerns. During calendar year 2009 the NRC received an elevated number of SCWE related allegations from SONGS. The high number of allegations continued throughout 2010. The chilling effect letter contained a number of requirements for SONGS to improve its working environment, including an action plan to address SCWE issues, a communication plan aimed at SCE and contract personnel, and a public meeting during which the licensee reviewed progress and additional planned actions to deal with the SCWE issues.

Because the NRC has issued a Chilling Effect Letter to SONGS, a cross-cutting theme exists for the licensee in the area of safety conscious work environment. The branch does not wish to open a substantive crosscutting issue in the area of SCWE at this time because the licensee is in the process of taking action to improve their working environment such that employees feel free and unencumbered in raising safety concerns. The effectiveness of these licensee actions will be assessed in early 2011.

C. PI&R Inspection Results

The last PI&R team inspection was completed in April 2010. When compared with the findings from the previous inspection conducted in September 2008, the findings from this inspection indicate that the corrective action program effectiveness has declined. As previously discussed in the past five NRC assessment letters, the licensee's ability to thoroughly evaluate problems such that the resolutions effectively address the causes and extent of conditions is of concern. The licensee's efforts to reverse the trend of substantive crosscutting

issues in both the human performance and problem identification and resolution areas have not shown to be effective.

Additionally, the inspection identified a number of issues that the licensee's staff had previous opportunities to identify. The inspectors noted that even after issues were discussed with the licensee's staff, thorough evaluations were not consistently completed. We noted examples where the evaluations for deficient components failed to fully address the component safety functions for all applicable design basis accident scenarios.

The inspectors determined that the licensee adequately evaluated industry operating experience for relevance to the facility, and entered applicable items in the corrective action program. The inspectors noted that operating experience was considered in cause evaluations. The inspectors noted that following the review of operating experience the licensee failed to consistently incorporate the knowledge into procedural guidance and design calculations.

In February 2010, the inspectors found that several work groups at San Onofre did not feel free to raise safety concerns without fear of retaliation. This was documented in NRC Inspection Report 050000361; 05000362/2009009 dated March 2, 2010, and in the NRC's Chilling Effect Letter dated March 2, 2010.

9. MISCELLANEOUS TOPICS

A. Independent Assessments (e.g., INPO, IAEA, OSART, etc.)

Ex. 4

(b)(4)

B. Allegations and OI investigations

SONGS continues to receive a very high number of allegations. In calendar year 2010 SONGS received 75 allegations. Approximately 21 of these involved allegations concerning the absence of a safety conscious work environment. Also, approximately 12 of these allegations involved willfulness. Currently there are 13 open cases being investigated by the office of investigations.

10. INSPECTION STATUS AND PLAN -

In 2010, in addition to the planned baseline inspection, NRC inspectors performed several additional inspections in support of evaluating issues at San Onofre. These included an expanded PI&R inspection, a steam generator replacement inspection, a follow up inspection focused just on substantive cross cutting issues, a second 95001 inspection to close out the white finding for unit 2,

and a confirmatory order inspection that also focused on work observations in the areas of operations and maintenance.

In 2011, major planned inspections include a Biennial EP exercise inspection, a CDBI, and two inspections to review the ongoing safety conscious work environment issues at SONGS.

The proposed inspection plan is attached.

ATTACHMENTS

1. Focus Areas/Technical Issues
2. Proposed Inspection Plan
3. Previous Follow-up Assessment Letter
4. Plant Issues Matrix
5. Performance Indicator Summary

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