

## Callaway

### 3Q/2003 Plant Inspection Findings

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#### Initiating Events

**Significance:**  Dec 28, 2002

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

**Inadequate control of over temperature-delta temperature delta flux penalty circuit amplifier gain resulted in a reactor trip.**

A noncited violation of 10 CFR Part 50, Appendix B, Criteria III, Design Control, occurred when the licensee failed to maintain control of the over temperature-delta temperature delta flux penalty circuit amplifier gain.

The finding was greater than minor because the condition resulted in a transient initiator and contributed to an unplanned reactor trip, an initiating event. This finding was evaluated using Appendix A of the reactor safety significance determination process and determined to be of very low safety significance because the finding did not contribute to the likelihood of a primary or secondary system loss of coolant accident, did not contribute to both the likelihood of a reactor trip and the unavailability of mitigation equipment, and did not increase the likelihood of a fire or flood. This finding is in the licensee's corrective action system as Callaway Action Request System Number 200208352.

Inspection Report# : [2002006\(pdf\)](#)

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#### Mitigating Systems

**Significance:**  Sep 20, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**Ineffective corrective actions following an EDG rocker arm lube oil valve mispositioning.**

The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action." This violation was related to inadequate corrective actions taken following an emergency diesel generator rocker arm lube oil valve mispositioning. The licensee's corrective actions were not adequate to prevent recurrence.

This finding was greater than minor because it could reasonably be viewed as a precursor to a significant event and if left uncorrected, would become a more significant safety concern. This finding was of very low safety significance because the condition was not a design or qualification deficiency, did not represent the actual loss of a safety function of a system, did not represent the actual loss of a safety function of a single train for greater than its Technical Specification allowed outage time, did not represent the loss of a non-Technical Specification related train for greater than 24 hours, or did not screen as potentially risk significant due to a seismic, fire, flooding, or severe weather initiating event.

Inspection Report# : [2003005\(pdf\)](#)

**Significance:**  Jun 21, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

**Failure to correctly install a pressurizer safety valve inlet gasket due to inadequate work instructions.**

The inspectors concluded that the pressurizer safety valve seat leakage, and subsequent plant shutdown, was the result of incorrect valve reassembly during the previous refueling outage. The inspectors concluded that this condition was a noncited violation of 10 CFR Part 50, Appendix B, Criterion V, and a finding of very low safety significance.

This finding was greater than minor because it was associated with the mitigating system equipment performance cornerstone attributes and it affected the availability/reliability cornerstone objective. This finding was of very low safety significance because the condition was not a design or qualification deficiency, did not represent the actual loss of a safety function of a system, did not represent the actual loss of a safety function of a single train for greater than its Technical Specification allowed outage time, did not represent the loss of a non-Technical Specification related train for greater than 24 hours, or did not screen as potentially risk significant due to a seismic, fire, flooding, or severe weather initiating event.

Inspection Report# : [2003004\(pdf\)](#)

**Significance:**  Jun 21, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to correct recurring air voiding condition on containment spray system.**

The inspectors concluded that voiding of the containment spray suction header occurred on two occasions during the inspection period. The voiding occurred because the licensee failed to properly fill and vent the suction piping following maintenance. The inspectors concluded this condition was a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, and was a finding of very low safety significance.

This finding had actual safety significance because the condition resulted in repeated air voiding of a safety-related pump. This finding was greater than minor because it was similar to Example 2C of Appendix E of Inspection Manual Chapter 0612 (i.e., a repetitive issue involving degradation of a safety-related pump). This finding was of very low safety significance because the condition was not a design or qualification deficiency, did not represent the actual loss of a safety function of a system, did not represent the actual loss of a safety function of a single train for greater than its Technical Specification allowed outage time, did not represent the loss of a non-Technical Specification related train for greater than 24 hours, or did not screen as potentially risk significant due to a seismic, fire, flooding, or severe weather initiating event.

Inspection Report# : [2003004\(pdf\)](#)

**Significance:**  Jun 06, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to implement effective corrective actions.**

The licensee failed to promptly identify, correct, or preclude recurrence of an industry known potential significant condition adverse to quality associated with failures of Magne-Blast 4160 Volt circuit breakers. The breaker failures were the result of a defective contact block assembly used as control switches in the breaker control circuits.

The failure to promptly identify, correct, or preclude recurrence of the deficient condition from affecting multiple safety related components due to failures of Magne-Blast 4160 volt circuit breakers was determined to be a violation of 10 CFR Part 50, Appendix B, Criterion XVI. This violation is being treated as a noncited violation consistent with

Section VI.A of the NRC Enforcement Policy. This finding is greater than minor because if left uncorrected this condition impacts the reliability and availability of all safety related loads supplied by Magne-Blast 4160 Volt circuit breakers. This finding was determined to be of very low safety significance since all failures reviewed did not result in loss of a safety function for a single train for greater than its Technical Specification allowed outage time.

