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San Onofre Nuclear Generating Station
2009 Mid-Cycle Plant Safety Performance Summary

Assessment Period: July 1, 2008 – June 30, 2009

1. **Operating Summary**

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

Unit 2 Power Operations

September 22	Power reduced to 65 percent to repair main feedwater Turbine K005 lube oil pipe flange leak
September 26	Reactor returned to full power

Unit 3 Power Operations

August 14	Power was reduced to 65 percent to repair main feedwater Turbine K006 trip mechanism
August 18	Reactor returned to full power
September 1	Reactor was shutdown to comply with Technical Specification 3.8.1 limiting condition for operation for an inoperable emergency diesel generator.
September 11	Following emergency diesel generator repairs, commenced reactor startup
September 13	Reactor at full power
September 17	Power reduced to 98 percent due to a tripped heater drain pump
September 20	Power reduced to 75 percent to alleviate an extraction steam line bellow leak and to accommodate condenser tube leak repairs.
October 12	Reactor shutdown for refueling outage
December 15	Commenced reactor start up

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

Unit 2 Planned Outages - Reactor was shutdown on December 28, 2008 for a planned midcycle outage. This outage was to perform weld overlays of piping in accordance with industry guidance. The reactor was restarted on February 17, 2009

Unit 3 Planned Outages – Reactor was shutdown on October 12, 2008 for refueling outage 3R15. The unit started up on December 15, 2008. It reached 65 percent on December 20, due to restrictions caused by a main feedwater pump being out of service. The reactor reached full power on December 24, 2008.

Upcoming RFOs

Unit 2 – 2R16: October 2, 2009 – January 20, 2010 – Steam Generator Replacement

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

2. Safety Performance Overview

A. Previous Assessment Results

	3rd Qtr 2008	4th Qtr 2008	1st Qtr 2008
Action Matrix Column	Licensee Response	Unit 2: Regulatory Response Unit 3: Licensee Response	Unit 2: Regulatory Response Unit 3: Licensee Response
Basis	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.

Summary of results from Previous End-of-Cycle Letter

Plant performance from the End-of-Cycle assessment period for Unit 2 was within the Regulatory Response Column of the 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).

Plant performance from the End-of-Cycle assessment period for Unit 3 was within the Licensee Response Column of the 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).

B. Proposed 2009 Mid-Cycle Assessment

Plant performance for the most recent quarter for Unit 2 was in the Regulatory Response Column of the 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, the 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, the 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. The NRC will be conducting Supplemental Inspection 95001, "Supplemental Inspection for One or Two White Inputs in a Strategic Performance Area."

Plant performance for the most recent quarter for Unit 3 was within the Licensee Response Column of the 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). Therefore, we plan to conduct reactor oversight process (ROP) baseline inspections.

(b)(5)

3. Inspection and Performance Indicator Results

A. Results by Cornerstones

Initiating Events

Inspection Findings: Seven green NCV's and one green finding were evaluated by inspectors during this assessment period.

1) Green NCV – Licensee failed to include maintenance activities in or near the electrical switchyard and offsite power components in the on-line risk assessment (HP, IR 2009003-04, PIM# 79273)

2) Green NCV – Licensee failed to follow procedures for performing reactivity manipulations (HP, IR 2009002-04, PIM# 79260)

3) Green NCV – Licensee failed to properly perform an evaluation of reactor coolant pump vapor seal boric acid accumulation caused by a clogged vapor seal drain line in accordance with procedures (HP, IR 2009002-05, PIM# 79265)

4) Green NCV – Licensee failed to follow procedures to place Ion Exchanger ME074 into service, resulting in an interruption of letdown flow and diversion of approximately

160 gallons of reactor coolant to the radiological waste system (HP, IR 2009002-07, PIM# 79261)

5) Green Finding – Licensee failed to perform an adequate inspection of a main generator stator water pump discharge check valve, resulting in an unrecognized degraded condition that caused a main generator trip and subsequent reactor trip (PI&R, IR 2008005-01, PIM# 79252)

