

Perry 1

1Q/2005 Plant Inspection Findings

Initiating Events

G**Significance:** Mar 31, 2005

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

INSTRUMENTATION AND CONTROL TECHNICIAN ERROR RESULTS IN INADVERTENT ESF ACTUATION

A finding of very low safety significance and a violation of Technical Specification 5.4, "Procedures" was self-revealed on February 3, 2005. Specifically, while calibrating the containment/drywell purge exhaust radiation monitor 1D17-K660, an error by an instrumentation and control (I&C) technician resulted in an engineered safety feature (ESF) actuation. Specifically, backup hydrogen purge system containment isolation valves M51-F090 and M51-F110 received an isolation signal. The valves functioned as designed and isolated the backup drywell hydrogen purge system. Control room personnel realigned the backup drywell hydrogen purge system in accordance with the system operating instruction. Additional I&C personnel reset the trip signal and completed the calibration procedure successfully. The primary cause of this finding was related to the cross-cutting issue of Human Performance because a personnel error was the primary cause of the event.

The inspectors determined that an inadvertent ESF actuation due to improper performance of an I&C procedure was a performance deficiency warranting significance evaluation. The inspectors determined that the issue was more than minor because it could reasonably be viewed as a precursor to a more significant event. The inspectors determined that the finding was of very low safety significance because the finding: (1) did not contribute to the likelihood of a loss of coolant accident initiator; (2) did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available; and (3) did not increase the likelihood of a fire or internal/external flooding.

Inspection Report# : [2005002\(pdf\)](#)**G****Significance:** Feb 18, 2005

Identified By: NRC

Item Type: FIN Finding

FAILURE TO EVALUATE AND DOCUMENT THE REMOVAL OF A MODE RESTRAINT AS REQUIRED BY PROCEDURES

A finding of very low significance was identified by the inspectors. The inspectors concluded that the licensee failed to properly assess and document the assessment for the removal of restart restraints prior to resuming reactor operation subsequent to the December 23, 2004, scram, and that the failure to appropriately close and document the basis for resolving a mode restraint prior to startup impaired the licensee's ability to identify the associated failure mechanism for the December 23 recirculation pump downshift event. The primary cause of this finding was related to the cross-cutting area of Human Performance.

The finding was more than minor because a plant transient was initiated on January 6, 2005, that caused an actual upset in plant stability, which directly affects the objective for the Initiating Events Cornerstone. Additionally, the reactor recirculation pump downshifts affected the equipment performance attributes of availability and reliability of the Initiating Events Cornerstone of Reactor Safety. The issue was of very low safety significance because the finding did not result in exceeding the Technical Specification limit for identified reactor coolant system leakage and did not affect other mitigation systems; the finding did not contribute to both the likelihood of a reactor trip AND the likelihood that mitigation equipment or functions will not be available; and the finding did not increase the likelihood of a fire or internal/external flood. No violation of NRC requirements occurred.

Inspection Report# : [2005005\(pdf\)](#)**G****Significance:** Feb 18, 2005

Identified By: NRC

Item Type: FIN Finding

FAILURE TO QUARANTINE EQUIPMENT AS REQUIRED BY PROCEDURES

A finding of very low significance was identified by the inspectors. The finding involved the licensee's failure to quarantine equipment after both reactor recirculation pumps experienced an unplanned downshift from fast to slow speed on December 23, 2004. The inspectors determined that the failure to quarantine equipment impaired the licensee's ability to identify the associated failure mechanism for the simultaneous downshifting of both reactor recirculation pumps. The primary cause of this finding was related to the cross-cutting area of Human Performance.

The finding was more than minor because the failure to quarantine equipment impaired the licensee's ability to identify the associated failure mechanism, and as a result, a plant transient was initiated on January 6, 2005, that caused an actual upset in plant stability, which directly affected the objective for the Initiating Events Cornerstone. Additionally, the reactor recirculation pump downshifts affected the equipment performance attributes of availability and reliability of the Initiating Events Cornerstone of Reactor Safety. The issue was of very low safety

significance because the finding did not result in exceeding the Technical Specification limit for identified reactor coolant system leakage and did not affect other mitigation systems; the finding did not contribute to both the likelihood of a reactor trip AND the likelihood that mitigation equipment or functions will not be available; and the finding did not increase the likelihood of a fire or internal/external flood. No violation of NRC requirements occurred.