Inspection Report# : [2003010\(pdf\)](#)



**Significance:** Mar 22, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure of the turbine-driven auxiliary feed pump due to incorrectly manufactured and installed part.**

A noncited violation of 10 CFR Part 50, Appendix B, Criterion V, Instructions, Procedures, and Drawings, for failure to correctly manufacture and install a valve stem on the turbine-driven auxiliary feedwater turbine. Appropriate quantitative and qualitative measures were not utilized to assure that the valve stem was manufactured to the correct dimensions, as required by Appendix B, prior to installation.

This finding had actual safety significance because the condition resulted in the failure of the turbine-driven auxiliary feedwater pump to respond to a valid demand signal. The finding was more than minor because it was associated with the mitigating system equipment performance cornerstone attribute and adversely affected the availability/reliability cornerstone objective. This finding was of very low safety significance because the condition was not a design or qualification deficiency, did not represent the actual loss of a safety function of a system, did not represent the actual loss of a safety function of a single train for greater than its Technical Specification allowed outage time, did not represent the loss of a non-Technical Specification related train for greater than 24 hours, or did not screen as potentially risk significant due to a seismic, fire, flooding, or severe weather initiating event.

Inspection Report# : [2003003\(pdf\)](#)

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## Barrier Integrity



**Significance:** Sep 20, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure of containment radiation monitors to meet Technical Specifications operability requirements.**

The inspectors identified a green noncited violation of 10 CFR Part 50, Appendix B, Criterion III, associated with the licensee's failure to assure that applicable regulatory requirements and the design basis for the containment radiation gas monitors were correctly translated into Calculation GT-13 and, ultimately, the radiation monitor setpoint. This deficiency resulted in the containment gaseous channel becoming incapable of performing the design bases function to detect a one gallon per minute reactor coolant system leak within one hour in accordance with the licensee's commitment to Regulatory Guide 1.45, "Reactor Coolant Pressure Boundary Leakage Detection Systems."

This finding was greater than minor because the containment gas channel radiation monitor was not capable of performing the design basis function for an extended period of time. The inoperability of the radiation monitor resulted in potential impact on reactor safety and adversely affected the reactor coolant leakage performance attribute of the barrier integrity reactor safety cornerstone. The finding was only of very low safety significance because other methods of reactor coolant system leak detection were available to the licensee. The unavailability of the gaseous channel leak detection function did not contribute to an increase in core damage sequences when evaluated using the significance determination process Phase 2 worksheets.

Inspection Report# : [2003005\(pdf\)](#)

**Significance:**  Sep 20, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**Ineffective actions following an unanalyzed condition.**

The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action." This violation was related to inadequate corrective actions taken following identification of an unanalyzed condition (control room ventilation envelope door open) which resulted in the postulated postaccident control room dose limits to be exceeded. The licensee's corrective actions failed to prevent recurrence of the condition.

This finding was greater than minor because it was associated with the integrity of the control room envelope. Because this finding involved the degradation of barrier integrity, the finding was evaluated using the significance determination process for at-power situations. The inspectors concluded that the finding was only of very low safety significance because the finding only represented a degradation of the radiological barrier function provided for the control room.

Inspection Report# : [2003005\(pdf\)](#)

**Significance:**  Jan 08, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to isolate an inoperable containment penetration flow path.**

A noncited violation of Technical Specification Action 3.6.3, Containment Isolation Valves, occurred when the licensee failed to isolate an inoperable component cooling water containment penetration flow path within the prescribed 4 hours.

This finding had actual safety significance because it resulted in one of two automatic containment isolation engineering features to be disabled and would have become a more significant safety condition if left uncorrected. This finding was more than minor because it was associated with barrier performance, the containment isolation reliability cornerstone attribute, and adversely affected the barrier integrity cornerstone objective. This finding was evaluated using Appendix A of the reactor safety significance determination process and determined to be of very low safety significance because the condition did not affect the control room barrier function or represent an actual open containment pathway.

Inspection Report# : [2003003\(pdf\)](#)

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## Emergency Preparedness

**Significance:**  Mar 21, 2003

Identified By: NRC

Item Type: VIO Violation

**Failure to meet the Alert Notification System design criteria due to programmatic deficiencies resulting in an inaccurate Tone Alert Radio database in apparent violation of 10 CFR 50.47(b)(5).**

Between September 1998, and November 2002, due to programmatic inadequacies, a small percentage of residences in the licensee's plume exposure emergency planning zone would not have received an emergency alerting signal in the event of an emergency at the Callaway facility. The failure to establish a means to notify members of the public in the

emergency planning zone was a violation of 10 CFR 50.47(b)(5), and also involved cross cutting aspects in the area of problem identification.

The finding had greater than minor significance because the condition, if left uncorrected, would have continued to degrade resulting in additional loss of alert notification capability. A Significance Determination Process review determined that the issue had low to moderate safety significance (White). The finding was entered in the licensee's corrective action program as Callaway Action Request System Item CARS 200208007. The final significance determination (White) and Notice of Violation were transmitted to the licensee in a letter dated June 20, 2003.