6) Green NCV – Licensee failed to consider the risk associated with the increased likelihood of an initiating event during emergent work on energized safety-related 125 Vdc battery breakers (HP, IR 2008013-04, PIM# 79232)

7) Green NCV – Licensee took ineffective corrective actions to address blended flow evolutions, resulting in multiple reactivity excursions occurring in the plant over the past two years (PI&R, IR 2008010-07, PIM# 79246)

8) Green NCV – Licensee failed to follow procedures for nuclear fuel movement in the spent fuel pool, resulting in the placement of spent fuel assemblies into storage locations different from those evaluated and approved by the procedure (HP, IR 2008004-01, PIM# 79227)

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

Mitigating Systems

Inspection Findings: Twenty-four NCV's, one severity level IV violation and one white violation were evaluated by inspectors during this assessment period.

1) White Violation – Licensee failed to establish appropriate instructions for performing maintenance activities on safety-related 125 Vdc breaker, resulting in an electrical connection whose integrity was inadequate to ensure the equipment would be able to perform its safety function (HP, IR 2008013-05, PIM# 79236)

2) SL-IV NCV – Licensee failed to submit a required Licensee Event Report within 60 days after discovering an event requiring a report, specifically safety-related 125 Vdc battery 2B008, which had been inoperable for greater than the technical specification allowed outage time (PI&R, IR 2008013-06, PIM# 79237)

3) Green NCV – Licensee failed to evaluate scaffolding for its impact on fire protection systems (HP, IR 2009003-01, PIM# 79270)

4) Green NCV – Licensee failed to implement timely corrective actions to preclude repetition of a significant condition adverse to quality involving the failure of a safety-related 480 volt circuit breaker (HP, IR 2009003-02, PIM# 79271)

5) Green NCV – Licensee failed to assess and manage the increase in risk associated with planned maintenance activities on an emergency chiller (PI&R, IR 2009003-03, PIM# 79272)

6) Green NCV – Licensee failed to provide adequate work instructions to control the connection of electrical monitoring devices on operable plant equipment (HP, IR 2009003-06, PIM# 79275)

7) Green NCV – Licensee failed to follow procedures while inspecting coating systems applied more than 20 mils think of saltwater cooling valve discs, resulting in defects in the coating not being detected (HP, IR 2009003-07, PIM# 79277)

8) Green NCV – Licensee failed to establish adequate procedures for scaffolding erection in safety-related areas (IR 2009003-08, PIM# 79278)

9) Green NCV – Licensee failed to maintain written procedures covered in Regulatory Guide 1.33, resulting in 54 uncontrolled procedures available for use on safety-related systems without flagging the required changes (PI&R, IR 2009003-09, PIM# 79279)

10) Green NCV – Licensee failed to follow maintenance instructions to fully remove fuses from fuse holder, resulting in plastic deformation of the fuse holder impacting the ability of the auxiliary feedwater control system to perform its required design function under all design basis accident conditions (HP, IR 2009002-01, PIM# 79262)

11) Green NCV – Licensee failed to follow procedures to adequately evaluate degraded conditions on the CCW tube leak was identified and subsequently when the tube exhibited a degrading trend (HP, IR 2009002-02, PIM# 79263)

12) Green NCV – Licensee failed to properly install and inspect scaffolding in safety-related areas in accordance with written procedural requirements (HP, IR 2009002-03, PIM# 79264)

13) Green NCV- Licensee failed to resolve degraded or nonconforming conditions at the first available opportunity or appropriately justify a longer completion schedule (PI&R, IR 2008005-02, PIM# 79253)

14) Green NCV – Licensee failed to follow procedures after notification that Battery 2B008 terminal voltage was less than required Technical Specification value, resulting in more than a two hour delay in entering the required 2-hour technical specification action statement (HP, IR 2008013-01, PIM# 79233)

15) Green NCV – Licensee failed to follow procedures, resulting in troubleshooting activities that were performed without a maintenance order and control room authorization (HP, IR 2008013-02, PIM# 79234)