Inspection Report# : [2005005\(pdf\)](#)

G

Significance: Feb 18, 2005

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

FAILURE TO INCORPORATE INDUSTRY OPERATING EXPERIENCE INTO PREVENTATIVE MAINTENANCE ACTIVITIES

A self-revealed finding of very low significance and a Non-Cited Violation of 10 CFR 50.65(a)(3) was identified. The finding involved the transient initiated as a result of a trip of "A" reactor recirculation pump low frequency motor generator and subsequent manual scram of the reactor. The Non-Cited Violation was associated with a failure to incorporate industry operating experience into preventive maintenance activities that would have prevented the failure of the "A" reactor recirculation pump. The primary cause of this violation was related to the cross-cutting area of Problem Identification and Resolution.

The finding was more than minor because the event caused an actual upset in plant stability and operation resulting in a plant transient, thereby directly affecting the objective for the Initiating Events Cornerstone. Additionally, the trip affected the equipment performance attributes of availability and reliability of the Initiating Events Cornerstone of Reactor Safety. The issue was of very low safety significance because the finding did not result in exceeding the Technical Specification limit for identified reactor coolant system leakage and did not affect other mitigation systems; the finding did not contribute to both the likelihood of a reactor trip AND the likelihood that mitigation equipment or functions will not be available; and the finding did not increase the likelihood of a fire or internal/external flood. Proposed and completed corrective actions included a formal root cause analysis, replacement of the defective voltage regulator, and establishment of a process to review post-transient performance data.

Inspection Report# : [2005005\(pdf\)](#)

Mitigating Systems

G

Significance: Mar 31, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW PROCEDURES FOR SCAFFOLD CONSTRUCTION IN SAFETY-RELATED AREAS

Inspectors identified a finding of very low safety significance and a violation of Technical Specification 5.4 when, during a walkdown of the high pressure core spray (HPCS) system, inspectors observed that the scaffolding constructed in the Division 3 emergency diesel generator (EDG) and HPCS pump rooms failed to meet the seismic clearance requirements specified in licensee procedure GCI-0016, "Scaffolding Erection, Modification or Dismantling Guidelines," Revision 4. The inspectors observed that the procedural deviations were not evaluated by engineering to ensure that the safety-related HPCS system would not be adversely impacted during a seismic event. Additionally, inspectors noted that the scaffolding constructions in the Division 3 EDG and HPCS pump rooms were not tracked as a temporary alteration as required by Perry Administrative Procedure (PAP)-0204, "Housekeeping/Cleanliness Control Program," Revision 14. The primary cause of this finding was the failure to implement appropriate procedures for construction of scaffolding that could affect safety-related equipment. The primary cause was related to the cross-cutting area of Human Performance in that the licensee failed to follow both procedures, GCI-0016 and PAP-0204.

The finding was more than minor because, if left uncorrected, the failure to follow procedures for scaffold construction in safety-related areas would become a more significant safety concern. Additionally, the failure to follow procedures designed to protect safety-related equipment from scaffold construction adversely affects the mitigating system cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The finding was determined to be of very low safety significance because, assuming HPCS was rendered inoperable following a seismic event due to non-seismic scaffolding, Significance Determination Process Phase 3 analysis determined the issue to not be greater than Green due to the low frequency of seismic events and the operability of other mitigating systems. The issue was a Non-Cited Violation of Technical Specification 5.4 which required the implementation of written procedures for performing maintenance on safety-related systems.

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

G

Significance: Mar 31, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO IMPLEMENT TS 5.4 REQUIRED PLANT FIRE PROCEDURES FOR DISCOVERY OF A FIRE

A finding of very low safety significance and a violation of Technical Specification 5.4 was self-revealed on January 13, 2005, when a chemistry technician failed to promptly notify the control room upon discovery of an unexpected fire. The fire was located in the chemistry oil

lab room of the control complex building within the protected area. The primary cause of this finding was related to the cross-cutting area of Human Performance. The chemistry technician failed to recognize that, in accordance with the Fire Protection Program, prompt notification to the control room is required when a fire is discovered.

The finding was more than minor because the failure to promptly report a fire prevents plant operators in the control room and other plant personnel from taking prompt and appropriate action pursuant to Fire Protection Program procedures. The resulting failure to implement the Fire Protection Program procedure on discovery of a fire degrades the facility's ability to meet the cornerstone objective of mitigating systems. Although not suitable for Significance Determination Process review, the finding was determined, by regional management, to be of very low safety significance in that (1) the finding did not affect the operability of the automatic fire detection and suppression systems in the affected fire zone, (2) the fire zone was outside of the vital area of the plant, and (3) the fire zone did not contain safe shutdown systems. Additionally, there was no identified damage to safety-related equipment due to the fire, and the fire was observed to be confined to an oven. Inspection Report# : [2005002\(pdf\)](#)

Significance:  Mar 31, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE RESTORATION OF IRM 'A'

