

**San Onofre Nuclear Generating Station – Units 1 and 2**

**2010 Mid-Cycle Plant Safety Performance Summary**

Assessment Period: July 1, 2009 – June 30, 2010

**1. Operating Summary.**

**A. Power Operations - Noteworthy Unplanned Operating Events and Forced Outages**

Unit 2 Power Operations

July 25                      Decrease power due to loss of circulating water pump from sea grass clogging.

Unit 3 Power Operations

July 25                      Decrease power due to loss of circulating water pump from sea grass clogging.

December 12              Unit began shutdown due to entering T/S shutdown LCO 3.8.1 after both EDGs declared inoperable. NOUE declared. Technical specification exited prior to shutdown. Unit began increasing power on December 13.

March 5                      Power rampdown to 50% for fuel conservation

April 10                      Return to 100% power

**B. Planned Outages - Noteworthy Unplanned Outage Events**

Unit 2 Planned Outages -

September 27              Unit 2 Shutdown for steam generator replacement and Refueling outage

April 9                      Unit 2 exit Steam generator replacement and refueling outage

Unit 3 Planned Outages – none

Upcoming RFOs

Unit 3 – 3R16: September 2010 – December 2010 – Steam Generator Replacement

Unit 2 - 2R17: October 2011-November 2011

Information in this record was deleted  
in accordance with the Freedom of Information  
Act, exemptions 7, 2, 5

FOIA- 2011-0159

A-B

## 2. Safety Performance Overview

### A. Previous Assessment Results

|                      | 2 <sup>nd</sup> Qtr 2009   | 3 <sup>rd</sup> Qtr 2009   | 1 <sup>st</sup> Qtr 2010   |
|----------------------|--|--|--|
| Action Matrix Column | Unit 2: Regulatory Response<br>Unit 3: Licensee Response             | Unit 2: Regulatory Response<br>Unit 3: Licensee Response             | Unit 2: Regulatory Response<br>Unit 3: Licensee Response             |
| Basis                | Unit 2: 1 White finding<br>Unit 3: All findings and PI's were Green. | Unit 2: 1 White finding<br>Unit 3: All findings and PI's were Green. | Unit 2: 1 White finding<br>Unit 3: All findings and PI's were Green. |

#### Summary of results from Previous End-of-Cycle Letter

Plant performance for the most recent quarter 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) and all Performance Indicators indicating performance at a level requiring no additional NRC oversight (Green). On August 4, 2008, NRC commenced a special inspection at Southern California Edison to inspect activities associated with deficient electrical connections with the potential to adversely affect the safety function of multiple safety systems used for accident mitigation. In Inspection Report 2008013, NRC issued a violation of low to moderate safety significance (White) for the failure to establish appropriate instructions for performing maintenance activities on a safety-related 125 Vdc station battery breaker. NRC conducted Supplemental Inspection 95001, "Supplemental Inspection for One or Two White Inputs in a Strategic Performance Area" in December, 2009. In February, 2010, NRC completed its assessment of the inspection results and concluded that the white finding would remain open due to our lack of confidence in the effectiveness of the licensee's corrective actions.

Plant performance for the most recent quarter for Unit 3 was within the Licensee Response Column of NRC's Action Matrix, based on all inspection findings being classified as having very low safety significance (Green) and all Performance Indicators indicating performance at a level requiring no additional NRC oversight (Green).

The branch kept open the substantive cross-cutting issues in the human performance area, decision making component, the human performance area, resources component, the human performance area, work practices component and in the problem identification and resolution area, corrective action program component. The branch also opened three new substantive cross-cutting issues: One in the Human performance area associated with the contractor oversight aspect of the work practices component (H4C), one in the Problem Identification and Resolution area associated with the low threshold aspect of the corrective action program component (P1A), and one in the Problem Identification and Resolution area associated with the appropriateness of corrective action aspect of the corrective action program component (P1D).

Ex 5

by [unclear]

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**B. Proposed 2010 Mid-Cycle Assessment**

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Since the last assessment period, the licensee has not demonstrated meaningful performance improvement evidenced by a increasing trend in number of NRC identified findings and continuing high number of allegations. The branch has observed improvement in day to day oversight by SONGS management, significantly improved as compared to previous assessment cycles, however, these efforts have not resulted in consistent improved performance.

Two inspections during this cycle provided some indication of improvements: A focused inspection on maintenance and technical training indicated generally positive attitudes among workers on improvement efforts in their training, although a significant amount of the training improvement plan remained to be accomplished. A team inspection in July confirmed completion of all elements of the confirmatory order, and the branch is recommending formal closure of the confirmatory order.

The branch also recommends continued elevated oversight and inspection at SONGS, as approved in the deviation memo from the EDO in April 2010. The branch is currently planning the next team inspection for late September/early October.

The branch will conduct a public meeting in late August to discuss with the licensee the results of their assessment of performance improvement related to safety culture at the site, as discussed in the Chilled Effect letter issued March 2, 2010.

**3. Inspection and Performance Indicator Results**

**A. Results by Cornerstones**

## **Initiating Events**

Inspection Findings: One Green NOV, Nine green NCV's and three green findings were evaluated by inspectors during this assessment period.

1) Green NCV – Licensee training personnel failed to follow procedure to ensure workers receive human performance training before performing hands-on work (PI&R, IR 2009009-01, PIM# 79301).

2) Green FIN – Licensee failed to have adequate procedures in place to successfully perform, test, and communicate maintenance activities on Unit 2 circulating water gate 5 (HP, IR 2009005-07, PIM# 79297).

3) Green FIN – Licensee failed to perform an adequate pre-job brief in accordance with procedural requirements for a planned Unit 2 heat treat evolution (HP, IR 2009005-08, PIM# 79298).

4) Green NCV – Licensee failed to ensure that contract personnel properly implement the requirements of a fire protection procedure for the control of hot work activities (HP, IR 2009005-09, PIM# 79299).

5) Green NOV – Licensee failed to adequately assess the increase in risk associated with maintenance activities in or near the electrical switchyard and offsite power components (PI&R, IR 2009004-02, PIM#79281).

6) Green NCV – Licensee contractors and station personnel failed to properly implement the requirements of a station fire protection procedure for control of hot work activities (HP, IR2010002-01, PIM#79309).