16) Green NCV – Licensee failed to follow procedures, resulting in commencing work to correct the identified degraded electrical condition prior to having the appropriately authorized maintenance order (HP, IR 2008013-03, PIM# 79235)

17) Green NCV – Licensee failed to establish measures to assure that deficient electrical connections were promptly identified and corrected (PI&R, IR 2008013-08, PIM# 79238)

18) Green NCV – Licensee failed to provide procedural guidance to operations personnel to combat and recover from a loss or degradation of a Class 1E 125 Vdc bus (IR 2008013-09, PIM# 79239)

19) Green NCV – Licensee failed to have adequate procedures, resulting in an inadvertent electrical ground on a safety-related electrical distribution bus (HP, IR 2008012-01, PIM# 79248)

20) Green NCV – Licensee failed to properly evaluate a degraded relay that affected the operability of Unit 3 Train A emergency diesel generator (HP, IR 2008012-02, PIM# 79249)

21) Green NCV – Licensee failed to consider the impact to the auxiliary feedwater pump room's heat load design basis calculation for the most limiting scenario (IR 2008012-03, PIM# 79250)

22) Green NCV – Licensee had no procedures to verify periodic heat treatments of intake tunnel and structure was consistent with historical data, resulting in the design basis calculation and operating instructions not ensuring the capability of the heat exchangers to perform their design function during anomalous conditions (IR 2008010-01, PIM# 79241)

23) Green NCV – Licensee failed to consider and analyze the voltage drop that occurs in control circuit elements that could result in considerably lower voltage at the devices than is available at the corresponding distribution panels (IR 2008010-02, PIM# 79242)

24) Green NCV – Licensee failed to recognize, evaluate, or write an action request when the performance test for a station battery was terminated early due to test equipment issues (IR 2008010-04, PIM# 79245)

25) Green NCV – Licensee failed to follow procedures while performing battery performance tests, resulting in the performance tests for one station battery being terminated early instead of continuing the tests until reaching one of the test termination criteria (HP, IR 2008010-05, PIM# 79243)

26) Green NCV – Licensee had inadequate procedures that did not identify the deleterious effects of 480 Volt AC system grounds on connected equipment (IR 2008010-06, PIM# 79244)

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 follow procedures to evaluate the operability of an identified non-conformin condition associated with containment structural Tendon H-14 (PI&R, IR 2009003-05, PIM# 79274)

2) Green NCV – Licensee failed to follow procedure requirements for work on a reactor coolant system pressure retaining component, resulting in a reactor coolant system leak during the fill and vent process (HP, IR 2009002-06, PIM# 79266)

3) Green NCV – Licensee did not properly implement procedural controls to adequately evaluate or repair a degraded source handling tool used in the spent fuel, resulting in the tool being returned to service still in a degraded condition (PI&R, IR 2008005-03, PIM# 79254)

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

Emergency Preparedness

Inspection Findings: No findings were evaluated by inspectors during this assessment period.

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

Occupational Radiation Safety

Inspection Findings: No findings were evaluated by inspectors during this assessment period.

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

Public Radiation Safety

Inspection Findings: No findings were evaluated by inspectors during this assessment period.

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

4. Adverse Trends in Cross-cutting areas

A. SCWE- Allegations Received Between January 1, 2008 – June 30, 2009 or NRC letters to Licensee

Forty-one allegations were received during the past eighteen months. The NRC has not sent any letters to Southern California Edison regarding SCWE. The following lists the twenty-one concerns associated with SCWE.