A finding of very low safety significance and a violation of Technical Specification 5.4 was self-revealed during a reactor start-up on January 30, 2005, when the intermediate-range monitor (IRM) 'A' instrument was discovered to be inoperable after reactor criticality had been achieved. Prior to start-up, it had been established that IRM 'C' was inoperable. The inoperability of both IRM 'A' and IRM 'C' resulted in operability of less than the minimum required number of IRM channels per trip system of the reactor protection system (RPS) for Mode 2 operation. The licensee entered the appropriate Technical Specification action statement and, as required by licensee procedure, commenced a normal reactor shutdown. The primary cause of this finding was the failure to implement appropriate procedures during maintenance activities on IRM 'A'. A cable connection between the intermediate-range detector and the intermediate-range instrument was left loosely attached at the conclusion of the maintenance activity. This rendered the IRM 'A' instrument inoperable. Additionally, the maintenance procedure lacked appropriate acceptance criteria for determining that the maintenance had been satisfactorily accomplished. The primary cause of this finding was related to the cross-cutting area of Human Performance in that technicians failed to adequately attach and verify connection of the cable in the IRM 'A' system.

The finding was more than minor because it resulted in a reactor start-up and operation in Mode 2 with less than the required number of IRM trip function channels per RPS trip system. This degraded the plant's ability to meet the mitigating system cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Additionally, the finding resulted in an unplanned reactor shutdown. The finding was of very low safety significance because RPS trip capability was maintained due to designed redundancy in the system logic. The issue was a Non-Cited Violation of Technical Specification 5.4 which required the implementation of written procedures covering the intermediate-range nuclear instrument system.

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

Significance:  Mar 31, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO TAKE PROMPT CORRECTIVE ACTION AFTER IDENTIFYING THAT ERRONEOUS OR UNEXPLAINABLE DATA WAS RECORDED DURING TS REQUIRED TESTING

Inspectors identified a finding of very low safety significance and a violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Actions" on January 18, 2005. Specifically, the licensee failed to take prompt corrective action after identifying on January 17, 2005, that erroneous or unexplainable data was recorded during Technical Specification required emergency closed cooling water (ECCW) 'B' pump and valve operability testing. The primary cause of this finding was related to the cross-cutting area of Problem Identification and Resolution. After the inspectors brought the issue to the attention of control room personnel, the licensee initiated action to re-code the surveillance as "no credit" based on suspect data. Action was also initiated to reschedule the surveillance prior to its overdue date of February 4, 2005. The licensee's subsequent performance of the surveillance test was not properly performed which resulted in a missed Technical Specification 5.5.6 surveillance and an additional 10 CFR 50, Appendix B, Criterion XVI violation was identified by the inspectors. The test was performed correctly, with acceptable results, on February 5, 2005, to satisfy Technical Specification requirements.

The inspectors concluded that the failure of a system engineer, an engineering supervisor, and a senior reactor operator to take action to correct an identified condition adverse to quality was more than minor in that it could reasonably be viewed as a precursor to a significant event and, with respect to the performance of Technical Specification required surveillance testing, was associated with the reactor safety cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring mitigating system availability, reliability, and capability. The inspectors determined that the finding did not involve the loss of safety function in that ECCW 'B' subsequently satisfactorily completed the required quarterly pump and valve operability test. The inspectors therefore concluded that the finding was of very low safety significance. Inspection Report# : [2005002\(pdf\)](#)

Significance:  Mar 31, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO IDENTIFY AND CORRECT INADEQUATE CREW PERFORMANCE DURING ECCW TESTING

Inspectors identified a finding of very low safety significance and a violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Actions" on February 7, 2005. Specifically, the licensee failed to identify and correct a condition adverse to quality following the inspectors' identification, on January 18, 2005, of an improperly performed Technical Specification required surveillance. As a result of the licensee's failure to properly evaluate the January 5, 2005, performance deficiency and take appropriate corrective action, the surveillance test was again performed improperly on February 1, 2005. In addition to causing unnecessary safety system unavailability during repetitive performances of the procedure, the inadequate performance of the test on February 1, 2005, resulted in a missed Technical Specification 5.5.6 surveillance. The primary cause of this finding was related to the cross-cutting area of Problem Identification and Resolution. The test was performed correctly, with acceptable results, on February 5, 2005, to satisfy Technical Specification requirements. An apparent cause investigation was initiated to review surveillance performance issues.

The inspectors concluded that the failure of the licensee to adequately address performance issues with respect to a Technical Specification required surveillance procedure was more than minor in that it could reasonably be viewed as a precursor to a significant event and, in this case, resulted in a second improper performance and a missed Technical Specification surveillance. Additionally, the issue was associated with the reactor safety cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring mitigating system availability, reliability, and capability. The inspectors determined that the finding did not involve the loss of safety function in that emergency closed cooling water 'B' subsequently satisfactorily completed the required quarterly pump and valve operability test. The inspectors therefore concluded that the finding was of very low safety significance.

