Callaway

Initiating Events

Significance: G Jan 12, 2001
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Inadvertent reactor protection system actuation.
During a trip actuating device operational test surveillance, maintenance personnel failed to complete a step in the procedure, resulting in the inadvertent tripping of a reactor trip breaker. This was a violation of Technical Specification 5.4.1. This noncited violation was characterized as having very low safety significance through the use of the significance determination process. Equipment designed to mitigate the consequences of a reactor trip was available and the reactor trip bypass breaker had been closed prior to the inadvertent opening of the reactor trip breaker.
Inspection Report# : 2001002*(pdf)*

Significance: G Nov 25, 2000
Identified By: Self Disclosing
Item Type: FIN Finding
Maintenance performed an offsite access circuit without a procedure.
On October 18, 2000, the licensee overhauled a 345 kV switchyard breaker without using a procedure. This breaker was part of the licensee's offsite access circuit. During the overhaul a small fire occurred in the breaker control cabinet. A significant contributor to the fire was that there was no formal procedure for performing overhaul on switchyard breakers. This finding was determined to have very low safety significance because the lack of procedural guidance for performing maintenance on offsite access circuits did not result in any identified loss of safety or safety support system function and the required offsite sources remained available.
Inspection Report# : 2000015*(pdf)*

Mitigating Systems

Significance: G Nov 26, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
Failure to perform corrective action.
A noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, occurred when a previously identified condition, associated with auxiliary feedwater minimum discharge pressure and recirculation flow, had not been corrected. Specifically on November 26, 2001, the licensee recognized that, in April 1997 and September 1998, they had identified that the motor-driven auxiliary feedwater pumps had the potential to degrade to a point where they would still be operable in accordance with Technical Specifications, but would not be able to provide the minimum design flow rate to the steam generators. The finding was more than minor because it had an actual impact on safety in that one of the auxiliary feedwater pumps could degrade to a point where it would be operable but unable to perform its design function. This finding was found to be only of very low safety significance because there was no actual degradation of the motor-driven auxiliary feedwater pumps and the turbine-driven auxiliary feedwater pump was available. Because the finding is of very low safety significance and the finding was entered into the licensee's corrective action program as Callaway Action Request 200107295, the associated finding is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy.
Inspection Report# : 2001006*(pdf)*

Significance: G Nov 19, 2001
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Failure to perform adequate maintenance on component cooling water Pump C
A noncited violation of Technical Specification 5.4.1 occurred when inadequate maintenance instructions resulted in maintenance personnel not adding enough lubricating oil to the driving bearing of component cooling water Pump C. The instructions failed to include guidance on how much oil to add to pump bearings following maintenance. Insufficient lubricating oil caused the pump bearing to fail. This finding is more than minor because it had a credible impact on safety in that, if the other component cooling water pump that supplied the train had failed, the train would not have been available to perform its safety function. This finding affects the mitigating system cornerstone. This finding was found to be of very low safety significance because no other risk significance equipment was rendered inoperable due to the inadequate maintenance instructions and the safety function was still maintained. Because this finding is of very low safety significance, and the finding was entered into the licensee's corrective action program as Callaway Action Request 200107296, it is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy.
Inspection Report# : 2001006*(pdf)*

Significance: G Oct 07, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to take action to ensure emergency core cooling system flood doors were properly controlled.
A noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, occurred when the licensee failed to take corrective action to ensure flood doors leading into the emergency core cooling system pump rooms were properly controlled. On October 7, 2001, the inspectors identified that the flood door leading to emergency core cooling system Train A equipment was open and unmonitored. With the door open a continuous flood watch was required. In June 2001, the inspectors identified that the flood door leading to emergency core cooling system Train B equipment was open and unmonitored. In response to the June 2001 incident, the licensee did not take corrective action to prevent the doors from being unmonitored while open. The corrective actions for this incident had been closed with no immediate corrective action taken. This finding included crosscutting aspects in the area of problem identification and resolution. This finding is more than minor because it had a credible impact on safety in that, if a fire water pipe break had occurred while the flood door was open and unmonitored, fire water could affect the operation of emergency core cooling system equipment. This finding affects the mitigating system cornerstone. This finding was found to be of very low safety significance because of the low likelihood of a fire water pipe break while the door was open and unmonitored and because of the availability of Train B equipment. Because the finding is of very low safety significance, and the finding was entered into the licensee's corrective action program as Callaway Action Request 200106307, it is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy.
Inspection Report# : 2001006*(pdf)*

Significance: G Jun 30, 2001
Identified By: NRC
Item Type: FIN Finding
Inadequate monitoring of feedwater piping degradation
The flow accelerated corrosion program failed to detect degradation in multiple portions of feedwater piping inside the containment building and in the turbine building prior to degradation beyond design minimum wall thickness. Although the main feedwater degradation was identified and addressed by the licensee before failure, the extent of the degradation at the time of discovery and exposure time while in this condition was a safety concern. This finding included crosscutting aspects in the area of problem identification and resolution. The finding was more than minor because it had an credible impact on safety and additionally could credibly affect the availability/reliability of a mitigating system (auxiliary feedwater). This finding was determined to be of very low safety significance using the reactor safety significance determination process because the degraded piping was determined to be operable. This issue is in the licensee's corrective action program as Callaway Action Request System Number 200102270.
Inspection Report# : 2001003*(pdf)*

