

## La Salle 2

### 2Q/2005 Plant Inspection Findings

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#### Initiating Events

**Significance:**  Mar 31, 2005

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

##### **Failure to Properly Implement Procedure Requirements for Hot Work and Ignition Control Results in a Fire in the 2B RHR Corner Room**

A finding of very low safety significance was self-revealed when sparks from hot work associated with the cutting of a 20-inch pipe in the 2B residual heat removal (RHR) corner room on February 16, 2005, ignited a small pile of absorbent cleaning material in the room. An associated NCV was also identified against Technical Specification 5.4.1(c) for failure to follow the existing plant fire protection procedure related to hot work and ignition control.

The performance deficiency, identified during review of the event, involved two examples where licensee personnel failed to properly implement the established plant procedure governing hot work and ignition control. The finding was of more than minor significance in that it had a direct impact on the cornerstone objective. Specifically, the licensee's performance deficiencies were directly responsible for an actual Class 'A' fire in the 2B RHR corner room on February 16, 2005. Because the finding involved Unit 2 in a cold shutdown condition, the inspectors determined it to be of very low safety significance (Green) and within the licensee's response band. Corrective actions completed by the licensee include: focused coaching sessions with superintendents and general foremen of hot work personnel; meetings between the station's Fire Marshal and contractor supervision to discuss hot work issues; and focused coaching sessions with fire watch personnel by contractor management conveying the message that the fire watch is ultimately responsible for the work location being and remaining in compliance with fire safety standards. The finding was determined to involve the cross-cutting aspect of human performance.

Inspection Report# : [2005002\(pdf\)](#)

**Significance:**  Mar 31, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

##### **Failure to Take Timely and Effective Corrective Action for Hot Work Ignition Control Issues**

The inspectors identified a finding of very low safety significance and an associated NCV during review of corrective actions associated with a small fire in the 2B RHR corner room on February 16, 2005. The inspectors determined that the licensee had, during several opportunities, failed to take timely and effective corrective actions with respect to ignition control for hot work. This failure was determined by the inspectors to be contrary to the requirements of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action."

In reviewing corrective actions for 2B RHR corner room fire, the inspectors identified a performance deficiency regarding inadequate corrective actions taken to control hot work activities. The inspectors determined that the finding was of more than minor significance in that it had a direct impact on an objective for the Initiating Event Cornerstone. The inspectors determined that the finding impacted minimally on the licensee's capability to reach and maintain cold shutdown conditions. Therefore, this finding had very low safety significance (Green) and was within the licensee's response band. Additional corrective actions planned by the licensee include a comprehensive common cause analysis to determine whether or not generic fire protection programmatic weaknesses exist.

Inspection Report# : [2005002\(pdf\)](#)

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#### Mitigating Systems

**Significance:**  Jun 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

##### **Ineffective Corrective Actions for Water Intrusion into Safety-Related Fan Control Cabinets**

A finding of very low safety significance was identified by inspectors, who determined that the licensee failed to take timely and effective corrective action for water intruding into safety-related electrical junction boxes and control cabinets via electrical conduit from the outside. An associated Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was also identified.

The inspectors determined that the performance deficiency associated with this issue centered around the licensee's failure to give proper

priority to the issue and the actions needed to resolve it. The inspectors determined that the finding was of more than minor significance in that it had a direct impact on the Mitigating Systems cornerstone objective. Because the finding did not represent the loss of any safety function for any system or train, and because it was determined not to be potentially significant with respect to any external events such as seismic, flooding, tornado, etc., the inspectors determined it to be of very low safety significance (Green) and within the licensee's response band. Corrective actions taken or planned by the licensee include: a complete extent-of-condition review of all through roof conduits that may be susceptible to water intrusion; drilling of weep holes in all susceptible junction boxes; repairs to damage caused by water intrusion; and the sealing of the leaking conduit on Unit 1, Division 1 and Division 2 safety-related ventilation systems. The finding was determined to involve the cross-cutting area of identification and resolution of problems.