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

Significance:  Mar 31, 2005

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

INADVERTENT ESTABLISHMENT OF FLOW PATH FROM SUPPRESSION POOL TO AUXILIARY BUILDING FLOOR DRAINS DURING RHR LLRT

A finding of very low safety significance and a violation of Technical Specification 5.4 was self-revealed on February 27, 2005. Specifically, while performing a local leak rate test (LLRT) for the residual heat removal (RHR) 'A' suppression pool suction valve, 1E12-F004A, the valve was opened with the RHR 'A' system drained and vented. As a result, the suppression pool began draining through an open 8 inch drain valve and then overflowed to the auxiliary building floor. The draining was terminated within minutes when the valve was closed per the next step in the LLRT procedure.

The inspectors determined that inadvertent draining of the suppression pool to the auxiliary building floor was a performance deficiency warranting a significance evaluation. The inspectors determined that the issue was more than minor because it could reasonably be viewed as a precursor to a significant event. The inspectors determined that the finding: (1) did not increase the likelihood of a loss of reactor coolant system (RCS) inventory; (2) did not degrade the licensee's ability to terminate a leak path or add RCS inventory when needed; and (3) did not degrade the licensee's ability to recover decay heat removal if lost. The finding affected the cross-cutting issue of Human Performance because a personnel error resulted in a loss of suppression pool volume.

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

Significance:  Mar 31, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE IMPLEMENTATION OF TS 3.4.10 FOR ALTERNATE HEAT DECAY REMOVAL

Inspectors identified a finding of very low safety significance for the licensee's failure to adequately implement Technical Specification 3.4.10 requirements for alternate decay heat removal methods as amended to the license during the Technical Specification improvement program to adopt Technical Specifications based on NUREG-1434 (Improved Standard Technical Specifications). The finding was considered to be a Non-Cited Violation of 10 CFR 50.36(c)(2)(I). The licensee has initiated action to install an alternate decay heat removal system.

The inspectors determined that the licensee's failure to adequately implement Technical Specification 3.4.10 was more than minor because it was directly associated with the mitigating system cornerstone objective of availability of a mitigating system. Although not suited for Significance Determination Process review, the finding was determined to be of very low safety significance in that (1) the Mode 4 conditions were maintained by the inoperable, but running, RHR 'B' system and (2) the licensee maintained vacuum within the condenser to provide a method of decay heat removal had coolant temperature rose sufficiently to produce steam.

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

Significance:  Feb 18, 2005

Identified By: NRC

Item Type: FIN Finding

FAILURE TO QUARANTINE EQUIPMENT AND PERFORM TROUBLESHOOTING WITHOUT FULL BENEFIT OF A TROUBLESHOOTING PLAN

A finding of very low significance was identified by the inspectors. The inspectors concluded that the licensee failed to quarantine equipment. The inspectors determined the failure to quarantine the motor feed pump (MFP) breaker cubicle impaired the licensee's ability to identify the

associated failure mechanism for the January 6, 2005 failure of the MFP breaker to close. The primary cause of this finding was related to the cross-cutting area of Human Performance.

The finding was more than minor because the failure to quarantine the MFP breaker after the January 6, 2005 failure, if left uncorrected, could become a more significant safety concern. The finding affected the short term heat removal element of the Mitigating System Cornerstone and that the issue was not a design deficiency that resulted in a loss of function. The finding was of very low safety significance because the system was not a safety system and that the system was not a TS system. In addition, the finding did not represent an actual loss of safety function or equipment designed as risk-significant per 10 CFR 50.65 for greater than 24 hours, the finding was not risk significant due to a seismic, a flooding, or a severe weather initiating event, therefore the finding screened as Green. No violation of NRC requirements occurred.
Inspection Report# : [2005005\(pdf\)](#)

G**Significance:** Feb 18, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROVIDE GUIDANCE TO REFURBISH BREAKERS WITHIN VENDOR-SPECIFIED TIME FRAMES OR TO PROVIDE REASONABLE ALTERNATIVE PREVENTATIVE MAINTENANCE PRACTICES

The inspectors identified a finding having very low safety significance and an associated Non-Cited Violation of Technical Specifications for inadequate safety-related breaker maintenance procedures. The inspectors determined that maintenance procedures for overhauling safety-related breakers were inappropriate, because they did not contain guidance to refurbish breakers within the vendor's specified time frames or provide reasonable alternative preventative maintenance practices to ensure that safety-related breakers remained operable.