Significance: G Jun 30, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to adequately assess and manage risk when essential service water was removed from service
A noncited violation (EA-01-173) of 10 CFR 50.65(a)(4) occurred when the licensee failed to adequately assess the risk when essential service water Train A was removed from service. Had the risk been adequately assessed, the licensee would have identified that the plant was actually in a higher risk category. The higher risk category required the development of contingency plans to manage the additional risk while essential service water Train A was out of service. This finding is more than minor and had a credible impact on safety because, with essential service water out of service, a diesel generator would not be available to perform its function in the event of a loss of all offsite power. This placed the plant in a higher risk category and the risk was not adequately assessed or managed. This finding affects the mitigating system cornerstone. This finding was evaluated using Appendix G (Shutdown Operations) of the reactor safety significance determination process and was determined to be of very low safety significance. The minimum equipment required by Appendix G remained available and the other diesel generator was operable. Because this finding is of very low safety significance, and the finding was entered into the licensee corrective action program as Callaway Action Request System Number 200103053, it is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy
Inspection Report# : 2001003*(pdf)*

Significance: G Jun 30, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
Flood door left open and unmonitored
A noncited violation of 10 CFR Part 50, Appendix B, Criterion V, occurred when the licensee failed to provide continuous monitoring of an open flood door that led into the safety injection pump and centrifugal charging pump Train B areas as required by Engineering Procedure EDP-ZZ-04107, "HVAC Pressure Boundary and Watertight Door Control," Revision 11. This finding is more than minor because it had a credible impact on safety in that, if a fire water pipe break had occurred while the flood door was left open and unmonitored, fire water could affect operation of the safety injection pump and centrifugal charging pump Train B. This finding affects the mitigating system cornerstone. This finding was found to be only of very low safety significance because of the low likelihood of a fire water pipe break while the flood door was open and unmonitored and because of the availability of Train A equipment. Because this finding is of very low safety significance, and the finding was entered into the licensee's corrective action program as Callaway Action Request System Number 200104044, it is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy.
Inspection Report# : 2001003*(pdf)*

Significance: G Jun 30, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate corrective action to address turbine driven auxiliary feedwater pump inoperability
A noncited violation of 10 CFR Part 50 Appendix B, Criterion XVI, occurred when the licensee failed to take corrective action to ensure that the turbine-driven auxiliary feedwater pump's steam trap and adjacent piping were not insulated. Insulating the steam trap and adjacent piping adversely affected the steam trap and caused the pump to become inoperable on June 12, 2001, when condensate level rose to the alarm setpoint while the steam line drain bypass level valve was out of service for maintenance. In August 1994, and on March 19, 2001, an insulated steam trap and/or adjacent piping also caused the turbine-driven auxiliary feedwater pump to become inoperable; however, the licensee failed to take corrective action following these two events to prevent the pump from becoming inoperable on June 12. This finding included crosscutting aspects in the area of problem identification and resolution. The finding was more than minor because it had an actual impact on safety in that the turbine-driven auxiliary feedwater pump was rendered inoperable. The event was of very low safety significance because the pump was out of service for less than 4 hours and both motor-driven auxiliary feedwater pumps were available. Because the finding is of very low safety significance, and the finding was entered into the licensee's corrective action program as Callaway Action Request System Number 200103722, the associated violation is being treated as a noncited violation, consistent with Section VI.A of the NRC Enforcement Policy.
Inspection Report# : 2001003*(pdf)*

Significance: W Jun 04, 2001
Identified By: NRC
Item Type: VIO Violation
Essential service water Pump B inoperable for aproximately 132 hours.
On February 9, 2001, a 20-foot section of reinforced tygon hose entered the suction bay of essential service water Pump B, rendering the pump inoperable for approximately 132 hours while the plant operated in Mode 1. Technical Specification 3.7.8.B specified an allowed outage time of 72 hours with the plant in Mode 1, 2, 3, or 4. This is an apparent violation of Technical Specification 3.7.8.B. This finding had greater than minor significance because it had an actual impact on safety, in that a train of essential service water (mitigating system) was inoperable for approximately 132 hours. It has been preliminarily determined to have low to moderate safety significance (White) using the significance determination process worksheet for loss of offsite power. If a loss of offsite power had occurred while the train of essential service water was inoperable, the Train B safety systems supported by essential service water, including an emergency diesel generator, would not have been available to perform their intended functions to mitigate the consequences of the loss of offsite power event. This violation was entered into the licensee's corrective action program as Suggestion-Occurrence-Solution Report 01-0515. The final significance determination for a White finding and a notice of violation were issued for EA-01-130 on July 23, 2001 (ML012050133).
Inspection Report# : 2001009*(pdf)*

Significance: G Mar 16, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to take Technical Specifications actions for inoperable diesel generators.
The licensee repeatedly failed to enter Technical Specification 3.8.1, Action B.1, while performing Technical Specifications Surveillance Requirement 3.8.1.16. Performance of Technical Specifications Surveillance Requirement 3.8.1.16 involved removal of synchronizing check relays for calibration, which rendered the emergency diesel generators incapable of being synchronized with offsite power sources as required by Technical Specifications Surveillance Requirement 3.8.1.16. The failure to enter Technical Specification 3.8.1, Action B.1, which involved verifying correct breaker alignment and indicated power availability for each required offsite circuit, was first identified by the licensee on August 8, 2000. On December 13, 2000, the licensee identified that this surveillance had been performed six times since August 2000 without performing the required actions. These subsequent events were a result of ineffective corrective action to prevent recurrence and failure to complete a timely root cause analysis for the August 2000 event. This violation of Criterion XVI of 10 CFR Part 50, Appendix B, is being treated as a noncited violation consistent with Section VI.A.1 of the NRC Enforcement Policy and was entered into the licensee's corrective action program as Callaway Action Request 00-3135. This noncited violation was characterized as having very low safety significance through the use of the significance determination process. This was because that although the capability to synchronize the emergency diesel generators with offsite power was defeated by removal of the synchronization check relays, they would have properly started and assumed safety-related electrical loads during a loss-of-offsite power event. Also, the licensee determined that none of the times for which the emergency diesel generators were inoperable exceeded the completion time of 1 hour allowed by Technical Specification 3.8.1, Action B.1.
Inspection Report# : 2001004*(pdf)*