7) Green NCV – Licensee operations and work control personnel failed to adequately assess and manage the increase in risk associated with maintenance activities in the electrical switchyard (HP, IR2010002-04, PIM#79312).

8) Green NCV – Licensee failed to follow the conduct of operations procedure in the control room (HP, 2010006-02, PIM#79338).

9) Green NCV – Licensee failed to develop an adequate procedure to control the borating of ion exchangers (HP, 2010006-03, PIM#79339).

10) Green NCV – Licensee Failed to secure loose items in the switchyard (HP, 2010006-04, PIM#79340).

11) Green NCV – Licensee failed to assess and manage risk for emergent work on the unit 2 intake structure (HP, IR 2010003-03, PIM#79326).

12) Green NCV – Licensee failed to define the control room as required in technical specifications (HP, IR 2010003-04, PIM#79327).

13) Green Finding – Licensee failed to follow station procedures on written instruction use and adherence while performing testing on a feed heater (HP, IR 2010003-11, PIM#79336).

Performance Indicators: All performance indicators were Green throughout the assessment period.

### **Mitigating Systems**

Inspection Findings: Thirty one green NCV's and one severity level IV NCV, and one potentially greater than green NCV (severity level TBD) were evaluated by inspectors during this assessment period.

1) Green NCV – Licensee failed to maintain change-control procedures as required by regulatory guide 1.33 that would suspend existing procedures requiring technical changes (PI&R, IR 2009009-02, PIM# 79302).

2) Green NCV – Licensee failed to perform an adequate evaluation of potential degradation of emergency core cooling piping restraints associated with support welds and embedded wall plates (HP, IR 2009005-02, PIM# 79292).

3) Green NCV – Licensee failed to take adequate corrective actions for conditions adverse to quality for the unit 3 emergency diesel generators following an unexpected fuse failure of the B train EDG annunciator system (PI&R, IR 2009005-03, PIM# 79293).

4) Green NCV – Licensee failed to initiate a nuclear notification within the required timeframe following a problem with a flooded auxiliary feedwater vault (PI&R, IR 2009005-01, PIM# 79291).

5) Green NCV – Licensee failed to correct problems with the EDG Train A annunciator power supplies (HP, IR 2009005-04, PIM#79294).

6) Green NCV – Licensee failed to adequately evaluate the operability of the Unit 3 containment emergency sump when a previously un-analyzed Styrofoam material was identified (PI&R, IR 2009005-05, PIM# 79295).

7) Green NCV – Licensee failed to implement adequate compensatory measures to substitute manual operator actions for automatic actions to support the operability of the RWST to charging pump suction piping (HP, IR 2009005-06, PIM# 79296).

8) Green NCV – Licensee failed to take measures to ensure that systems specified in the design basis were maintained in a configuration which provided a reasonable assurance of operability during design basis events (HP, IR 2009005-10, PIM# 79306).

9) Severity Level IV NCV: Licensee failed to submit revisions to the Updated Safety Analysis Report reflecting changes to the Unit 2 safety equipment building emergency core cooling pump room piping penetration that were in place for more than 24 months (PI&R, IR 2009004-01, PIM# 79280).

10) Green NCV: Licensee failed to follow corrective action program procedures to address deficiencies associated with post-maintenance testing (PI&R, IR 2009004-003, PIM# 79282)

11) Green NCV: Licensee procurement and engineering personnel failed to include requirements necessary to assure adequate quality in a safety-related component, resulting in a main feedwater isolation valve and a main steam isolation valve being inoperable for greater than their allowed technical specification outage time (IR 2009004-05, PIM# 79284)

12) Green NCV: Licensee failed to appropriately scope the steam driven auxiliary feedwater pump trench eductor in the maintenance rule monitoring program (IR2010002-02, PIM#79310).

13) Green NCV – Licensee failed to properly implement procedure requirements to ensure that applicable risk significant operating experience was entered into the corrective action program for timely evaluation (HP, IR2010002-03, PIM#79311).

14) Green NCV – Licensee operations personnel failed to follow procedures to approve and document operability determinations using adequate or technically correct information (PI&R, IR2010002-05, PIM#79314).

15) Green NCV – Licensee of 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 (HP, IR 2010002-06, PIM#79315).

16) Green NCV – Licensee failed to enter conditions adverse to quality into the corrective action program (PI&R, IR 2010002-12, PIM#79321).

17) Green NCV – Licensee failed to adequately implement a Work Order and provide adequate oversight to transmission and distribution personnel while performing work in the electrical switchyard (HP, IR 2010002-13, PIM#79322).

18) Green NCV – Licensee failed to follow procedures for operating the component cooling water system (HP, IR 2010002-14, PIM#79323).

19) Green NCV – Licensee failed to perform an adequate operability determination of the turbine driven auxiliary feed water pumps steam admission valve (HP, IR2010006-05, PIM#79341).

20) Green NCV – Licensee failed to translate design basis information into procedures for the turbine driven auxiliary feed pump steam admission valves (PI&R, IR 2010006-06, PIM#79342).

21) Significance TBD NCV – Licensee failed to maintain the condensate storage tank as operable as required by technical specifications (HP, IR 2010006-07, PIM#79343).

22) Green NCV – Licensee failed to maintain procedures such that outdated procedures with known technical errors were in use in the plant after plant modifications (PI&R, IR2010006-08, PIM#79344).

23) Green NCV – Licensee failed to count unavailability hours for long-standing latent failures that exceeded the 10 CFR 50.65(a)(2) monitoring criteria. (HP, IR 2010006-09, PIM#79345).

24) Green NCV – Licensee failed to identify and correct the use of degraded motor driven relays in safety related systems and components (HP, IR 2010006-10, PIM#79346).

25) Green NCV – Licensee failed to translate design basis information into affected calculations and procedures (PI&R, IR 2010006-11, PIM#79347).

26) Green NCV – Licensee failed to demonstrate that the performance or condition of the Unit 3 component cooling water system had been effectively controlled through the performance of appropriate preventive maintenance and did not monitor against licensee-established goals (HP, IR 2010003-01, PIM#79324).

27) Green NCV – Licensee failed to assess and manage risk associated with maintenance on emergency diesel generators (HP, IR 2010003-02, PIM#79325).

28) Green NCV – Licensee failed to follow work control procedures requiring approved work orders for work on safety related components (HP, IR 2010003-05, PIM#79330).