The finding was more than minor because the procedure quality attribute of the Mitigating Systems Cornerstone was affected when the licensee failed to evaluate industry and vendor recommended changes and incorporate the changes into their breaker maintenance procedures. The issue was of very low safety significance because the deficiency did not result in any loss of function; the finding was not risk significant due to a seismic, a flooding, or a severe weather initiating event; and because other plant-specific analyses that identify core damage scenarios of concern were not impacted. The finding was a Non-Cited Violation of Technical Specification Section 5.4, and Regulatory Guide 1.33, for inadequate maintenance procedures. The issue was entered into the licensee's corrective action program and is being evaluated under multiple condition reports (CR 05-0187, CR 05-00230, CR 05-00253, CR 05-00274, CR 05-00283, CR 05-00295, CR 05-00359, CR 05-00459).
Inspection Report# : [2005005\(pdf\)](#)

G**Significance:** Feb 18, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO INCORPORATE THE VENDOR'S GAP REQUIREMENTS INTO OPERATIONS MANUAL INSTRUCTIONS

The inspectors identified a finding having very low safety significance and associated Non-Cited Violation of Technical Specifications for inadequate procedures associated with safety-related breaker maintenance procedures. The inspectors determined that maintenance procedures for overhauling safety-related breakers were inappropriate, because they did not contain guidance to measure and monitor critical measurements identified by the vendor.

The finding was more than minor because the procedure quality attribute of the Mitigating Systems Cornerstone was affected when the licensee failed to evaluate industry and vendor recommended changes and incorporate the changes into their breaker maintenance procedures. The issue was of very low safety significance because the deficiency did not result in any loss of function; the finding was not risk significant due to a seismic, a flooding, or a severe weather initiating event; and because other plant-specific analyses that identify core damage scenarios of concern were not impacted. The finding was a Non-Cited Violation of Technical Specifications Section 5.4, and Regulatory Guide 1.33, for inadequate maintenance procedures. The finding was entered into the licensee's corrective action program and is being evaluated under condition reports CR 05-00364 and CR 05-00095.
Inspection Report# : [2005005\(pdf\)](#)

G**Significance:** Dec 31, 2004

Identified By: NRC

Item Type: FIN Finding

FAILURE TO PROMPTLY IDENTIFY A DEGRADED FIRE BARRIER

The inspectors identified a finding of very low safety significance for the failure of the licensee to promptly identify a degraded fire barrier between the Division 1 emergency diesel generator (EDG) room and the EDG building corridor. The finding was not considered a violation of regulatory requirements. The inspectors identified a fire door that was not latched and therefore was not fully capable of providing its required function of preventing fire spread and maintaining CO2 suppression within the confines of the Division 1 EDG room. Once identified, the licensee immediately established a watch on the door and completed repairs later that day. The primary cause of this finding was related to the cross-cutting area of Problem Identification and Resolution.

This finding was more than minor because it was associated with fire protection equipment performance and degraded the ability to meet the cornerstone objective. This issue had very low safety significance because risk-significant equipment in the exposed area had at least 20 minutes of protection due to passive barriers.

Inspection Report# : [2004015\(pdf\)](#)

G**Significance:** Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

REINSTALLATION OF NONCONFORMING RELIEF VALVE

A finding of very low safety significance was identified by the inspectors on December 3 for a violation of 10 CFR 50, Appendix B, Criterion XV, "Nonconforming Materials, Parts, or Components." Specifically, on October 25, while attempting to locate a relief valve which had failed as-found set pressure testing, the licensee determined that a nonconforming relief valve had been reinstalled in the Division 2 emergency diesel generator lube oil system during the divisional outage earlier that month. Once the improper installation was identified, the licensee initiated both an operability determination and a work package to replace the relief valve. The valve was replaced on October 26. While reviewing the licensee's apparent cause of the reinstallation, the inspectors identified that the licensee failed to identify or address noncompliance with quality control requirements as specified in Nuclear Repair Manual NRM, Section 15, "Nonconforming Material or Items," Rev. 4. The primary cause of this finding was related to the cross-cutting area of Human Performance.

This finding was more than minor because it could reasonably be a precursor to a more significant event. This issue had very low safety significance because it did not involve a loss of safety function.

Inspection Report# : [2004015\(pdf\)](#)**Significance:** N/A Sep 30, 2004

Identified By: NRC

Item Type: FIN Finding

REPETITIVE FAILURE TO IMPLEMENT ON-LINE RISK MANAGEMENT STRATEGY

The inspectors identified a finding of very low safety significance for the licensee's repetitive failure to identify and correct issues associated with the implementation of on-line risk management. On June 29, 2004, the inspectors identified that the licensee failed to establish the appropriate protected train postings during a planned Division 3 emergency diesel generator unavailability. This occurred on the licensee's first opportunity to implement a new internal procedure (revision dated June 22, 2004) for posting protected equipment, following the November 3, 2003, failure to post the motor feed pump as protected during a Division 1 outage. The licensee took immediate corrective action to correct the identified posting deficiency and commenced a complete walkdown of all required postings. The primary cause of this finding was related to the cross-cutting area of Problem Identification and Resolution.