Significance: G Nov 25, 2000
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Ineffective chemistry controls.
The licensee's chemical treatment to plant water systems was ineffective in that it did not control the growth the Asiatic clams in the service water and essential service water systems. As a result, essential service water flow to several safety-related heat exchangers was degraded and flow to the motor-driven auxiliary feedwater Pump A room cooler was reduced below its operability limit. This caused the pump to become inoperable. The failure to establish an adequate chemical treatment program to prevent fouling of heat exchanger surfaces was a violation of Technical Specification 5.4.1. This noncited violation was determined to have very low safety significance because no other safety-related components, other than motor-driven auxiliary feedwater Pump A, was rendered inoperable due to ineffective chemistry controls. The other auxiliary feedwater pumps remained operable.
Inspection Report# : 2000015*(pdf)*

Significance: G Nov 25, 2000
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Motor driven auxiliary feedwater Pump A inoperable due to reduced essential service water flow.
Motor-driven auxiliary feedwater Pump A became inoperable and exceeded its Technical Specification allowed outage time when essential service water flow to the pump room cooler fell below its operability requirement. Flow was reduced to the room cooler due to an Asiatic clam infestation in the essential service system. This was a violation of Technical Specification 3.7.5. This noncited violation was determine to have very low safety significance because, even though Asiatic clams caused the pump to become inoperable, the 100 percent motor-driven auxiliary feedwater Train B and the 200 percent turbine-driven auxiliary feedwater train remained operable. As a result, there was only a small increase in plant risk with the motor-driven auxiliary feedwater Pump A inoperable.
Inspection Report# : 2000015*(pdf)*

Significance: G Aug 22, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Three examples of making a change to the fire protection program, without prior Commission approval, that adversely affected the ability to achieve and maintain safe shutdown.
In Fire Area A-27 (reactor trip switchgear room) the team found that redundant equipment required for safe shutdown of the plant following a fire was not separated in accordance with Section C.5.b of Branch Technical Position Chemical Engineering Branch 9.5-1, in that the 20 feet of horizontal space between redundant trains of safe shutdown equipment contained intervening combustibles. Subsequent to this finding, the licensee identified similar conditions in Fire Areas A-1A (west corridor of the 1974 foot elevation of the auxiliary building), and Fire Area A-18 (north electrical penetration room in the auxiliary building). The team also found that in 1989, and 1996, the licensee performed engineering evaluations to justify installed configurations in several fire areas, including Fire Areas A-1A, A-18, and A-27, which did not meet the separation criteria of Section C.5.b of Branch Technical Position Chemical Engineering Branch 9.5-1. In performing these evaluations, however, the licensee failed to consider, as intervening combustibles or fire hazards, non-safety-related cables and other equipment located in the 20 foot separation areas between redundant trains of equipment necessary to achieve and maintain safe shutdown conditions. Therefore, the licensee did not identify the safe shutdown equipment which could be vulnerable to fire damage and the operator actions to restore that equipment to service. The failure to identify and evaluate these additional operator actions were considered by the team to have an adverse affect on the licensee's ability to achieve and maintain safe shutdown in the event of a fire. Therefore, the team concluded that without prior approval of the Commission, the licensee made changes to their approved fire protection program that adversely affected their ability to achieve and maintain safe shutdown in the event of a fire in Fire Areas A-1A, A-18, and A-27. This is a violation of Operating License Condition 2.C(5)(d), with three examples, and is being treated as a Non-Cited Violation consistent with Section VI.A of the NRC Enforcement Policy. The licensee entered this finding into their corrective action program as Suggestion-Occurrence-Solution 00-2070 and posted compensatory measures in accordance with the provisions of their fire protection program. Each example of this violation was evaluated using the significance determination process, which indicated that, for each of the fire areas involved, the violation had very low safety significance, because the ignition frequencies were relatively low, fire detection and suppression systems were not degraded, and operator actions were available to ensure a safe shutdown path for a fire in each of the fire areas.
Inspection Report# : 2000013*(pdf)*

Significance: G Aug 22, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Noncited violation involving the failure to assure that the design basis was correctly translated into drawings and procedures, and that the adequacy of design was verified or checked-closes URI 0009.
During a previous inspection, NRC inspectors identified an unresolved item involving a potential violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." The potential violation concerned the licensee's failure to consider auxiliary feedwater system flow demand on the essential service water system flow balance between 1984 and 1998. The licensee stated that they had not included the auxiliary feedwater flow demand on the essential service water flow balance because they had incorrectly credited the nonsafety-related condensate storage tank as the required water supply for the auxiliary feedwater pumps. The licensee performed a past operability review and determined that the essential service water pumps had been capable of supplying adequate flow to the auxiliary feedwater pumps and all other safety-related loads between 1984 and 1998. This issue was determined to be a violation of Criterion III of Appendix B to 10 CFR Part 50. This violation is being treated as noncited violation consistent with Section VI.A of the NRC Enforcement Policy. The inspectors determined that the issue had very low safety significance because the essential service water pumps had been capable of supplying adequate flow to the auxiliary feedwater pumps and all other safety-related loads between 1984 and 1998.
Inspection Report# : 2000012*(pdf)*