1. Alleger believes that they were discriminated against for raising safety related concerns. (2008-A-0035)
2. Two individuals separately contacted the NRC via email claiming that they had been subjected to discrimination for "raising safety concerns". (2008-A-0062)
3. Alleger states that (s)he was yelled at, intimidate, and questioned by his/her supervisor as to the reason why (s)he had raised a concern to the Nuclear Safety Concerns office (unsubstantiated). (2008-A-0083)
4. Alleger states that Bechtel contract painters do not feel safe coming forward to their supervisor or the Nuclear Concerns department with their concerns because of what happened to another individual (2008-A-0089)
5. Alleger believes that they were discriminated against for raising safety related concerns (unsubstantiated). (2008-A-0111)
6. Alleger states that another individual was retaliated against for raising safety concerns (third party discrimination). (2008-A-0114)
7. Alleger states that the vice president has created a chilled environment (unsubstantiated). (2008-A-0128)
8. Alleger believes (s)he was retaliated against for raising safety concerns (ADR). (2008-A-0141)
9. Alleger states that operators were intimidated to work unfit for duty (nonallegation). (2008-A-0152)
10. Alleger believes that (s)he was black-listed due to use of sick leave (nonallegation). (2008-A-0156)
11. Alleger states that there is a chilled environment (unsubstantiated). (2008-A-0163)
12. Alleger states that they were terminated for raising safety concerns (ADR). (2009-A-0017)
13. Alleger states that a negative perception of SCWE exists. (2009-A-0032)
14. Alleger states that they and others will not approach management about concerns. (2009-A-0039)
15. Adverse action was taken against two individuals who opposed remote access (transferred to HQ's, NSIR-2009-A-005). (2009-A-0043)
16. Alleger believes that (s)he has been discriminated against for raising safety concerns to the NRC (ADR). (2009-A-0057)

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(b)(5) In discussion with the licensee they state their change management processes have not been effective, possibly resulting in the increased levels of concerns. The licensee is currently in the process of performing an independent safety culture assessment and other safety culture assessments specific to the contract workforce. The NRC plans to perform focused inspections to review the results of these efforts and any associated action plans developed by the licensee to address areas of concern. The licensee plans to have the results of these assessments the end of September and state they should be ready for an NRC inspection in early November.

The NRC will also perform a team PI&R inspection in February 2010. A focus area for this inspection will be placed on evaluating the SCWE at the facility in addition to the effectiveness of the employee concerns program.

B. Human Performance- 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 human performance. In the end-of-cycle assessment, there were sixteen findings with cross-cutting aspects in this area. In this assessment, there are twenty-one, indicating a degrading trend in the area of human performance overall.

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Details

Three of the twenty-one findings in the cross-cutting area of human performance were within the resources component. All three had the common theme of not providing complete, accurate and up-to-date design documentation and procedures (H.2(c)), one finding was safety significant (White). This contributing cause was first noticed in the second quarter of the 12-month inspection cycle and continued throughout the period with one new finding in this aspect occurring during the most recent quarter. The branch has concern with the scope and effectiveness of the licensee's efforts in addressing this issue. Consequently, the branch recommends leaving the substantive crosscutting issue in Human Performance / Resources open.

Nine of the twenty-one findings in the cross-cutting area of human performance were within the work practices component. Of the nine, six had the common theme of not using human error prevention techniques and proceeding in the face of uncertainty (H.4(a)). The branch has concerns with the scope and effectiveness of the licensee's efforts in addressing this issue. The branch recommends leaving the substantive crosscutting issue in Human Performance / Work Practices open.

Six of the twenty-one findings in the cross-cutting area of human performance were within the decision-making component. Of the six, four had the common theme of not using conservative assumptions in decision-making (H.1(b)). This contributing cause was first noticed in the second quarter of the 12 month inspection cycle and continued throughout the period with one new finding in this aspect occurring during the most recent quarter. The branch has concerns with the scope and effectiveness of the licensee's efforts in addressing human performance. The branch recommends opening a substantive crosscutting issue in Human Performance / Decision-Making.