29) Green NCV – Licensee failed to perform an adequate operability determination for safety related concrete cracks (HP, IR 2010003-06, PIM#79331).

30) Green NCV – Licensee failed to follow the conduct of operations procedure direction to control operator aids (PI&R, IR 2010003-07, PIM#79332).

31) Green NCV – Licensee failed to determine the cause of and take corrective actions to preclude repetition of a significant condition adverse to quality associated with repeated leakage of safety related piping (IR 2010003-08, PIM#79333).

32) Green NCV – Licensee failed to appropriately identify and classify degraded voltage on a class 1E battery (HP, IR 2010003-09, PIM# 79334).

33) Green NCV – Licensee failed to assure circuit breakers conformed to procurement documents (IE 2010003-10, PIM#79335).

Performance Indicators: All performance indicators were Green throughout the assessment period.

## **Barrier Integrity**

Inspection Findings: Three green NCV's were evaluated by inspectors during this assessment period.

1) Green NCV – Licensee failed to ensure contractor personnel established measures to ensure adequate controls for the storage and preservation of material, associated with the admixture and fly ash, to be used in the production of safety-related concrete (HP, IR 2009007-01, PIM # 79303)

2) Green NCV – Licensee failed to ensure contractor personnel followed procedures to ensure proper mixing and batching of safety-related concrete (HP, IR 2009007-02, PIM# 79304).

3) Green NCV – Licensee failed to adequately implement foreign material exclusion controls (HP, IR 2010002-07, PIM#79316).

Performance Indicators: All performance indicators were Green throughout the assessment period.

## **Emergency Preparedness**

Inspection Findings: One SL-IV NCV was evaluated by inspectors during this assessment period.

1) Severity Level IV NCV: Licensee failed to notify the NRC in the required time after computer engineering personnel discovered an event requiring an eight hour notification (PI&R, IR 2009004-04, PIM# 79283).

Performance Indicators: All performance indicators were Green throughout the assessment period.

## **Occupational Radiation Safety**

Inspection Findings: One Green NCV was evaluated by inspectors during this assessment period.

1) Green NCV – Licensee failed to control access to a locked high radiation area (IR 2010002-08, PIM# 79317).

Performance Indicators: All performance indicators were Green throughout the assessment period.

## **Public Radiation Safety**

Inspection Findings: One Green NCV was evaluated by inspectors during this assessment period.

1) Green NCV – Licensee failed to establish procedures for monitoring radiation in component cooling water during all operational alignments (PI&R, IR 2010006-12, PIM#79348).

Performance Indicators: All performance indicators were Green throughout the assessment period.

#### **Other**

Inspection Findings: Four SL-IV NCV's and one Green Finding were evaluated by inspectors during the assessment period.

1) Severity Level IV NCV – Licensee failed to notify the NRC within 8 hours of a nonemergency event (PI&R, IR 2010002-09, PIM#79318).

2) Severity Level IV NCV – Licensee failed to report a safety system functional failure (IR 2010002-10, PIM#79319).

3) Severity Level IV NCV – Licensee failed obtain a license amendment for a technical specification basis change (IR 2010002-11, PIM#79320).

4) Severity Level IV NCV – Licensee failed to submit a Licensee Event report within 60 days after discovery of a condition that could have prevented the fulfillment of the safety related function of the auxiliary feed water system (PI&R, IR 2010006-13, PIM#79349).

5) GREEN FIN – Licensee failed to meet actions planned to correct third and fourth consecutive assessment cycles of substantive cross-cutting issues (HP, IR 2010006-14, PIM#79350)

#### **4. Adverse Trends in Cross-cutting areas**

##### **A. SCWE- Allegations Received Between January 1, 2009 – June 30, 2010 or NRC letters to Licensee**

Forty allegations (detailed below) associated with SCWE were received during the past eighteen months. A chilling effect letter was issued by the NRC to SONGS on March 2, 2010, requiring the licensee to take actions to address the perception among some SONGS personnel in multiple work groups that retaliation could result from the raising of safety concerns. An independent SONGS investigation substantiated a case of a supervisor creating a chilled working environment in their group. The last five allegations listed below were received by the NRC after the Chilling Effect Letter was issued.

1. Allegor states that they were terminated for raising safety concerns (ADR). (2009-A-0017)
2. Allegor states that a negative perception of SCWE exists. (2009-A-0032)
3. Allegor states that they and others will not approach management about concerns. (2009-A-0039)

4. Adverse action was taken against two individuals who opposed remote access (transferred to HQ's, NSIR-2009-A-005). (2009-A-0043)
5. Allegor believes that (s)he has been discriminated against for raising safety concerns to the NRC (ADR). (2009-A-0057)
6. A chilled work environment exists in the Maintenance Procedure Group. (2009-A-0085)
7. Management has created a hostile work environment. (2009-A-0086)
8. Allegor has no faith in nuclear safety concerns program with respect to confidentiality, adequacy, and independence from senior executive influence. (2009-A-0104)
9. A current fearful environment exists in which senior management directives are not challenged. (2009-A-0108)
10. Concerned individual claims retaliation for raising nuclear safety concerns to the NRC. (2009-A-0138)
11. Site safety manager has managed in a manner that has created a hostile and chilled work environment. Substantiated by Licensee in RFI. (2009-A-0146)
12. Southern California Edison has a chilled working environment and has discriminated against an employee. DOL claim submitted. (2009-A-0152)
13. Southern California Edison has a chilling effect at SONGS. (2009-A-0157)
14. Concerned individual does not feel secure in raising safety concerns to their supervisor because they received a negative response when they asked for clarification about changes to an apparent cause evaluation associated with untimely corrective actions. The CI fears retaliation. (2009-A-0158)
15. Concerned individual fears retaliation due to lack of safety conscious work environment. (2009-A-0159)
16. Concerned individual is being targeted by management and does not feel safe raising safety concerns to any supervisor or manager. (2009-A-0169)
17. A chilled work environment exists in the SONGS emergency preparedness group. (2009-A-0170)
18. Concerned individual fears retaliation after complaining to SCE about willful violations. (2009-A-0171)
19. Security personnel are reporting to work unfit for duty for fear of receiving disciplinary action if they call in sick. (2009-A-0172)