This finding was greater than minor because if left uncorrected it could evolve into a more significant safety concern. This was previously demonstrated when the motor feed pump was left unprotected in November 2003. Although not suited for Significance Determination Process review, the finding was determined to be of very low safety significance, in that in this instance, the repetitive failure to implement on-line risk management did not result in a substantive increase in on-line risk due to the short duration of the elevated risk configuration (less than three hours actual unavailability); no work was scheduled on the improperly posted equipment; no personnel were observed in the area; and it is not a likely "transit" area for personnel. The finding was not considered a violation of regulatory requirements because the licensee programs and procedures for the management of on-line risk are not 10 CFR Part 50, Appendix B programs or procedures.

Inspection Report# : [2004013\(pdf\)](#)**G****Significance:** Sep 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE INSTRUMENTATION CALIBRATION

The inspectors identified a finding of very low safety significance for a violation of 10 CFR Part 50, Appendix B, Criterion XII. On July 7, 2004, the licensee failed to ensure that instrumentation used to measure diesel room temperature was calibrated with sufficient accuracy to ensure diesel generator starting air operability. After the inspectors discussed instrument accuracy with the licensee, the licensee implemented a reduced control temperature to account for instrument inaccuracy. The finding also affected the cross-cutting issue of Human Performance because the licensee's staff failed to recognize that instrument accuracy must be considered when establishing operating limits.

The inspectors determined that the licensee's failure to establish limits sufficient to ensure that limits in the operability evaluation were not exceeded was more than minor because it could reasonably be a precursor to a more significant event. The inspectors determined the finding did not involve the loss of safety function; and therefore, concluded that the finding was of very low safety significance.

Inspection Report# : [2004013\(pdf\)](#)**G****Significance:** Sep 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO IDENTIFY MOST SEVERE LIMITING FUEL OIL RETURN LINE FRETTING

The inspectors identified a finding of very low safety significance for a violation of 10 CFR Part 50, Appendix B, Criterion XVI, for failure to identify a condition adverse to quality. Specifically, the licensee identified fretting on emergency diesel generator (EDG) fuel oil return lines but did not measure the depth of the worst fret and erroneously declared operability based on a less severe fret. After the issue was brought to their attention on August 12, 2004, the licensee performed vibration measurements and performed calculations on the pipe to determine available margin. This analysis concluded that minimal margin existed and that the EDG could no longer be considered operable. The licensee declared the EDG inoperable, replaced the fretted section of pipe, and performed a successful post-maintenance test of the EDG. The primary

cause of this finding was related to the cross-cutting area of Problem Identification and Resolution.

This finding was more than minor because it directly affected the mitigating system cornerstone objective of equipment reliability. The inspectors concluded that without repair, the pipe fret would have progressed to the point of fuel leakage and the diesel would not have been able to fulfill its mission. The inspectors concluded that there was no loss of safety function; therefore, the finding was of very low safety significance.

Inspection Report# : [2004013\(pdf\)](#)

Significance:  Sep 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO IDENTIFY MISALIGNED AUXILIARY SWITCH

The inspectors identified a finding of very low safety significance for a violation of 10 CFR Part 50, Appendix B, Criterion XVI, for failure to identify a condition adverse to quality. Specifically, non-licensed operators failed to identify that the auxiliary switch in the control complex chilled water system 'A' chiller breaker cubicle was misaligned. After the condition was brought to the attention of the licensee on August 13, 2004, immediate corrective action was taken to align the switch later that same day. The primary cause of this finding was related to the cross-cutting area of Problem Identification and Resolution.

The finding was more than minor because it could reasonably be a precursor to a more significant event. In fact, the issue was similar to the failure to properly align the high pressure core spray system pump breaker cell switch which resulted in the failure of the pump to start in October 2002. The inspectors determined the finding did not involve the loss of safety function; and therefore, concluded that the finding was of very low safety significance.