Inspection Report# : [2005003\(pdf\)](#)



**Significance:** Jun 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

**Nonconservative Uncorrected Bias Associated with Tank Level Instruments Used for Standby Liquid Control System Surveillances**

The inspectors identified a finding of very low safety significance. During a review of test procedures used to maintain standby liquid control (SBLC) tank volume and concentration within Technical Specification limits, the inspectors identified that the licensee had used inaccurate and nonconservative instruments to measure SBLC tank level. An associated Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XI, "Test Control," was also identified.

The inspector-identified performance deficiency associated with this issue was a failure by the licensee's staff to utilize adequate test equipment for the performance of safety-related Technical Specification surveillance measurements of SBLC solution tank level. The inspectors determined that the finding was of more than minor significance in that it had a direct impact on the Mitigating Systems cornerstone objective. The finding was determined to be of very low safety significance because subsequent licensee analyses of SBLC tank concentrations and volumes, in accordance with GL 91-18, demonstrated that the errors in SBLC tank volume in question were sufficiently small as to not have jeopardized the capability of SBLC to have performed its safety function for either unit. Corrective actions by the licensee included: additions of sodium pentaborate chemical to each unit's SBLC tank to adjust chemistry to well within the Technical Specification required band; revision of SBLC tank sampling procedures; and the establishment of administrative controls to ensure that each unit's SBLC tank volume and sodium pentaborate solution concentration are being maintained well away from Technical Specification limits; and the procurement of new T-squares instruments for measuring SBLC tank level, which were manufactured in accordance with 10 CFR 50, Appendix B, Quality Assurance Program controls and requirements.

Inspection Report# : [2005003\(pdf\)](#)



**Significance:** Mar 31, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Take Timely and Effective Corrective Action for Emergency Diesel Generator (EDG) Reverse Power Trips Results in Additional EDG Inoperability and Unavailability**

A finding of very low safety significance was identified by the inspectors. The licensee had failed during prior opportunities to fully evaluate the nature of the problem leading to various emergency diesel generator (EDG) reverse power trips. The most recent of these events were a reverse power trip of the 2B EDG on August 18, 2004, for which no root cause was ever determined, and a subsequent reverse power trip of the 2A EDG that occurred on December 7, 2004. An associated Non-Cited Violation (NCV) of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was also identified by the inspectors.

The performance deficiency was determined to be a failure on the part of the licensee's staff to fully evaluate a long standing issue with EDG reverse power trip. An evaluation in response to an event, as recent as August 18, 2004, failed to give sufficient priority to identified corrective actions in a manner that would preclude the latest occurrence, a reverse power trip of the 2A EDG on December 7, 2004. The finding was of more than minor significance in that it had a direct impact on the cornerstone objective. Specifically, the inspectors concluded that the licensee's performance deficiency was responsible for the reverse power trip of the 2A EDG on December 7, 2004, which caused the EDG to be unavailable for an additional 26 hours. Because the finding involved the loss of only one train of safety related equipment and the loss was for less than the Technical Specification allowed outage time, the inspectors determined it to be of very low safety significance (Green) and within the licensee's response band. Corrective actions planned and completed by the licensee include: establishment of a less restrictive EDG load limit to allow opening the EDG output breaker when the load is less than approximately 500 kW; additional training for licensed operators in the areas of EDG theory and operation and the effects of reverse power conditions on diesel generators; and revision of simulator modeling for EDGs to more accurately reflect actual plant performance for reverse power trips.

Inspection Report# : [2005002\(pdf\)](#)



**Significance:** Mar 31, 2005

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

**Failure to Incorporate Relevant Design Information into Battery Charger Operating Procedure Results in DC Bus Undervoltage**

**Condition**

A finding of very low safety significance was self-revealed when changes implemented by a modification to the Unit 2 125 volt direct current (Vdc) charger system were not appropriately incorporated into operational procedures. This procedural deficiency resulted in an under-voltage condition during an attempt to swap in-service chargers. An associated NCV against the requirements of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was also identified.