20. Electricians are being directed to perform work involving industrial safety concerns. (2009-A-0174)
21. CI did not raise a concern to management for fear of being laid off. (2009-A-0176)
22. Third party discrimination claim. (2009-A-0177)
23. CI has been the subject of retaliation. (2009-A-0179)
24. Contract workers are being threatened with the loss of their jobs for raising safety concerns. (2009-A-0181)
25. CI alleged anonymously due to fear of retaliation. (2009-A-0182)
26. CI was retaliated upon for questioning supervisor's direction to change a procedure. (2010-A-0001)
27. Employee feared retaliation after reporting unethical conduct of their manager. (2010-A-0002)
28. CI felt supervisor was retaliating. (2010-A-0003)
29. CI felt that the reason for their termination was because they refused to return to work while unfit for duty. (2010-A-0004)
30. CI still feels chilled environment even after safety organization action taken to address. CI was terminated for raising ethical concerns. (2010-A-0018)
31. Nuclear safety concerns program not confidential; management hostile to those who raise concerns. Contractor harassed and intimidated, CI feared retaliation. (2010-A-0022)
32. Activist group compilation of issues, including SCWE issues. (2010-A-0023)
33. CI claimed retaliation from manager for writing a nuclear notification. (2010-A-0027)
34. CI terminated for reporting name of individual who tied open a high radiation area gate inside containment. (2010-A-0036)
35. CI concerned with SCWE in dry storage container fabrication facility and felt they were discriminated against due to their association with certain individuals. (2010-A-0044)
36. Managers hide problems so they can keep their jobs; CI fears retaliation. (2010-A-0053)
37. CI fearful of retaliation and felt a safety conscious work environment does not exist at SONGS. (2010-A-0062).
38. CI feels a hostile work environment exists at SONGS. (2010-A-0069)

39. CI claimed retaliation for writing a notification and felt there is not a safety conscious work environment at SONGS. (2010-A-0090)
40. CI received a poor performance evaluation as retaliation for involvement in protected activities. (2010-A-0092).

### **Conclusion**

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 an action plan to address SCWE issues, a communication plan aimed at SCE and contract personnel, and a public meeting (scheduled for late August, 2010) during which the licensee will review 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 reviewed per the 6 month timeline set forth in the Chilling Effect Letter. Also, NRC inspectors are conducting additional focused inspections through CY2010 per the ROP deviation memo dated April 9, 2010. These inspections will focus on identification of latent technical issues that have not been identified through the licensee's corrective action program, as well as address emerging technical issues identified as a result of corrective action backlog reviews and other normal inspection activities. Per this memo, the end of cycle performance assessment for CY2010 will evaluate licensee progress in implementing effective corrective actions for the substantive cross-cutting issues in HP, PI&R, and SCWE. The results achieved by the licensee will determine whether continued heightened NRC oversight is needed during CY2011.

### **B. Human Performance- PIM Entries between January 1, 2009 – December 31, 2009.**

#### **Conclusion**

In the end-of-cycle assessment, there were 23 findings with cross-cutting aspects in the area of human performance. In this assessment, there are 32 findings, indicating an increasing trend in the number of findings in this cross-cutting area.

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**Details**

Eight of the thirty-three findings in the cross-cutting area of human performance were within the decision making component. Five had the common theme of not using conservative assumptions and validating underlying assumptions in decision making (H.1(b)). Four of the supporting findings for this theme were new to CY2010. The branch has concern with the scope and effectiveness of the licensee's efforts in addressing this issue.

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Seven of the thirty-three findings in the cross-cutting area of human performance were within the resources component. Six findings had the common theme of not having complete, accurate, and up-to-date design documentation, procedures, and work packages, and correct labeling of components (H.2(c)). Two of these findings were documented in the most recent resident inspection report.

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Sixteen of the thirty-three findings in the cross-cutting area of human performance were within the work practices component. Of these, three had the common theme of not using adequate human error prevention techniques (H.4(a)). Two of these findings are new to CY2010.

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Seven 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)). All of these findings are new to CY2010.

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The other six findings in the work practices component were within the work oversight component (H.4(c)). 3 of these findings are new to CY2010.

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Table 1.0 - Cross Cutting Area - Human Performance

| Decision-Making Component   |   |                    |
|---|---|--------------------|
| Finding   | Documented Contributing Cause   | Cornerstone        |
| Licensee failed to implement adequate compensatory measures to substitute manual operator actions for automatic actions to support the operability of the RWST to charging pump suction piping (HP, IR 2009005-06, PIM# 79296). | Failure to make decisions using a systematic process when faced with unexpected plant conditions. H.1(a)                                | Mitigating Systems |
| Licensee failed 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 |
| Licensee failed to count unavailability hours for long-standing latent failures that exceeded the 10 CFR 50.65(a)(2) monitoring criteria. (IR 2010006-09, PIM#79345).   | Licensee failed to use a formal decision making process to determine how to count unavailability hours for the maintenance rule. H.1(a) | Mitigating Systems |
| Licensee failed to perform an adequate evaluation of potential degradation of emergency core cooling piping restraints associated with support welds and embedded wall plates (HP, IR 2009005-02, PIM# 79292).                  | Failure to use conservative assumptions for operability decision making H.1(b)  | Mitigating Systems |
| Licensee failed to perform an adequate operability determination of the turbine driven auxiliary feed water pumps steam admission valve (IR2010006-05, PIM#79341).  | Licensee utilized unsupported assumptions in its evaluation that were not consistent with the valve vendor manual. H.1(b)               | Mitigating Systems |
| Licensee failed to identify and correct the use of degraded motor driven relays in safety related systems and components (IR 2010006-10, PIM79346).   | Failure to use conservative assumptions for extent of condition decision making H.1(b)  | Mitigating Systems |