Inspection Report# : [2004013\(pdf\)](#)

Significance:  Sep 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO SPECIFY ADEQUATE TESTING PROTOCOL AND ACCEPTANCE CRITERIA

The inspectors identified a finding of very low safety significance for a violation of 10 CFR Part 50, Appendix B, Criterion XI. The inspectors determined that the combination of licensee testing protocol and established acceptance criteria was inadequate to demonstrate check valve position as required by Technical Specification 5.5.6 and American Society of Mechanical Engineers Code for reactor core isolation cooling condensate storage tank suction check valve 1E51-F011. Specifically, on July 12, 2004, the surveillance procedure failed to establish steady-state flow conditions at the outlet of the test piping prior to data collection necessary for the verification of check valve position. Additionally, operators used non-calibrated timing and liquid collection devices while obtaining data. The net effect of the procedural deficiencies was the collection of meaningless data. The licensee corrected the deficiency by reperforming the surveillance with appropriate controls and instrumentation prior to declaring the check valve operable and initiated corrective action to obtain and implement the use of accurate flow measuring devices during future performance of the surveillance. The primary cause of this finding was related to the cross-cutting area of Human Performance.

This finding was greater than minor because it was directly associated with the mitigating systems cornerstone objective of mitigating system availability and operability. The inspectors concluded that with the observed test methodology and acceptance criteria, an operator could credibly conclude the check valve was shut when in fact it was open. The finding was of very low safety significance because the operator performing the July 12, 2004 surveillance determined the valve to have failed the surveillance test despite inconclusive test data. As such, reactor core isolation cooling suction remained aligned to the suppression pool and system operability was maintained.

Inspection Report# : [2004013\(pdf\)](#)

Significance:  Jun 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO DISPOSITION IDENTIFIED IMPAIRED TORNADO BARRIERS

On April 1, 2004, a finding of very low safety significance was identified by the inspectors in that on three occasions in 2003 the licensee failed to treat identified impaired tornado barriers in accordance with established procedures. The primary cause of this finding was related to the cross-cutting area of Human Performance. The licensee's corrective actions included returning to compliance with their procedure either through repair of the door or performance of an engineering analysis of the door.

The issue was more than minor because it was associated with the Mitigating System cornerstone attribute of protection against external factors and affected the Mitigating System Cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee's failure to follow procedural guidance resulted in the existence of a degraded condition without compensatory action. The issue was of very low safety significance because, if the affected door's tornado wind function was assumed to be completely failed or unavailable, the loss of function by itself (1) would not cause a plant trip; (2) would not degrade two or more trains of a multi-train safety system or function; and (3) would not degrade one or more trains of a system that supports a safety system or function. The inspectors reached their conclusion based on the position of the impaired door relative to safety-related equipment. The issue was an NCV of Technical Specification 5.4 which required the implementation of procedures as recommended in

Regulatory Guide 1.33. Regulatory Guide 1.33 recommended the establishment of procedures for equipment control.
Inspection Report# : [2004007\(pdf\)](#)

G**Significance:** Jun 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

IMPROPERLY INSTALLED TEST EQUIPMENT DAMAGES VALVE IN COMBUSTIBLE GAS CONTROL SYSTEM

On March 30, 2004, a self-revealed finding of very low safety significance occurred when the licensee improperly installed test equipment which subsequently damaged a valve in the combustible gas control system. The finding also affected the cross-cutting area of Human Performance because the licensee's procedure, and worker attention to detail, were both less than adequate and contributed to damaging the valve. As corrective actions, the licensee replaced the damaged portions of the valve and performed training.

The issue was more than minor because the installation error resulted in over-stressing the valve operator and extending the time the plant was in a limiting condition for operation by four days. As such, the Mitigating System Cornerstone objective of system availability and operability was adversely affected. The finding was of very low safety significance due primarily to the short duration of extended unavailability. The issue was an NCV of Technical Specification 5.4 which required the implementation of procedures as recommended in Regulatory Guide 1.33. Regulatory Guide 1.33 recommended the establishment of procedures for performing maintenance that can affect the performance of safety-related equipment.

Inspection Report# : [2004007\(pdf\)](#)**G****Significance:** Jun 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

UNINTENTIONAL AIR-ROLL OF THE EMERGENCY DIESEL GENERATOR

On April 10, 2004, a self-revealed finding of very low safety significance occurred when the licensee unintentionally air-rolled the emergency diesel generator (EDG) following replacement of a timing relay. An investigation by the licensee revealed that the test method specified in the procedure actuated the air-start circuit but did not include steps to prevent air-roll of the EDG. This finding also affected the cross-cutting area of Human Performance because the licensee's development of the post-maintenance test failed to either inhibit air-roll of the EDG or verify the EDG could be safely air-rolled. Licensee corrective actions included conducting training for operations and planning personnel on appropriate controls during work activities.

The issue was more than minor because the finding could reasonably be viewed as a precursor to a more significant event because the air-roll was not anticipated by the licensee. The finding was of very low safety significance because no safety-related mitigation systems were affected by the issue. The issue was an NCV of Technical Specification 5.4 which required the implementation of procedures as recommended in Regulatory Guide 1.33. Regulatory Guide 1.33 recommended the establishment of procedures for performing maintenance that can affect the performance of safety-related equipment.