The identified performance deficiency was the failure of the licensee to incorporate relevant design information concerning the metering circuitry of a newly installed battery charger into the appropriate operating procedures. The finding was of more than minor significance in that it had a direct impact on the MS cornerstone objective. Specifically, the procedural deficiency, and lack of any formal training regarding the metering circuitry, contributed to a low voltage condition on the Unit 2 Division 1 125 Vdc system. The low voltage resulted in the Unit 2 Division 1 125 Vdc system being rendered inoperable for about 23 minutes. Because the finding involved the loss of only one train of safety related equipment and the loss was for less than the Technical Specification allowed outage time, the inspectors determined it to be of very low safety significance (Green) and within the licensee's response band. Corrective actions planned and completed by the licensee include: revision of applicable operating procedures; training for operations personnel on new charger procedures; and planned training to enhance operator knowledge regarding the metering circuitry and the differences between various battery chargers.

Inspection Report# : [2005002\(pdf\)](#)

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**Significance:** Dec 31, 2004

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

**Failure to Follow Applicable Operating Procedure For Strainer Backwashing Renders RHRSW Train Inoperable**

A finding of very low safety significance was self-revealed when a plant non-licensed operator (NLO) conducted a backwashing evolution of the 2B residual heat removal service water (RHRSW) strainer without obtaining authorization for the activity from any operating supervisor or using any written procedures. The unauthorized and unplanned strainer backwashing caused the 2B RHRSW header to depressurize, rendering Unit 2 Division 2 RHRSW system inoperable for several minutes until the backwashing cycle was complete and the header automatically repressurized. An associated NCV for failure to implement an approved plant procedure for the RHRSW strainer backwashing activity, as required by plant Technical Specification 5.4.1(a) and Regulatory Guide 1.33, Revision 2, Appendix A, was also identified.

The performance deficiency associated with this issue was a failure on the part of the NLO to have used an approved written plant procedure to conduct the backwashing of the 2B RHRSW strainer, a safety-related component. The finding was of more than minor significance in that it had a direct impact on the cornerstone objective. Specifically, the licensee's failure to properly use an approved written procedure for the backwashing of the 2B RHRSW strainer resulted in the inoperability of a safety-related service water train. The finding was of very low safety significance because the loss of operability for the 2B RHRSW train was only for a very short time and the actual loss of safety function did not exceed any Technical Specification allowed outage time limits, and because the event did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. Corrective actions planned and completed by the licensee include: the licensee had entered this issue into their corrective action program as Condition Report 262611; development and implementation of procedural guidance that outlines the activities that are considered skill-of-the-craft for operators; evaluation of need for establishing proficiency requirements for operations NLOs not normally assigned to on-watch duties; and resetting the operations and station event free clocks. The primary cause of the finding was determined to be related to the cross-cutting aspect of human performance.

Inspection Report# : [2004005\(pdf\)](#)

**Barrier Integrity****G**

**Significance:** Dec 31, 2004

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

**Inadequate VE System Test Procedure Causes Auxiliary Electric Equipment Room High Humidity Condition and Renders Multiple Control Room Annunciator Alarms Inoperable**

A finding of very low safety significance and an associated NCV were self-revealed following a trip of the 'A' train of the auxiliary electric equipment room (AEER) ventilation (VE) system while operating in the purge mode. Written procedures for the operation of the VE system failed to properly account for ventilation compressor heat load capacity limitations during VE system alignment in the purge mode. The lack of proper written procedural guidance was determined to constitute a Non-Cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings."

The performance deficiency with this issue was a failure on the part of the licensee to establish and maintain adequate written procedures for the testing and operation of the VE system in the purge mode. The finding was of more than minor significance in that if left uncorrected it would constitute a more significant safety concern. The finding was determined to be of very low safety significance because it only involved the barrier function provided for the AEER. Corrective actions planned and completed by the licensee include revisions to procedures LTS-400-17, LOP-VC-01, and LOP-VE-01 to account for the newly identified limitations associated with VE operation in the purge mode.