|  |  |                    |
|--|--|--------------------|
| Licensee failed to demonstrate that the performance or condition of the Unit 3 component cooling water system had been effectively controlled through the performance of appropriate preventive maintenance and did not monitor against licensee-established goals (IR 2010003-01, PIM#79234). | Failure to use conservative assumptions for operability decision making H.1(b)   | Mitigating Systems |
| Licensee failed to perform an adequate operability determination for safety related concrete cracks (HP, IR 2010003-06, PIM#79331).  | Failure to use conservative assumptions for decision making H.1(b)   | Mitigating Systems |
| <b>Resources Component</b>   |  |                    |
| <b>Finding</b>   | <b>Documented Contributing Cause</b>   | <b>Cornerstone</b> |
| Licensee failed to maintain the condensate storage tank as operable as required by technical specifications (IR 2010006-07, PIM#79343).  | Licensee did not ensure that equipment was available and adequate to assure nuclear safety in that the valve was not being maintained through a preventive maintenance program. H.2(a) | Mitigating Systems |
| Security Related Inspection Finding (IR 2009404).  | Insufficient resources associated with documentation. H.2(c)   | Security           |
| Licensee failed to perform an adequate pre-job brief in accordance with procedural requirements for a planned Unit 2 heat treat evolution (HP, IR 2009005-08, PIM# 79298).   | Inadequate procedural guidance. H.2(c)   | Initiating Events  |
| Licensee failed to take adequate corrective actions for conditions adverse to quality for the unit 3 emergency diesel generators following an unexpected fuse failure of the A train EDG annunciator system (HP, IR 2009005-04, PIM# 79294).   | Licensee did not provide adequate instructions to perform activities affecting quality. H.2(c)   | Mitigating Systems |
| Licensee failed to take measures to ensure that systems specified in the design basis were maintained in a configuration which provided a reasonable assurance of operability during design basis events (HP, IR 2009005-10, PIM# 79306).  | Licensee did not maintain up to date design documentation, procedures, and work packages. H.2(c)   | Mitigating Systems |

|   |   |                           |
|---|---|---------------------------|
| <p>Licensee failed to assess and manage risk for emergent work on the unit 2 intake structure (IR 2010003-03, PIM#79326).</p>   | <p>Licensee did not maintain up to date design documentation, procedures, and work packages. H.2(c)</p>                           | <p>Initiating Events</p>  |
| <p><b>Work Control Component</b></p>  |   |                           |
| <p><b>Finding</b></p>   | <p><b>Documented Contributing Cause</b></p>   | <p><b>Cornerstone</b></p> |
| <p>Licensee Failed to secure loose items in the switchyard (HP, 2010006-04, PIM#79340).</p>   | <p>Personnel failed to appropriately plan work activities involving job site conditions which may impact plant SSC's. H.3(a)</p>  | <p>Initiating Events</p>  |
| <p>Licensee failed to have adequate procedures in place to successfully perform, test, and communicate maintenance activities on Unit 2 circulating water gate 5 (HP, IR 2009005-07, PIM# 79297).</p> | <p>Licensee did not incorporate actions to address interdepartmental communication H.3(b)</p>                                     | <p>Initiating Events</p>  |
| <p><b>Work Practices Component</b></p>  |   |                           |
| <p><b>Finding</b></p>   | <p><b>Documented Contributing Cause</b></p>   | <p><b>Cornerstone</b></p> |
| <p>Security Related Inspection Finding (IR 2009402)</p>   | <p>Security officer proceeded in the face of uncertainty or unexpected circumstances H.4(a)</p>                                   | <p>Security</p>           |
| <p>Licensee failed to follow procedures for operating the component cooling water system (IR 2010002-14, PIM#79323).</p>  | <p>Operations personnel failed to use proper human error prevention techniques in the face of unexpected circumstances H.4(a)</p> | <p>Mitigating Systems</p> |

|  |   |                    |
|--|---|--------------------|
| 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  |
| 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 2010003-05, PIM#79330).  | Licensee did not define and effectively communicate expectations regarding procedural compliance. H.4(b)   | Mitigating Systems |
| 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 |
| Licensee failed to ensure contractor personnel established measures to ensure adequate controls for the storage and preservation of material, associated with the admixture and fly ash, to be used in the production of safety-related concrete (HP, IR 2009007-01, PIM # 79303) | licensee failed to ensure supervisory and management oversight of work activities, including contractors, such that nuclear safety is supported [H.4(c)] | Barrier Integrity  |
| Licensee failed to ensure contractor personnel followed procedures to ensure proper mixing and batching of safety-related concrete (HP, IR 2009007-02, PIM# 79304).   | licensee failed to ensure supervisory and management oversight of work activities, including contractors, such that nuclear safety is supported [H.4(c)] | Barrier Integrity  |
| 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 |
| Licensee failed to follow the conduct of operations procedure in the control room (2010006-02, PIM#79338).  | Licensee did not ensure supervisory and management oversight of work activities. H.4(c)  | Initiating Events  |
| Licensee failed to develop an adequate procedure to control the borating of ion exchangers (2010006-03, PIM#79339).   | Licensee supervisory personnel did not ensure activities associated with reactivity control were performed in a controlled manner H.4(c)                 | Initiating Events  |

**Table 1.1 - Basis for Conclusion on MC 0305 Criteria**

| <b>MC 0305 Guidance on Substantive Cross-Cutting (SCC) Issues</b>   | <b>Performance Observations in the Human Performance Area</b>  | <b>Met Criteria</b> |
|---|--|---------------------|
| <p>Criterion 1: Four or more Green or safety significant inspection findings in the assessment period with the same documented aspects from more than one cornerstone (exception is Mitigating Systems)</p>                     | <p>Thirty two findings with aspects of human performance.</p>  |                     |
|   | <p>H.1(a) Three findings in the Decision-Making component with the common theme of not using a systematic process in making safety significant or risk-significant decisions; covering the Mitigating Systems cornerstone.</p>                                       | No                  |
|   | <p>H.1(b) Five findings in the Decision-Making component with the common theme of not using conservative decision-making, covering the Mitigating Systems cornerstone.</p>   | Yes                 |
|   | <p>H.2(a) One finding in the Resources Component with the theme of not maintaining long term plant safety by minimizing long standing plant equipment issues and preventive maintenance deferrals.</p>   | No                  |
|   | <p>H.2( c) Five findings in Resources component with the common theme of not providing complete, accurate, and up-to-date design documentation, procedures, and work packages, covering the Mitigating Systems, and Initiating Events and security cornerstones.</p> | Yes                 |
| <p>H.3(a) One finding in the Work Control component with the theme of not appropriately planning work activities by incorporating risk insights, job site conditions, and contingency plans. Initiating Events Cornerstone.</p> | No   |                     |

|   |  |            |
|---|--|------------|
| <p>Criterion 1: Four or more Green or safety significant inspection findings in the assessment period with the same documented aspects from more than one cornerstone (exception is Mitigating Systems)</p> | <p>H.3(b) One finding in the Work Control component with the theme of not appropriately coordinating work activities by incorporating interdepartmental communications.</p>  | <p>No</p>  |
|   | <p>H.4(a) Three findings in the Work Practices component with the common theme of not using human error prevention techniques and proceeding in the face of uncertainty covering the Mitigating Systems, Initiating Events, and security cornerstones.</p> | <p>No</p>  |
|   | <p>H.4(b) Eight findings in the Work Practices Component with the common theme of not defining and communicating expectations regarding procedural compliance or personnel not following procedures.</p>   | <p>Yes</p> |
|   | <p>H.4(c) Five findings in the Work Practices component with the common theme of not ensuring adequate supervisory oversight of work activities covering the Mitigating Systems and Initiating Events cornerstones.</p>                                    | <p>Yes</p> |