Significance: G Aug 09, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to maintain in effect a 3-hour rated fire barrier between redundant trains of equipment necessary to achieve and maintain safe shutdown.
The inspectors identified that a 3-hour rated fire door between the Train A and Train B safety-related ac switchgear rooms was ajar. This failure to properly maintain in effect all provisions of their NRC-approved fire protection program is a violation of Operating License Condition 2.C(5)(c). This violation is being treated as a Non-Cited Violation consistent with Section VI.A of the NRC Enforcement Policy. The licensee entered this finding into their corrective action program as Suggestion-Occurrence-Solution 00-1927. This finding was of very low safety significance, because the door was ajar for less than 3 hours, the ignition frequency was relatively low, and the fire detection and suppression systems were minimally affected.

Inspection Report# : 2000013*(pdf)*

Significance: G May 26, 2000
Identified By: NRC
Item Type: FIN Finding
Essential service water system vibration issues were not recognized by licensee personnel in a timely fashion.
During review and closure of Unresolved Item 50-483/0003-01 (essential service water reliability issues), the team noted that licensee personnel had documented several component failures in the essential service water system which were attributable to cyclic stress caused by excessive vibration. These components started failing after implementation of modifications (a May 1992 modification which increased the size of Orifices EFFO0005 and EFFO0006 located in the essential service water return to the ultimate heat sink, and the October 1996 and February 1997 changeout of two system Butterfly Valves EFV0090 and EFV0058). The licensee had not considered either additional vibration or cumulative effects caused by modifications to essential service water, which had experienced high vibration levels since initial plant startup. The team noted that, until May 1999, the licensee had not implemented any significant initiatives to address these issues. At that time, comprehensive corrective actions were finalized, some of which have been implemented. The team concluded after review of the plans, that the licensee is now effectively managing essential service water system vibration and that the reliability of the system should no longer be challenged by vibration. The licensee determined, and the team agreed, that the essential service water system had remained operable throughout this period. Therefore, the team concluded that the vibration issues had a very low risk significance and did not pose a significant safety concern. This issue was determined to be GREEN after being evaluated in the significance determination process.
Inspection Report# : 2000009*(pdf)*

Significance: G May 25, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Licensee personnel failed to properly evaluate a plant modification
The licensee failed to recognize that a plant modification, which capped two of the four floor drains in Rooms 1206 and 1207 (below the auxiliary feedwater pump rooms), resulted in the facility being outside the design and licensing basis for internal flooding with respect to the consequences of a postulated break in the nonseismic condensate storage tank piping. The team considered this to be a violation of Criterion III of Appendix B to 10 CFR Part 50, which requires assurance that the design basis is correctly translated into drawings and procedures, and that the adequacy of design is verified or checked. This violation is being treated as a Non-Cited Violation (50-483/0009-01), consistent with Section VI.A of the NRC Enforcement Policy. The condition resulting in the violation is in the licensee's corrective action system as Suggestion Occurrence Solution 00-1214 initiated May 25, 2000. This issue was evaluated to have very low risk significance for the safety-related instruments or electrical connections in these rooms because flooding would be limited to approximately 6 inches, which is below the instrumentation installation height. Other equipment in the rooms subject to flooding at this elevation would not be required for safe shutdown.
Inspection Report# : 2000009*(pdf)*

Significance: G May 20, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to follow procedures for testing of the turbine driven auxiliary feedwater pump.
The licensee did not comply with the initial condition of a surveillance test procedure requiring that both diesel generators be operable prior to testing the turbine- driven auxiliary feedwater pump. This violation of Technical Specification 6.8.1 is being treated as a noncited violation in accordance with Section VI.A.1 of the NRC Enforcement Policy. This item was entered in the licensee's corrective action program as Suggestion-Occurrence-Solution Report 99-3305. The actual risk significance of this issue was very low (Green) because the other diesel generator and its associated 100 percent capacity motor-driven auxiliary feedwater pump were operable and the turbine-driven auxiliary feedwater pump tested satisfactorily.
Inspection Report# : 2000010*(pdf)*

Significance: G Apr 27, 2000
Identified By: NRC
Item Type: FIN Finding
Inoperable diesel generator not factored into risk assessment.
The inspectors identified that the plant was in a more risk significant condition than that which was calculated by the risk monitor (quantitative risk assessment) when a diesel generator was made inoperable during maintenance. This placed the plant in the second highest of three risk conditions. The licensee's initial risk assessment did not assume that the diesel generator would be inoperable during maintenance and calculated plant risk as being in the lowest risk condition. Although a qualitative risk assessment performed by operations personnel allowed the diesel generator to be removed from service, it did not indicate that the plant was in a more risk significant configuration and no formal contingency actions were developed. Additionally, the inspectors learned that the licensee's configuration risk monitor program had not defined any contingency actions in response to calculated risk conditions. Failure to account for the diesel generator inoperability in the quantitative risk assessment resulted in the plant being in a more risk-significant condition than most of the plant staff realized. This condition could potentially result in undesirable risk configurations of mitigating systems under certain emergent work situations. However, in this case, other risk-significant equipment was not concurrently removed from service and the error did not result in actual plant risk impact. Therefore, the significance determination process found this issue to be of very low risk significance.
Inspection Report# : 2000010*(pdf)*