Inspection Report# : [2003012\(pdf\)](#)

Inspection Report# : [2003008\(pdf\)](#)

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## Occupational Radiation Safety

**Significance:**  Feb 13, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

### **Failure to perform radiological surveys.**

Inspectors identified two examples of a violation of 10 CFR 20.1501(a) for failure to perform radiological surveys. The licensee failed to collect airborne samples to evaluate the potential for airborne activity during the removal and reinstallation of contaminated insulation on Valve BB8378A on October 29 and November 15, 2002, respectively. This violation is being treated as a noncited violation consistent with Section VI.A.1 of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Callaway Action Request System Number 200300355.

The issue was more than minor because the failure to perform a radiological survey has the potential for unplanned or unintended dose which could have been significantly greater as a result of higher levels of airborne activity. The safety significance of this finding was determined to be very low by the Occupational Radiation Safety Significance Determination Process because it did not involve ALARA planning and controls, there was no personnel overexposure, there was no substantial potential for personnel overexposure, and the finding did not compromise the licensee's ability to assess dose.

Inspection Report# : [2003003\(pdf\)](#)

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## Public Radiation Safety

**Significance:**  Jul 02, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

### **Dose rates on the external surface of a package in excess of DOT limits.**

The licensee failed to maintain contact dose rates to 200 millirems per hour or less on a package transported in an open, exclusive use shipment, in violation of 49 CFR 173.441(b)(1).

This self-revealing, noncited violation was greater than minor because the finding is associated with one of the Public Radiation Safety Cornerstone attributes (transportation packaging) and the finding affects the associated cornerstone objective (to ensure adequate protection of public health and safety from exposure to radioactive materials released into

the public domain). The finding was related to an occurrence in the licensee's radioactive material transportation program that was contrary to Department of Transportation regulations and, therefore, was processed through the Public Radiation Safety Significance Determination Process. The finding is of very low safety significance because it involved a radiation dose limit (200 millirems per hour) that was exceeded, but the dose rate (300 millirems per hour) did not exceed the limit by more than two times and it was not accessible to the public.

Inspection Report# : [2003009\(pdf\)](#)

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## Physical Protection

**Significance:** N/A Feb 14, 2003

Identified By: NRC

Item Type: FIN Finding

### Verification of Compliance With Interim Compensatory Measures Order

On February 25, 2002, the NRC imposed by Order, Interim Compensatory Measures to enhance physical security. The inspectors determined that, overall, the licensee appropriately incorporated the Interim Compensatory Measures into the site protective strategy and access authorization program; developed and implemented relevant procedures; ensured that the emergency plan could be implemented; and established and effectively coordinated interface agreements with offsite organizations.

Inspection Report# : [2003002\(pdf\)](#)

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## Miscellaneous

**Significance:** N/A Jun 06, 2003

Identified By: NRC

Item Type: FIN Finding

### Identification and Resolution of Problems

On the basis of the sample selected for review, the team concluded that in general, problems were adequately identified, evaluated, and corrected. The team identified a number of examples pertaining to the failure to promptly identify and correct conditions adverse to quality. One long-standing issue involving a failure to promptly identify and correct voided conditions affecting both trains of the containment spray system suction piping following abnormal system response during surveillance testing on multiple occasions dating back to 1995 was identified by the team. Problem identification and resolution issues have affected Callaway historically and corrective actions have been put in place to improve performance. The team noted that engineering products reviewed effectively supported the corrective action process, were technically adequate, and provided sufficient justification to support operability for degraded conditions evaluated.

Inspection Report# : [2003010\(pdf\)](#)

**Significance:** N/A Jan 30, 2003

Identified By: NRC

Item Type: FIN Finding

### Implementation of identification and resolution of problems program

Issues associated with a failure to identify and adequately evaluate an operability issue associated with the auxiliary feedwater system and two examples of inadequate corrective actions for conditions adverse to quality provided indications that the licensee had weaknesses in their problem identification and resolution program. The team found the licensee effectively implemented changes to address these problem identification and resolution program weaknesses. Problems were identified at the proper threshold and entered into the corrective action program. Risk information was

effectively used to prioritize the extent of evaluation and to determine the schedule for implementation of corrective actions. Corrective actions, when specified, were typically implemented in a timely manner. During interviews workers indicated no reluctance to place safety issues into the problem identification and resolution program. However, a licensee survey indicated that some employees felt that they had received negative repercussions for raising issues. Inspection Report# : [2002003\(pdf\)](#)

**Significance: SL-III** May 14, 2001

Identified By: NRC

Item Type: VIO Violation

**Discrimination against a security officer and a training instructor for having engaged in protected activity**

10 CFR 50.7(a) prohibits discrimination by a Commission licensee against an employee for engaging in certain protected activities. On October 27, 1999, the security officer and the training instructor identified to the Wackenhut Corporation a violation of NRC requirements at the Callaway Nuclear Plant. Based at least in part on this protected activity, the Wackenhut Corporation unfavorably terminated the security officer's employment for lack of trustworthiness and gave a written reprimand to the training instructor on November 19, 1999.

In consideration of the severity of the actions taken against the former security officer and the training instructor, the level of management involved in the adverse action, and the nature of contractor/licensee relationships, this violation has been categorized in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600 at Severity Level III (EA-01-005, dated May 14, 2001).

Inspection Report# : [2001003\(pdf\)](#)

Last modified : December 01, 2003