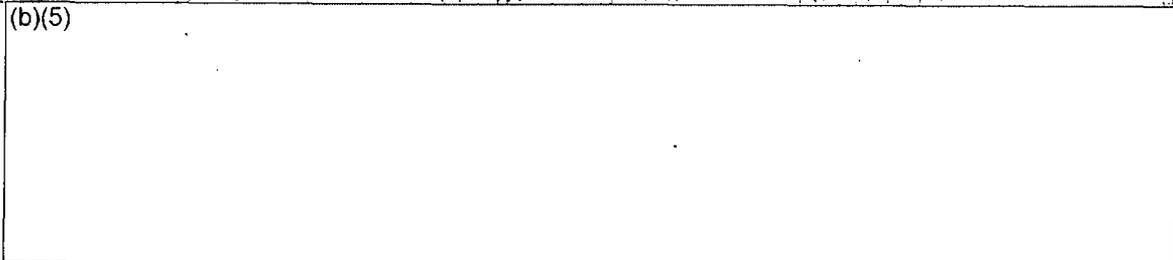
|   |  |            |
|---|--|------------|
| <p>Criterion 2: The agency has a concern with the licensee's scope of efforts or progress in addressing the cross-cutting area performance deficiency</p> | <p>H.1(b) Based on the fact that the total number of findings with human performance cross-cutting issues has increased the branch has a concern with licensee's actions and progress in addressing the cross-cutting area. The branch recommends keeping open a substantive cross-cutting issue in human performance / decision-making.</p> | <p>Yes</p> |
|   | <p>H.2( c) Based on the fact that the theme was seen throughout the entire cycle with two new findings in this most recent quarter, we recommend keeping open the substantive cross-cutting issue in human performance / resources.</p>  | <p>Yes</p> |
|   | <p>H.4(a) Based on the fact that the theme has two new findings for CY2010, we recommend keeping open a substantive crosscutting issue in human performance/work practices.</p>  | <p>Yes</p> |
|   | <p>H.4 (b) Based on the fact that the theme was spread across three cornerstones, we recommend keeping open a substantive cross-cutting issue in human performance / work practices.</p>   | <p>Yes</p> |
|   | <p>H.4(c) Based on the fact that this has been a past issue and corrective actions have been ineffective.</p>  | <p>Yes</p> |

**C. PI&R - PIM Entries Between July 1, 2008- June 30, 2009**

**Conclusion**

There is an increasing trend in the number of findings with cross-cutting aspects in the area of problem identification and resolution. In the end-of-cycle assessment, there were thirteen findings with cross-cutting aspects in this area. In this assessment, there are nineteen findings, indicating an increasing trend in the area of problem identification and resolution overall.

(b)(5)



(b)(5)

**Details**

All of the nineteen findings in the cross-cutting area of Problem Identification and Resolution (PI&R) were in the corrective action program component. Eight 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.1A). Four of these inspection findings came from CY2010 inspection reports.

(b)(5)

Seven findings shared the common theme of failing to thoroughly evaluate problems such that the resolutions address causes and extent of conditions (P.1.C).

(b)(5)

Three of the inspection findings in this area had a theme of not taking appropriate corrective actions to address safety issues and adverse trends (P.1.D). These inspection findings occurred over the third and fourth quarters and involved the mitigating systems and initiating events cornerstones.

(b)(5)

| Table 2.0 - Cross Cutting Area - Problem Identification and Resolution  |   |                        |
|---|---|------------------------|
| Corrective Action Program Component   |   |                        |
| Finding   | Documented Contributing Cause   | Cornerstone            |
| Licensee failed to notify the NRC in the required time after computer engineering personnel discovered an event requiring an eight hour notification (PI&R, IR 2009004-04, PIM# 79283). | Licensee personnel failed to implement the corrective action program at an appropriate threshold identified issues. P.1(a)  | Emergency Preparedness |
| Licensee failed to follow corrective action program procedures to address deficiencies associated with post-maintenance testing (PI&R, IR 2009004-003, PIM# 79282)                      | Licensee failed to identify and correct deficiencies associated with inadequate post-maintenance testing at a threshold commensurate with the safety significance. P.1(a) | Mitigating Systems     |

|  |  |                         |
|--|--|-------------------------|
| Failure to initiate a notification in a timely manner regarding a flooded auxiliary seawater vault (PI&R, IR 2009005-01, PIM# 79291)   | Licensee failed to implement the corrective action program with an appropriate threshold for identified issues P.1(a)          | Mitigating Systems      |
| Security Related Inspection Finding (IR 2009402)   | Licensee's threshold for identifying issues failed to capture the key program element deficiencies P.1(a)                      | Security                |
| 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 translate design basis information into procedures for the turbine driven auxiliary feed pump steam admission valves (PI&R, IR 2010006-06, PIM#79342).  | Licensee failed to evaluate issue in all occurrences. 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      |
| Licensee failed to maintain change-control procedures as required by regulatory guide 1.33 that would suspend existing procedures requiring technical changes (PI&R, IR 2009009-02, PIM# 79302).   | Licensee failed to evaluate problems such that the resolutions addressed the causes and extent of conditions. P.1(c)           | Mitigating Systems      |
| Licensee failed to establish procedures for monitoring radiation in component cooling water during all operational alignments (IR 2010006-12, PIM#79348).  | Licensee failed to implement the corrective action program with a low threshold for identifying issues with procedures. P.1(c) | Public Radiation Safety |
| Licensee failed to adequately evaluate the operability of the Unit 3 containment emergency sump when a previously un-analyzed Styrofoam material was identified (PI&R, IR 2009005-05, PIM# 79295).   | Licensee failed to evaluate problems such that the resolution addressed the cause and extent of condition. P.1(c)              | Mitigating Systems      |
| Licensee failed to take adequate corrective actions for conditions adverse to quality for the unit 3 emergency diesel generators following an unexpected fuse failure of the B train EDG annunciator system (HP, IR 2009005-02, PIM# 79292). | Licensee failed to evaluate problems such that the resolution addressed the cause and extent of condition. P.1(c)              | Mitigating Systems      |