Barrier Integrity

Significance: G Jan 10, 2001
Identified By: Self Disclosing
Item Type: FIN Finding
Unidentified reactor coolant system leakage in excess of Technical Specification limits.
Although operations personnel had prior indication of a valve alignment problem in the boron thermal regeneration system, they were slow to correctly identify the source of the valve alignment problem. As a result, several valves in the boron thermal regeneration system were overpressurized, resulting in reactor coolant system leakage of approximately 2 gpm. This finding was of very low safety significance because once operations personnel identified the valve that was out of alignment they quickly isolated the leak and limited reactor coolant system leakage to approximately 50 gallons.
Inspection Report# : 2001002*(pdf)*

Significance: G Jun 02, 2000
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Failure to comply with the technical specification required action for an inoperable containment penetration
An error in a modification package that addressed fire-induced hot short concerns resulted in an outer containment isolation valve (component cooling water return from reactor coolant pump thermal barrier heat exchanger) being inoperable for almost two months. The valve would not have automatically closed on a Phase B (high containment pressure) containment isolation signal. During the time the outer containment isolation valve was inoperable, the inner containment isolation valve for the same penetration was inoperable for 90 minutes. Technical Specification 3.6.3.B required that with both containment isolation valves inoperable that the penetration be isolated within 1 hour. The licensee failed to isolate the penetration as required by Technical Specification 3.6.3.B. This violation of Technical Specification 3.6.3.B is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy. This item was entered in the licensee's corrective action program as Suggestion-Occurrence-Solution Report 00-0314. The actual safety significance of the issue was determined to be very low (Green) because the inner containment isolation valve was inoperable for only 90 minutes. The outer valve could have been remotely closed by a reactor operator from the main control board and the inner valve was not subject to common cause failure because the hot shorts modification had not been performed on it.
Inspection Report# : 2000011*(pdf)*

Emergency Preparedness

Significance: G Jul 08, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to revise an emergency action level after errors in its bases were identified
Inspectors determined that an emergency action level had not been corrected 22 months after licensee staff identified errors in its bases. In March 1998, the licensee determined that there were errors in the calculation of effluent monitor indicators used in determining site area and general emergency classifications. This issue was tracked as Unresolved Item 50-483/00004-02. Subsequently, it was determined to be a violation of 10 CFR 50.54(q) in that the licensee failed to revise an emergency action level associated with plant instrumentation to its most accurate known value to ensure that corresponding protective action recommendations were appropriate for the indicated conditions. This violation is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Suggestion-Occurrence-Solution Report 00-0108. This issue was of very low safety significance because it did not represent a failure to meet risk significant planning standard 10 CFR 50.47(b)(4) regarding emergency action levels.
Inspection Report# : 2000011*(pdf)*

Occupational Radiation Safety

Significance: G Aug 10, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to perform a radiological survey
On August 9, 2001, the inspector determined that radiation levels on top of the Nukem solid collection system vessel increased from 60 to 180 millirem per hour after the vessel was drained due to a leak. The failure to perform a radiological survey of the vessel after it had been drained, to identify the increased dose rates, is a violation of 10 CFR 20.1501. 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 Corrective Action Report 2001-04974. The

safety significance of this finding was determined to be very low by the Occupational Radiation Safety Significance Determination Process because there was no overexposure or substantial potential for an overexposure, and the ability to assess dose was not compromised. The issue was more than minor because the failure to perform a radiological survey has a credible impact on safety and has the potential for unplanned or unintended dose.
Inspection Report# : 2001005*(pdf)*

Significance: G Aug 10, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to post a high radiation area.
10 CFR 20.1902(b) requires that the licensee shall post each high radiation area with a conspicuous sign or signs bearing the radiation symbol and the words "Caution High Radiation Area." On May 27, 2001, the licensee identified that a high radiation area located outside in the radwaste yard was not posted. This event is described in the licensee's corrective action program, reference Corrective Action Report 2001-03509. This violation is being treated as a noncited violation. The safety significance of this finding was determined to be very low by the Occupational Radiation Safety Significance Determination Process because there was no overexposure or substantial potential for an overexposure, and the ability to assess dose was not compromised.
Inspection Report# : 2001005*(pdf)*

Significance: G Jun 30, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to review or evaluate the use of a nonconforming dose rate instrument
On April 18, 2001, the inspector identified a survey instrument (RO-2A, SN 2365) which was tagged out of service as nonconforming on April 12, 2001. The description of the nonconformance was, "reading 20 mr/hr in a 100 mr/hr field." Health Physics Departmental Procedure HDP-ZZ-04000, "Health Physics Instrumentation Program," Revision 16, requires, in part, that a review of the instrument use must be performed within one working day when a dose rate instrument is nonconforming. No review or evaluation had been conducted. The licensee's failure to conduct a review or evaluation of the use of the nonconforming dose rate instrument within one working day was a violation of Technical Specification 5.4.1.a. This violation is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Callaway Action Request System Number 200102148. The significance of this violation was determined to be more than minor, because it could be reasonably viewed as a precursor to a significant event and it involved conditions contrary to licensee procedures which impact instrumentation related to measuring worker dose. This violation was processed through the occupational radiation safety significance determination process and determined to be of very low safety significance, because there was no overexposure, no substantial potential for overexposure because the instrument was removed from service, and the ability to assess dose was not compromised because the technician was wearing dosimetry.
Inspection Report# : 2001003*(pdf)*