Table 1.0 - Cross Cutting Area - Human Performance		
Decision-Making Component		
Finding	Documented Contributing Cause	Cornerstone
Licensee failed to follow procedures after notification that Battery 2B008 terminal voltage was less than required Technical Specification value, resulting in more than a two hour delay in entering the required 2-hour technical specification action statement (HP, IR 2008013-01, PIM# 79233)	Licensee did not make safety-significant decisions using a systematic process when faced with uncertain and unexpected conditions. H.1(a)	Mitigating Systems
Licensee failed to follow procedures, resulting in troubleshooting activities that were performed without a maintenance order and control room authorization (HP, IR 2008013-02, PIM# 79234)	Licensee did not make safety-significant decisions using a systematic process when faced with uncertain and unexpected conditions. H.1(a)	Mitigating Systems
Licensee failed to properly evaluate a degraded relay that affected the operability of Unit 3 Train A emergency diesel generator (HP, IR 2008012-02, PIM# 79249)	Failure to use conservative assumptions for operability decision-making H.1(b)	Mitigating Systems
Licensee failed to follow procedures and adequately evaluate degraded conditions to support operability decision making (HP, IR 2009002-02, PIM# 79263)	Failure to review past operability decisions to verify validity of underlying assumptions H.1(b)	Mitigating Systems
Licensee failed to properly perform an evaluation of reactor boric acid corrosion control program procedures (HP, IR 2009002-05, PIM# 79265)	Failure to use conservative assumptions to identify possible unintended consequences H.1(b)	Initiating Events
Licensee failed to implement timely corrective actions to preclude repetition of a significant condition adverse to quality involving the failure of a safety-related 480 volt circuit breaker (HP, IR 2009003-02, PIM# 79271)	Failure to verify safety-significant decisions to validate underlying assumptions H.1(b)	Mitigating Systems

Resources Component		
Finding	Documented Contributing Cause	Cornerstone
Licensee failed to consider the risk associated with the increased likelihood of an initiating event during emergent work on energized safety-related 125 Vdc battery breakers (HP, IR 2008013-04, PIM# 79232)	Licensee did not have complete, accurate up-to-date procedure H.2(c)	Initiating Events
Licensee failed to establish appropriate instructions for performing maintenance activities on safety-related 125 Vdc breaker, resulting in an electrical connection whose integrity was inadequate to ensure the equipment would be able to perform its safety function (HP, IR 2008013-05, WHITE Violation, PIM# 79236)	Licensee did not have complete, accurate up-to-date procedure H.2(c)	Mitigating Systems
Licensee failed to include maintenance activities in or near the electrical switchyard and offsite power components in the on-line risk assessment (HP, IR 2009003-04, PIM# 79273)	Licensee did not have complete, accurate up-to-date procedure H.2(c)	Initiating Events
Work Control Component		
Finding	Documented Contributing Cause	Cornerstone
Licensee failed to have adequate procedures, resulting in an inadvertent electrical ground on a safety-related electrical distribution bus (HP, IR 2008012-01, PIM# 79248)	Work was not planned to address the human-system interface H.3(a)	Mitigating Systems
Licensee failed to follow procedures for reactivity manipulations (HP, IR 2009002-04, PIM# 79260)	Licensee did not appropriately plan work activity H.3(a)	Initiating Events
Licensee failed to follow procedure requirements for work on a reactor coolant system pressure retaining component (HP, IR 2009002-06, PIM# 79266)	Licensee did not incorporate actions to address operation impact of work activities H.3(b)	Barrier Integrity
Work Practices Component		
Finding	Documented Contributing Cause	Cornerstone
Licensee failed to evaluate scaffolding for its impact on fire protection systems (HP, IR 2009003-01, PIM# 79270)	Licensee did not use human error prevention techniques such as proper documentation H.4(a)	Mitigating Systems