Inspection Report# : [2004005\(pdf\)](#)

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## Emergency Preparedness

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## Occupational Radiation Safety

**Significance:**  Mar 31, 2005

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

### **Electrician Enters HRA (Drywell) When Signed On To General Area RWP**

A finding of very low safety significance was self-revealed when an electrician improperly entered a high radiation area (HRA) in the radiation controlled area (RCA) (the Unit 2 drywell) that was posted as a HRA. This occurrence was revealed when he exited the RCA and the electronic dosimeter check-out was alerted that a dose rate alarm had occurred during the entry, revealing that the individual had signed on to the wrong radiation work permit (RWP).

The cause of the error was a failure to assure through self-checking that each entry to the electronic RWP sign-in is made using the correct RWP. The finding, under the Occupational Radiation Safety Cornerstone, does not involve the application of traditional enforcement because it did not result in actual safety consequences or potential to impact the NRC's regulatory function, and was not the result of any willful actions. The finding was more than minor as it involves the failure of the licensee to adhere to procedures to monitor and control radiation exposure, a key attribute under the objective of the radiation safety cornerstone to ensure adequate protection of worker health and safety from exposure to radiation. The finding is of very low safety significance because the individual was using an electronic dosimeter that alarms to warn workers of higher than expected dose rates or accumulated dose. The issue constituted a Non-Cited Violation of Technical Specification 5.7.1, which requires that access to, and activities in, each HRA with dose rates not exceeding 1.0 rem per hour at 30 centimeters from the radiation source be controlled by means of a RWP that includes specification of radiation dose rates in the immediate work area and other appropriate radiation protection equipment and measures. Immediate corrective actions included locking the individual out of the RCA and initiation of an investigation. Additionally, all site personnel were notified of this event through a station safety alert. The primary cause of the finding was related to the cross-cutting area of human performance.

Inspection Report# : [2005002\(pdf\)](#)

**Significance:**  Sep 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

### **Entry into a Neutron Radiation Area by Operations Personnel without Procedurally Required Neutron Radiation Dose Estimates**

The inspectors identified a Green finding and associated Non-Cited Violation (NCV) when they observed operations personnel entering a posted neutron dose area without proper neutron monitoring, contrary to the licensee's Technical Specifications. This finding was considered NRC-identified as radiation protection personnel were unaware of this issue until questions by inspectors indicated a lack of proper neutron dose control for both this event and similar past occurrences.

The cause of the error was a failure of communication between the operations and radiation protection (RP) staff. The finding, under the Occupational Radiation Safety Cornerstone, does not involve the application of traditional enforcement because it did not result in actual safety consequences or potential to impact the NRC's regulatory function, and was not the result of any willful actions. The finding was more than minor as it involves the failure of the licensee to adhere to procedures to monitor and control radiation exposure, a key attribute under the objective of the radiation safety cornerstone to ensure adequate protection of worker health and safety from exposure to radiation. The finding is of very low safety significance because the personnel involved were using electronic dosimeters that alarm to warn workers of higher than expected dose rates or accumulated dose. The issue was a Non-Cited Violation of Technical Specifications 5.4.1(a), which requires written procedures be established, implemented, and maintained in accordance with the requirements of Regulatory Guide 1.33, Section 7.e(7). of Regulatory Guide 1.33 lists the requirement for radiation protection procedures for personnel monitoring. RP-AA-210, "Dosimetry Issue, Usage, and Control," is the plant procedure governing neutron dose estimation and monitoring.

The licensee conducted a human performance investigation to determine the cause of the event and identified a failure of communication between the RP and operation staffs. The individuals involved were coached, site personnel were informed of the event, and RP staff personnel were provided additional training on the requirements for entering neutron areas.

Inspection Report# : [2004004\(pdf\)](#)

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## Public Radiation Safety

## **Physical Protection**

[Physical Protection](#) information not publicly available.

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## **Miscellaneous**

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