Significance: N/A Jun 30, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
Failure to use NIOSH certified harness straps and belts on all self contained breathing apparatus
10 CFR 20.1703(a) states, in part, that the licensee shall use only respiratory protection equipment that is tested and certified by the National Institute for Occupational Safety and Health (NIOSH). From late 1992 to August 2000, self contained breathing apparatus (SCBA) harness straps and belts were used, which were not NIOSH certified for the type of SCBA in use at Callaway, as described in the licensee's corrective action program (Callaway Action Request System Number 200001969). The significance of this violation was determined to be more than minor, because there was a credible impact on a worker's radiation safety and did not affect the cornerstone. There were extenuating circumstances, because the violation was determined to be more than minor.
Inspection Report# : 2001003*(pdf)*

Significance: G Jun 07, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to follow procedural guidance when moving temporary shielding
The inspectors identified that temporary shielding in the chemical and volume control system letdown valve cubical had been moved without a review by health physics supervision. Moving lead shielding without health physics supervision review is a violation of Procedure HTP-ZZ-01101 and Technical Specification 5.4.1. Moving lead shielding has a credible impact on safety and the occurrence could have involved a worker's unplanned, unintended dose or potential of such a dose which could have been significantly greater if radiation levels were higher. However, since there was no overexposure or substantial potential for an overexposure and the ability to assess dose was not compromised, the finding is considered to be of very low safety significance. Because of the very low safety significance of the item and because the licensee has included this item in its corrective action program (as CARS 200102390), this procedure violation is being treated as a non-cited violation consistent with Section VI.A.1 of the NRC Enforcement Policy.
Inspection Report# : 2001008*(pdf)*

Significance: N/A Jun 07, 2001
Identified By: NRC
Item Type: FIN Finding
Supplemental inspection results
This supplemental inspection was performed by the NRC to assess the licensee's evaluation of Refueling Outage 10 job doses that were not as

low as is reasonably achievable (ALARA). Three findings were previously characterized as having low to moderate safety significance (White) in NRC Inspection Report 50-483/00-17. During this supplemental inspection performed in accordance with Inspection Procedure 95002, the inspectors determined that the licensee performed a thorough evaluation of the causes of radiation doses that were not ALARA and correctly identified the extent of the conditions that led to the doses. The doses were identified by the licensee during post-job reviews following Refueling Outage 10. The licensee's evaluation identified the primary root causes of the performance issues to be: (1) management's failure to establish expectations for keeping dose ALARA, (2) management's failure to communicate a priority for keeping doses ALARA, (3) a culture that did not support the ALARA concept, and (4) administrative controls that did not assure documented ALARA concerns would receive proper priority, appropriate consideration, and comprehensive resolution. With regard to the extent of condition, the licensee found that only the fourth root cause extended beyond the radiation protection department. The licensee specified appropriate corrective actions to address the root causes and had implemented most actions by the start of Refueling Outage 11. However, many of the corrective actions were not institutionalized to prevent recurrence of the problems during outages following Refueling Outage 11. The licensee acknowledged this potential problem and entered it into the corrective action program. The licensee was working on separate, broader corrective actions for the fourth root cause. In addition, the licensee intends to conduct effectiveness evaluations of the corrective actions to ensure their effectiveness. Because of the licensee's acceptable performance in addressing job doses that were not ALARA, the White findings associated with this issue will only be considered in assessing plant performance for a total of four quarters, in accordance with the guidance in IMC 0305, "Operating Reactor Assessment Program." Implementation of the licensee's corrective actions will be reviewed further during a future inspection.
Inspection Report# : 2001008*(pdf)*

Significance: W Sep 05, 2000
Identified By: NRC
Item Type: FIN Finding
Failure to Maintain Radiation Doses As-Low-As-Reasonably-Achievable
Because of poor planning and preparation, as well as other causes, six jobs that accrued more than 5 person-rems each during Refueling Outage 10 exceeded their projected job doses by more than 50 percent. The licensee scheduled outage activities to reduce the outage duration rather than to reduce dose, failed to properly train workers in dose reduction methods, and failed to ensure good communications between radiation protection personnel and other work groups. Because of these performance problems and the licensee's history of high collective radiation doses, the NRC identified the issue as a violation of 10 CFR 20.1101(b), which requires that the licensee use, to the extent practical, procedures and engineering controls based upon sound radiation protection principles to achieve occupational doses and doses to members of the public that are as low as is reasonably achievable. Using the Occupational Radiation Safety Significance Determination Process, the NRC determined that the violation was composed of three parts, each of low to moderate risk significance (white). Of the six jobs that exceeded their dose projections by more than 50 percent, two jobs accrued actual doses greater than 25 person-rems. Thus, because the licensee's 3-year rolling average, collective dose exceeded 135 person-rems (but did not exceed 340 person-rems) each was a white finding. In addition, since there were more than two other jobs that accrued more than 5 person-rems (but less than 25 person-rems), these constituted an additional white finding, for a total of three white findings. [The second of three white fingings associated with the violation of 10 CFR 20.1101(b) involved steam generator eddy current/robotic plugging/stabilizing/electrosleeving activities accrued actual doses greater than 25 person-rems. The final significance determination letter and the associated Notice of Violation (EA-00-208) were issued on January 9, 2001.]
Inspection Report# : 2000017*(pdf)*