Licensee failed to follow procedures while performing battery performance tests, resulting in the performance tests for one station battery being terminated early instead of continuing the tests until reaching one of the test termination criteria (HP, IR 2008010-05, PIM# 79243)	Licensee did not use human error prevention techniques such as proper documentation H.4(a)	Mitigating Systems
Licensee failed to follow procedures, resulting in commencing work to correct the identified degraded electrical condition prior to having the appropriately authorized maintenance order (HP, IR 2008013-03, PIM# 79235)	Licensee did not use human error prevention techniques such as proper documentation H.4(a)	Mitigating Systems
Licensee failed to follow procedures for nuclear fuel movement in the spent fuel pool, resulting in the placement of spent fuel assemblies into storage locations different from those evaluated and approved by the procedure (HP, IR 2008004-01, PIM# 79227)	Licensee did not use human error prevention techniques such as proper documentation H.4(a)	Initiating Events
Licensee failed to properly install and inspect scaffolding in safety-related areas in accordance with procedure (HP, IR 2009002-03, PIM# 79264)	Licensee did not use human error prevention techniques such as proper documentation H.4(a)	Mitigating Systems
Licensee failed to follow procedures to place an ion exchanger in service, resulting in interruption of letdown flow and diversion of reactor coolant to radiological waste system (HP, IR 2009002-07, PIM# 79261)	Licensee did not use human error prevention techniques such as proper documentation H.4(a)	Initiating Events
Licensee failed to provide adequate work instructions to control the connection of electrical monitoring devices on operable plant equipment (HP, IR 2009003-06, PIM# 79275)	Licensee did not comply with expectations regarding procedural compliance H.4(b)	Mitigating Systems
Licensee failed to follow instructions to fully remove fuses from the fuse holder (HP, IR 2009002-01, PIM# 79262)	Licensee did not comply with expectations regarding procedural compliance H.4(b)	Mitigating Systems

Licensee failed to follow procedures while inspecting coating systems applied more than 20 mils think of saltwater cooling valve discs, resulting in defects in the coating not being detected (HP, IR 2009003-07, PIM# 79277)	Licensee failed to ensure supervisory oversight of work activities such that nuclear safety is supported H.4(c)	Mitigating Systems

Table 1.1 - Basis for Conclusion on MC 0305 Criteria

MC 0305 Guidance on Substantive Cross-Cutting (SCC) Issues	**Performance Observations in the Human Performance Area**	**Met Criteria**
Criterion 1: Multiple Green or safety significant inspection findings in the assessment period with documented aspects of human performance	Twenty-one findings with aspects of human performance.	Yes
Criterion 2: Contributing Causes have a common theme corroborated by more than three (3) findings and from more than one cornerstone (exception is Mitigating System)	Four findings in the Decision-Making component with the common theme of not using conservative decision-making, covering the Mitigating Systems and Initiating Events cornerstones. H.1(b) Three 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 cornerstones. H.2(c) Six 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 and Initiating Events cornerstones. (H.4(a))	Yes No Yes

Criterion 3: The agency has a concern with the licensee's scope of efforts or progress in addressing the cross-cutting area performance deficiency	Based on the fact that the total number of findings with human performance cross-cutting issues has increased, and that this theme had three findings in the last two quarters, the branch has a concern with licensee's actions and progress in addressing the cross-cutting area. The branch recommends opening a substantive cross-cutting issue in human performance / decision-making.	Yes
	Based on the fact that the theme was seen throughout the entire cycle with one new finding in this most recent quarter we recommend keeping open the substantive cross-cutting issue in human performance / resources.	Yes
	Based on the fact that the theme was seen throughout the entire cycle with one new finding in this most recent quarter we recommend opening a substantive cross-cutting issue in human performance / work practices.	Yes

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 eight findings with cross-cutting aspects in this area. In this assessment, there are nine, indicating a degrading trend in the area of problem identification and resolution overall.

(b)(5)

Details

All of the nine findings in the cross-cutting area of Problem Identification and Resolution (PI&R) were in the corrective action program component. Seven of the nine shared the common theme of failing to thoroughly evaluate problems such that the resolutions address causes and extent of conditions.