|  |   |                    |
|--|---|--------------------|
| 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 |
| Licensee failed to submit a Licensee Event report within 60 days after discovery of a condition that could have prevented the fulfillment of the safety related function of the auxiliary feed water system (IR 2010006-13, PIM#79349).                                | Licensee failed to appropriately evaluate corrective maintenance as a basis for past operability. P.1(c)  | Miscellaneous      |
| Licensee training personnel failed to follow procedure to ensure workers receive human performance training before performing hands-on work (PI&R, IR 2009009-01, PIM# 79301).   | Licensee failed to take appropriate corrective actions to address safety issues and adverse trends in a timely manner, commensurate with their safety significance and complexity. P.1(d) | Initiating Events  |
| Licensee failed to adequately assess the increase in risk associated with maintenance activities in or near the electrical switchyard and offsite power components (PI&R, IR 2009004-02, PIM#79281).   | Licensee did not take appropriate corrective actions to address safety issues and adverse trends in a timely manner, commensurate with their safety significance and complexity. P.1(d)   | Initiating Events  |
| Licensee failed to submit revisions to the Updated Safety Analysis Report reflecting changes to the Unit 2 safety equipment building emergency core cooling pump room piping penetration that were in place for more than 24 months (PI&R, IR 2009004-01, PIM# 79280). | Licensee failed to take appropriate corrective actions to address safety issues and adverse trends in a timely manner, commensurate with their safety significance and complexity. P.1(d) | Mitigating Systems |

| Operating Experience Component  |   |                    |
|---|---|--------------------|
| Finding   | Documented Contributing Cause   | 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 |

**Table 2.1 - Basis for Conclusion on MC 0305 Criteria**

| <b>MC 0305 Guidance on Substantive Cross-Cutting (SCC) Issues</b>   | <b>Performance Observations in the Problem Identification and Resolution Area</b>   | <b>Met Criteria</b>                       |
|---|---|---|
| <p>Criterion 1: Four or more Green or safety significant inspection findings in the assessment period with the same documented aspects from more than one cornerstone (exception is Mitigating Systems)</p> | <p>Nineteen findings in the area of Problem Identification and Resolution were found in this inspection cycle.</p> <p>P.1(a) Seven findings sharing the same aspect of the Corrective Action Program component for having a low threshold for identifying issues in the Emergency Preparedness, Mitigating Systems, Public Radiation Safety and Security cornerstones.</p> <p>P.1(c) Eight findings in the area of thorough problem evaluation in the mitigating systems cornerstone.</p> <p>P.1(d) Three findings sharing the same aspect of Corrective Action Program for not taking appropriate actions in the Mitigating Systems and Initiating Events cornerstones.</p> <p>P.2.(b) One finding with the aspect of implementing and institutionalizing OE through changes to station processes, procedures, equipment, and training programs.</p> | <p>Yes</p> <p>Yes</p> <p>No</p> <p>No</p> |

|   |  |            |
|---|--|------------|
| <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>Branch recommends keeping open a substantive crosscutting issue in the corrective action program aspect of maintaining a low threshold for identifying issues (P.1(a)) because there is a concern with the adequacy of the licensee's corrective actions.</p> | <p>Yes</p> |
|   | <p>The branch recommends maintaining open the substantive crosscutting issue associated with the aspect of thorough problem evaluation (P.1(c)) because there is a lack of confidence in the licensee's response to this ongoing issue.</p>                      | <p>Yes</p> |
|   | <p>The branch recommends maintaining open the substantive crosscutting issue with the corrective action program aspect of not taking appropriate corrective actions because there is a concern with the licensee's response to this issue (P.1.D).</p>           | <p>Yes</p> |

**D. Summary/Conclusions of PI&R inspections**

The last full PI&R inspection was completed on June 17, 2010. The team concluded that, in general, the licensee was adequately identifying, evaluating, and resolving problems; however the team also concluded that San Onofre had serious challenges in meeting its regulatory obligations to promptly identify and correct conditions adverse to quality. San Onofre personnel were usually identifying and entering issues into the corrective action program at appropriately low thresholds as evidenced by a large number of nuclear notifications issued; however, the team identified several deficiencies during walkdowns that the licensee should have identified previously. The team determined that the licensee generally screened issues appropriately for operability and reportability; however, the team also found deficiencies with several evaluations that had been performed and that there were several instances which required significant NRC interaction with licensee personnel before the problem was recognized or before adequate evaluations were performed. Most root and apparent cause analyses appropriately considered extent of condition and operating experiences, however the team identified many examples where the licensee's extent of condition was narrowly focused. Overall, the team concluded that the licensee's corrective actions were generally appropriate and implemented promptly; however, the team also noted several instances where corrective actions were not implemented or were ineffective. The team also identified several examples in which the licensee had failed to satisfy commitments that had been made to the NRC in order to correct its many consecutive assessment cycles of substantive cross cutting issues. Further, the team raised questions about the metrics the licensee was using to evaluate its corrective action program and whether the licensee was appropriately characterizing the data to the NRC and the public. The team's findings included one apparent violation whose significance is TBD, one NRC-identified cited violation, nine NRC-identified NCVs, and one self-revealing NCV.

In February 2010, the inspection team 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.