Significance: W Sep 05, 2000
Identified By: NRC
Item Type: VIO Violation
Failure to Maintain Radiation Doses As-Low-As-Reasonably-Achievable
Because of poor planning and preparation, as well as other causes, six jobs that accrued more than 5 person-rems each during Refueling Outage 10 exceeded their projected job doses by more than 50 percent. The licensee scheduled outage activities to reduce the outage duration rather than to reduce dose, failed to properly train workers in dose reduction methods, and failed to ensure good communications between radiation protection personnel and other work groups. Because of these performance problems and the licensee's history of high collective radiation doses, the NRC identified the issue as a violation of 10 CFR 20.1101(b), which requires that the licensee use, to the extent practical, procedures and engineering controls based upon sound radiation protection principles to achieve occupational doses and doses to members of the public that are as low as is reasonably achievable. Using the Occupational Radiation Safety Significance Determination Process, the NRC determined that the violation was composed of three parts, each of low to moderate risk significance (white). Of the six jobs that exceeded their dose projections by more than 50 percent, two jobs accrued actual doses greater than 25 person-rems. Thus, because the licensee's 3-year rolling average, collective dose exceeded 135 person-rems (but did not exceed 340 person-rems) each was a white finding. In addition, since there were more than two other jobs that accrued more than 5 person-rems (but less than 25 person-rems), these constituted an additional white finding, for a total of three white findings. [The first of three white fingings associated with the violation of 10 CFR 20.1101(b) involved scaffolding activities which accrued actual doses greater than 25 person-rems. The final significance determination letter and the associated Notice of Violation (EA-00-208) were issued on January 9, 2001.]
Inspection Report# : 2000017*(pdf)*

Significance: W Sep 05, 2000
Identified By: NRC
Item Type: FIN Finding
Failure to Maintain Radiation Doses As-Low-As-Reasonably-Achievable
Because of poor planning and preparation, as well as other causes, six jobs that accrued more than 5 person-rems each during Refueling Outage 10 exceeded their projected job doses by more than 50 percent. The licensee scheduled outage activities to reduce the outage duration rather than to reduce dose, failed to properly train workers in dose reduction methods, and failed to ensure good communications between radiation protection personnel and other work groups. Because of these performance problems and the licensee's history of high collective radiation doses, the NRC identified the issue as a violation of 10 CFR 20.1101(b), which requires that the licensee use, to the extent practical, procedures and engineering controls based upon sound radiation protection principles to achieve occupational doses and doses to members of the public that are as low as is

reasonably achievable. Using the Occupational Radiation Safety Significance Determination Process, the NRC determined that the violation was composed of three parts, each of low to moderate risk significance (white). Of the six jobs that exceeded their dose projections by more than 50 percent, two jobs accrued actual doses greater than 25 person-rems. Thus, because the licensee's 3-year rolling average, collective dose exceeded 135 person-rems (but did not exceed 340 person-rems) each was a white finding. In addition, since there were more than two other jobs that accrued more than 5 person-rems (but less than 25 person-rems), these constituted an additional white finding, for a total of three white findings. [The third of three white fingings associated with the violation of 10 CFR 20.1101(b) involved four jobs, each of which accrued actual doses greater than 5 person-rems (steam generator manway covers and inserts removal and installation; health physics support for primary and secondary steam generator activities; foreign object search and retrieval; and reactor coolant pump seal removal and replacement.) The final significance determination letter and the associated Notice of Violation (EA-00-208) were issued on January 9, 2001.]
Inspection Report# : 2000017*(pdf)*

Significance: Aug 22, 2000
Identified By: Licensee
Item Type: NCV NonCited Violation
Failure to barricade a high radiation area
On May 17, 2000, the licensee identified that a Caution High Radiation Area boundary was moved on the 2000 foot elevation of the radwaste building, and the area was not barricaded for 5 days. The licensee's procedures define a Caution High Radiation Area as an area with dose rates greater than 100 millirems per hour but less than or equal to 1000 millirems per hour at 30 centimeters from a radiation source. Technical Specification 5.7.1.a states, in part, that each entryway to a high radiation area with dose rates not exceeding 1 rem per hour shall be barricaded. The failure to barricade the above area was a violation of Technical Specification 5.7.1.a. This violation is being treated as a noncited violation and is in the licensee's corrective action program as Suggestion-Occurrence-Solution Report 00-1139. This issue was determined to have very low safety significance because there was no overexposure or substantial potential for an overexposure to occur.
Inspection Report# : 2000012*(pdf)*

Public Radiation Safety

Significance: Nov 30, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
Failure to provide the correct proper shipping name and shipment identification number.
10 CFR 71.5(a) requires that each licensee who transports licensed material outside the site of usage, as specified in the NRC license, or where transport is on the public highways, or who delivers licensed material to a carrier for transport, shall comply with the applicable requirements of the Department of Transportation regulations in 49 CFR Parts 170 through 189 appropriate to the mode of transportation. 49 CFR 172.202(a)(1) and (a)(3) require that the shipping description of a hazardous material on the shipping papers must include the proper shipping name prescribed for the material in Column 2 of 49 CFR 172.101, Hazardous Materials Table, and the identification number prescribed for the material as shown in Column 4 of 49 CFR 172.101, Hazardous Materials Table, respectively. On December 10, 1999, the proper shipping name for Shipment 99-0075 was incorrectly determined to be "Radioactive Material, LSA, n.o.s., 7 - Radioactive Material UN2912" instead of "Radioactive Material, n.o.s., 7 - Radioactive Material UN2982." Therefore, the shipment's hazardous material identification number was also incorrectly assigned as UN2912 instead of UN2982. This event is described in the licensee's corrective action program, reference Callaway Action Request 2001-168. This finding is being treated as a noncited violation. The safety significance of this finding was determined to be very low by the Public Radiation Safety Significance Determination Process because radiation limits were not exceeded, and there was no breach of package during transit, certificate of compliance problem, low level burial access problem, or failure to make notifications or provide emergency information.
Inspection Report# : 2001006*(pdf)*