(b)(5)

Table 2.0 - Cross Cutting Area - Problem Identification and Resolution

Corrective Action Program Component

Finding	Documented Contributing Cause	Cornerstone
Licensee failed to perform an adequate inspection of a main generator stator water pump discharge check valve, resulting in an unrecognized degraded condition that caused a main generator trip and subsequent reactor trip (PI&R, IR 2008005-01, PIM# 79252)	Licensee did not identify a degraded condition completely, accurately and in a timely manner P.1(a)	Initiating Events
Licensee took ineffective corrective actions to address blended flow evolutions, resulting in multiple reactivity excursions occurring in the plant over the past two years (PI&R, IR 2008010-07, PIM# 79246)	Licensee did not thoroughly evaluate the problem such that resolutions address causes and extent of conditions P.1(c)	Initiating Events
Licensee failed to establish measures to assure that deficient electrical connections were promptly identified and corrected (PI&R, IR 2008013-08, PIM# 79238)	Licensee did not thoroughly evaluate the problem such that resolutions address causes and extent of conditions P.1(c)	Mitigating Systems

Licensee failed to submit a required Licensee Event Report within 60 days after discovering and event requiring a report, specifically safety-related 125 Vdc battery 2B008, which had been inoperable for greater than the technical specification allowed outage time (PI&R, IR 2008013-06, PIM# 79237)	Licensee did not thoroughly evaluate the problem such that resolutions address causes and extent of conditions P.1(c)	Mitigating Systems
Licensee failed to resolve degraded or nonconforming conditions at the first available opportunity or appropriately justify a longer completion schedule (PI&R, IR 2008005-02, PIM# 79253)	Licensee did not thoroughly evaluate the problem such that resolutions address causes and extent of conditions P.1(c)	Mitigating Systems
Licensee did not properly implement procedural controls to adequately evaluate or repair a degraded source handling tool used in the spent fuel, resulting in the tool being returned to service still in a degraded condition (PI&R, IR 2008005-04, PIM# 79254)	Licensee did not thoroughly evaluate the problem such that resolutions address causes and extent of conditions P.1(c)	Barrier Integrity
Licensee failed to follow procedures to evaluate the operability of an identified non-conformin condition associated with containment structural Tendon H-14 (PI&R, IR 2009003-05, PIM# 79274)	Licensee did not properly classify, prioritize, and evaluate for operability conditions adverse to quality P.1(c)	Barrier Integrity
Licensee failed to maintain written procedures covered in Regulatory Guide 1.33, resulting in 54 uncontrolled procedures available for use on safety-related systems without flagging the required changes (PI&R, IR 2009003-09, PIM# 79279)	Licensee did not thoroughly evaluate the problem such that resolutions address causes and extent of conditions P.1(c)	Mitigating Systems
Licensee failed to assess and manage the increase in risk associated with planned maintenance activities on an emergency chiller (PI&R, IR 2009003-03, PIM# 79272)	Licensee failed to take appropriate corrective actions to address identified errors in a timely manner P.1(d)	Mitigating Systems
Operating Experience Component		
Finding	Documented Contributing Cause	Cornerstone

None.		

Table 2.1 - Basis for Conclusion on MC 0305 Criteria		
MC 0305 Guidance on Substantive Cross-Cutting (SCC) Issues	**Performance Observations in the Problem Identification and Resolution Area**	**Met Criteria**
Criterion 1: Multiple Green or safety significant inspection findings in the assessment period with documented aspects of PI&R	Nine findings in the area of Problem Identification and Resolution were found in this inspection cycle.	Yes
Criterion 2: Contributing Causes have a common theme corroborated by more than three (3) findings and from more than one cornerstone (exception is Mitigating System)	There is a common theme with seven findings sharing the same aspect of Corrective Action Program not thoroughly evaluating extent of condition P.1(c), in the Mitigating Systems, Barrier Integrity, and Initiating Events cornerstones.	Yes
Criterion 3: The agency has a concern with the licensee's scope of efforts or progress in addressing the cross-cutting area performance deficiency	Due to the fact that this theme is apparent throughout the inspection cycle with two findings in the most recent quarter we recommend keeping open a substantive cross-cutting issue in the problem identification and resolution area.	Yes

D. Summary/Conclusions of PI&R inspections

The PI&R inspection was completed on October 3, 2008. The inspection team determined that once problems were identified, the licensee usually entered the issues into the corrective action program but was inconsistent in ensuring that identified problems were thoroughly evaluated in a timely manner and identified several issues with the quality of cause evaluations and the completeness of corrective action documents. They also identified that operability assessments and reportability reviews were not being implemented consistent with procedural guidance and many of these assessments did not demonstrate the appropriate level of technical rigor to support conclusions made for operability or reportability. The team determined that the licensee was adequately evaluating industry operating experience for relevance to the facility, and had entered applicable items in the corrective action program in accordance with stations procedures.