In addition, a focused PI&R inspection was conducted in November, 2009 to review the results of the licensee's safety culture survey which was conducted at the request of the NRC in the 2008 end of cycle assessment letter. The inspectors reviewed the human performance and problem identification and resolution improvement plans. The inspectors reviewed the recently developed root cause evaluation for the additional theme identified in the human performance cross-cutting area. The inspections concluded that the recently developed root cause evaluation was narrowly focused, and the corrective actions from the evaluation did not fully address the performance issues. The inspectors could not assess and evaluate the effectiveness of the corrective actions because the licensee was in the early stages of implementation of the improvement plans. The inspectors reviewed the licensee's independent safety culture survey results and performed eleven independent safety culture focus groups. The focus groups identified degradations in the safety culture of the facility. The weaknesses were apparent across several functional groups at the site. This is of concern because it indicates that, as an overriding priority, nuclear plant safety issues have not always received the attention warranted by their significance. Based on the results of the NRC focus groups, the licensee convened focus groups in January, 2010, and subsequently the NRC convened more focus groups in February, 2010.

**5. Performance Indicator Verification**

All performance indicators are Green. No significant issues were identified during the review of licensee performance indicators.

**6. Licensee and NRC action on safety significant PIs and inspection findings**

**A. Results of any follow-up actions taken by the licensee and the NRC to current safety significant PIs and inspection findings.**

A Special Inspection was performed as a result of loose electrical connection issues. The Special Inspection performed on-site inspection from August 4-8, 2008 with in-office review continuing through December 11, 2008. As a result of this special inspection, the NRC issued Southern California Edison a finding of low-to-moderate safety significance (White) for the failure to establish appropriate instructions to perform maintenance activities on safety-related 125 Vdc station battery breaker. This violation was issued as part of the special inspection report, IR 2008013.

NRC performed a Supplemental Inspection Procedure 95001, "Supplemental Inspection for One or Two White Inputs in a Strategic Performance Area" for the White finding and violation in December, 2009. Based on the inspection results and a lack of confidence in the effectiveness of the proposed corrective actions, NRC is keeping the white finding open until progress in performance can be verified.

**B. Planned NRC follow-up actions due to safety significant PIs and inspection**

**findings.**

Due to the open white finding for SONGS unit 2, NRC will conduct an additional 95001 inspection when the licensee notifies the NRC that they are ready. The date for this inspection is undetermined.

On June 25, 2010 SONGS notified the NRC by letter that they are ready for a closeout inspection for Confirmatory Order EA-07-232. This inspection was started on July 12, 2010.

In April 2010 NRC RIV received approval from the EDO to deviate from the ROP Action Matrix to increase regulatory oversight for SONGS throughout CY2010 in the following two areas:

- Conduct additional focused inspections through CY2010. These inspections would focus on identification of latent technical issues that have not been identified through the licensee's corrective action program, as well as address emerging technical issues identified as a result of corrective action backlog reviews and other normal inspection activities.
- Allow for additional resources to address the increased allegation workload.

7. **Non-SDP Severity Level III or greater violations currently proposed or issued July 1, 2009 – June 30, 2010**

None.

8. **Longstanding or emergent safety issues for possible trend problems.**

None.

9. **Potential Greater-than-Green PIs or inspection findings / Open Unresolved Items**

Potential Greater-than-Green PI/Inspection Finding

IR 2010006-07

TBD: The team identified an apparent violation of Technical Specification 3.7.6 which requires, in part, that Condensate Storage Tank T-120 be operable. Specifically, prior to January 26, 2010, isolation valve 2HV5715 had been inoperable for a time period greater than the completion time of 7 days while Unit 2 was in modes 1, 2, and 3. The valve isolates non-seismic piping from tank T-120, and it is required for tank operability because it must be closed within 90 minutes after an earthquake to preserve tank inventory. The valve had been inadvertently left out of the preventive maintenance program and the hand wheel had rusted in the open configuration. The condition was discovered during the 2-year inservice test at which time the hand wheel was sheared off when a leverage device was used to attempt to turn it. It was only after questioning from the NRC inspector that the licensee determined that the valve had been

inoperable prior to failure when it was required to be operable in accordance with Technical Specification 3.7.6. This finding was entered into the licensee's corrective action program as Nuclear Notification NN 200765235 in January 2010, and new tasks were issued to re-evaluate the failed valve. The failure to document the use of a leverage device in January 2010 was placed in Nuclear Notification NN 200920644. The licensee's corrective actions included repairing the hand wheel and placing the valve into the preventive maintenance program.

This finding is more than minor because it impacted the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the broken valve impacted the protection against external events attribute for seismic protection. The inspectors used Inspection Manual Chapter 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," to analyze the significance of this finding. The inspectors screened the finding to Phase 2 because the condensate storage Tank T-120 was inoperable for a significant period of time greater than that allowed in Technical Specifications. This screened the finding out of Phase 2 to Phase 3 because the closest surrogate for this deficiency was failure of one of the auxiliary feedwater pumps for one year which screened to red. The Senior Reactor Analyst is currently performing a Phase 3 evaluation using the SPAR model. The inspectors also determined that the cause of the finding has a cross cutting aspect in the area of human performance associated with resources in that SONGS did not 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)](Section 40A2.5c).

#### Open Unresolved Items

05000361/05000362/2008012-04 – Open Confirmatory Order items.

05000361/05000362/2008010-03 – Omission of Station Black-Out Profile During Battery Service Tests

#### **10. Inspections planned through Dec 31, 2011.**

All required baseline inspections were completed in CY 2009. NRC is performing periodic focused baseline inspections due to unit 2 being in the regulatory response column of the action matrix and lack of progress in addressing substantive cross cutting issues.

The NRC will perform an inservice inspection coincident with the unit 3 refueling outage beginning in October, 2010. The NRC will also be performing a Steam Generator replacement inspection on Unit 3 in the fall of 2010.

The NRC will also continue additional inspection as authorized by the EDO in the deviation memo approved in April 2010. The next inspection will be a team inspection in late September to review the effectiveness of corrective actions to improve SONGS safety culture. Depending on the results that are discussed in the public meeting in late August, the NRC may conduct an inspection prior to the team inspection to validate

those results and provide information to support additional regulatory response as needed.

A Biennial EP exercise inspection will occur in March, 2011, and a component design basis inspection will occur in May, 2011. An inservice inspection will occur coincident with a refueling outage on Unit 2 in October, 2011.

11. **Conclusions from any independent assessment (i.e. INPO, IAEA, OSART, etc)**

(b)(4)

12. **Miscellaneous Topics**

95001 for the White Finding (IR 2008013)

Confirmatory Order Closeout

Periodic PI&R Plan