Significance: Nov 30, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
Failure to perform shipping cask leak test requirement prior to shipment.
10 CFR 71.12(c)(2) requires that a licensee who delivers to a carrier for transport licensed material in a package for which a Certificate of Compliance has been issued by the NRC shall comply with the terms and conditions of the Certificate of Compliance as applicable. On December 10, 1999 (Shipment 99-0075) and again on April 25, 2000 (Shipment 00-0022), dewatered bead resin was shipped to the Barnwell Waste Management Facility for disposal using Package USA/9208/B( ) [NuPac Cask Model No 10-142]. In each case, the leak test required by Section 9.b of the Certificate of Compliance was not performed. These events are described in the licensee's corrective action program, reference Callaway Action Requests 2001-166 and 2001-168. This finding is being treated as a noncited violation. The safety significance of this finding was determined to be very low by the Public Radiation Safety Significance Determination Process because radiation limits were not exceeded and there was no breach of package during transit. However, it involved a Certificate of Compliance finding resulting in a shipping cask maintenance/use performance deficiency.
Inspection Report# : 2001006*(pdf)*

Significance: Jun 30, 2001
Identified By: NRC
Item Type: NCV NonCited Violation

Failure to adequately survey items released from the radiologically controlled area
The inspector found that the licensee had not evaluated the ability of its personnel contamination monitors, portable frisking instruments, and tool monitors to identify all radionuclides that might be present on items released from its control. Without this evaluation, the licensee could not ensure that release surveys were adequately performed. The licensee's failure to adequately survey items released from the radiologically controlled area was a violation of 10 CFR 20.1501(a). This violation is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Callaway Action Request System Number 200102126. The significance of this violation was determined to be more than minor, because it could reasonably be viewed as a precursor to a significant event and it involved an occurrence in the radioactive material control program. This violation was processed through the public radiation safety significance determination process and determined to be of very low safety significance, because it did not result in public dose greater than 0.005 rem, and there were no more than five related events
Inspection Report# : 2001003*(pdf)*

Physical Protection

Miscellaneous

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)*

Significance: N/A Mar 16, 2001
Identified By: NRC
Item Type: FIN Finding
Licensee's problem identification and resolution program was effective.
The licensee adequately identified problems and put them into the corrective action program. The licensee adequately used risk in prioritizing the extent to which individual problems would be evaluated and in establishing schedules for implementation of corrective actions. Licensee audits and assessments were effective in identifying problems. Based on the interviews conducted during this inspection, workers at the site felt free to input safety issues into the problem identification and resolution program. Corrective actions, when specified, were generally implemented in a timely manner. With a few exceptions identified by the licensee, corrective actions to prevent recurrence of conditions adverse to quality were effective. However, one example of untimely and ineffective corrective action, involving testing of emergency diesel generator relays, is discussed as a noncited violation.
Inspection Report# : 2001004*(pdf)*

Significance: SL-IV Oct 03, 2000
Identified By: Licensee
Item Type: NCV NonCited Violation
Failure to report the inadvertent start of the diesel generator within the required 4 hours.
On October 3, 2000, while reviewing the procedural guidance for locally starting the diesel generator, a nonlicensed operator started the diesel generator by inadvertently breaking the glass cover for the emergency start button on the local control panel. Operations personnel failed to report the start of the diesel generator as a manual actuation of an engineered safety feature within the 4-hour time requirement. Quality assurance personnel subsequently identified that this condition was reportable. Failing to report the manual actuation of the diesel generator within the required 4 hours was a violation of 10 CFR 50.72(b)(2)(ii). This violation is being treated as a noncited violation consistent with Section VI.A.1 of the NRC Enforcement Policy. This item was entered into the licensee's corrective action program as Suggestion-Occurrence-Solution Report 00-2450.
Inspection Report# : 2000014*(pdf)*

Significance: SL-IV Jun 02, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to monitor the performance of a condenser air radiation gas detector
Certain cognizant licensee personnel were not aware that a condenser air radiation gas detector was within the scope of the maintenance rule. The detector was identified in the emergency operating procedure to provide an indication of a steam generator tube rupture. Since licensee personnel were not aware the detector was within the scope of the maintenance rule, functional failure determinations had not been performed on detector failures. Without functional failure determinations, the licensee could not demonstrate that the detector was being effectively controlled through preventive maintenance, as required by the maintenance rule. This was a Severity Level IV violation of 10 CFR 50.65(a)(1) and (2). This violation (EA-00-174) is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy. This item was entered into the licensee's correction action program as Suggestion-Occurrence-Solution Report 00-1548. The licensee could still manually sample steam generator blowdown or use other indications of a steam generator tube rupture.

Inspection Report# : 2000011*(pdf)*

Last modified : March 01, 2002