All of the individuals interviewed expressed a willingness to raise safety concerns and were able to provide multiple examples of avenues available. Overall, the interviewees expressed positive experiences in raising concerns to their supervisors and through their chain of management.

During this inspection, the team reviewed the licensee's evaluations, actions, and plans to assess the progress in addressing the open substantive cross-cutting issues in human performance and problem identification and resolution. After evaluating the licensee's root cause evaluations for these substantive cross-cutting issues, the team determined that the root cause evaluations did not include appropriate information and detail to identify the reasons for the insufficient progress in addressing the substantive cross-cutting issues. Also, the team could not assess and evaluate the effectiveness of the corrective actions because the licensee was in the early stages of implementation of their improvement plans.

Part of the PI&R inspection was to follow-up on the Confirmatory Order items. During this inspection, the PI&R inspection team felt that sufficient progress had been made to close items 1, 2.d, 2.e, 2.f, 2.i, 2.j, 2.k, and 3. The inspectors did not feel that sufficient progress had been made on the other remaining Confirmatory Order items and so recommended keeping those items open.

Southern California Edison submitted a letter updating the status of these open items in January 2009. NRC performed a PI&R/Confirmatory Order inspection in June 2009 to followup on the Order actions and licensee efforts to address the open Substantive Cross-Cutting issues. Following that inspection, the inspectors felt that sufficient progress had been made to close items 2a, 2b, 2g, and 2h. The remaining open order items are 2c and 2l. The inspectors reviewed the recently revised human performance and problem identification and resolution improvement plans. The inspections concluded that the root cause evaluations were adequately defined and understood, and the corrective actions resulting from the evaluations appeared reasonable. However, the inspectors could not assess and evaluate the effectiveness of the corrective actions because SONGS was in the early stages of implementation of the improvement plans.

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

batter breaker. This violation was issued as part of the special inspection report, IR 2008013.

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

NRC will be performing a Supplemental Inspection Procedure 95001, "Supplemental Inspection for One or Two White Inputs in a Strategic Performance Area" for the White violation that was issued as a result of the Special Inspection performed on the loose electrical connections.

7. **Non-SDP Severity Level III or greater violations currently proposed or issued July 1, 2008 – June 30, 2009.**

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

The following URI is currently going through Phase 3 of the Significance Determination Process to determine if it is potentially greater-than-green:

05000361/05000362/2008013-07 – Degraded Electrical Connections

Open Unresolved Item

1)05000361/05000362/2008012-04 – Open Confirmatory Order items.
2)05000361/05000362/2008010-03 – Omission of Station Black-Out Profile During Battery Service Tests
3)05000361/05000362/2008013-07 – Degraded Electrical Connections

10. **Inspections planned through December 31, 2010.**

All required baseline inspections were completed in CY 2008. See Proposed Inspection Plan for future inspections. NRC will be performing a Supplemental Inspection IP 95001 to address White battery breaker issue.

NRC will be performing Steam Generator replacement inspections commencing in 2009 and continuing through 2010. The NRC will be performing its triennial heat sink inspection and an EP exercise inspection in August and September 2009. The NRC will perform its triennial fire protection inspection starting in May 2010.

In November of 2009 the NRC plans to perform a focused PI&R inspection to review results and actions taken by the licensee following performance of an independent safety culture assessment. The NRC will also perform a team PI&R inspection in February 2010. Focus areas for this inspection will be evaluating the SCWE at the facility, effectiveness of the employee concerns program, status of improvements initiatives to address the substantive cross cutting areas, and status of remaining open confirmatory order items.

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

(b)(4)

12. Miscellaneous Topics

13. Attachments

Plant Issues Matrix
Performance Indicator Summary
Proposed Inspection Plan