Inspection Report# : [2004007\(pdf\)](#)**G****Significance:** Jun 11, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW QUALITY CONTROL REQUIREMENTS OF ANSI N45.2.8 - 1975

A finding of very low significance was identified regarding the licensee's failure to establish quality control requirements described in American Nuclear Standards Institute (ANSI) N45.2.8 - 1975 for reassembling the ESW pump 'A' coupling in 1997. The primary cause of this finding was a general lack of knowledge of the quality control requirements.

This issue was more than minor because, if left uncorrected, it could lead to a more significant event. This finding was of very low safety significance because omitting the need for such inspections was a barrier to preventing the failure of the ESW pump coupling and not a direct cause of the failure. This finding was determined to be an NCV of 10 CFR 50, Appendix B, Criterion X. To address this issue, the licensee entered it into the corrective action program because the failure was programmatic in nature and not in need of an immediate corrective action.

Inspection Report# : [2004008\(pdf\)](#)**G****Significance:** Jun 11, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

MISSED PRIOR OPPORTUNITIES TO IDENTIFY MISSING VENT VALVE IN THE FEEDWATER LEAKAGE CONTROL SYSTEM DURING ROOT CAUSE EVALUATION FOR CR 03-04764

A finding of very low significance was identified in the root cause evaluation for CR 03-04764, "Post-Loss of Offsite Power (LOOP) LPCS/RHR 'A' Waterleg Pump Air Binding," regarding the licensee's failure to identify several missed opportunities that included the venting procedure biennial reviews between 1985 and 1995, a 1996 design review of the RHR system, and venting issues that occurred during the 2003

refueling outage. The primary cause of this finding was an inability to conduct a thorough root cause evaluation.

The issue was more than minor because, if left uncorrected, it could be a precursor to a significant event. This finding was of very low safety significance because the failing to identify these missed opportunities would not have directly prevented air binding of the LPCS/RHR waterleg pump. This finding was determined to be an NCV of 10 CFR 50, Appendix B, Criterion XVI. To address this issue, the licensee entered it into the corrective action program because the failure was programmatic in nature and not in need of an immediate corrective action.

Inspection Report# : [2004008\(pdf\)](#)

G

Significance: Jun 11, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

TRAINING EFFECTIVENESS NOT ADDRESSED IN ROOT CAUSE REPORT FOR CRS 02-03972, 03-05065 AND 03-04912

A finding of very low significance was identified regarding the licensee's failure to recognize whether training was effective for the following root cause evaluations addressed in: 1) CR 03-04912 for operators not properly restoring the Division 1 EDG to standby following the loss of offsite power event that occurred on August 14, 2003; 2) CR 02-03972 for correcting maintenance craft's inability to adjust breaker linkage rods for the HPCS breaker; and 3) CR 03-05065 when the ESW pump 'A' coupling design changed from a screwed to a keyed configuration in 1985. The primary cause of this finding was the failure to recognize that effective training could have prevented these events, since these events typically involved skill-of-the-craft activities.

This issue was more than minor because if left uncorrected, it could lead to a more significant event. This finding was of very low significance because failure to evaluate training effectiveness was not a direct cause to these three events. This finding was determined to be an NCV of 10 CFR 50, Appendix B, Criterion XVI. To address this issue, the licensee entered it into the corrective action program because the failure was programmatic in nature and not in need of an immediate corrective action.

Inspection Report# : [2004008\(pdf\)](#)

W

Significance: Dec 31, 2003

Identified By: NRC

Item Type: VIO Violation

INADEQUATE LPCS/RHR 'A' FILL AND VENT PROCEDURES RESULTS IN SYSTEM INOPERABILITY AFTER LOSS OF OFFSITE POWER

An apparent self-revealed violation of Technical Specification 5.4 occurred when the waterleg pump for low pressure core spray (LPCS) and residual heat removal (RHR) 'A' became air bound following a loss of offsite power. Subsequent investigation revealed that the procedures for venting these systems did not include the high point vent valve on the discharge of the pump, thus allowing gas to accumulate in a vertical section of system piping. When the waterleg pump lost power on August 14, 2003, the accumulated gas expanded and caused voiding of the pump. As a result, both LPCS and RHR 'A' were rendered inoperable.

The NRC assessed this finding through Phase 3 of the Significance Determination Process and made a preliminary determination that it is an issue with low to moderate safety significance.

After considering the information developed during the inspection, the NRC has concluded that the inspection finding is appropriately characterized as White (i.e., an issue with low to moderate increased importance to safety) and a final Significance Determination Process letter was issued on March 12, 2004, and will be inspected within the scope of a supplemental 95002 inspection in May 2004

Inspection Report# : [2004006\(pdf\)](#)

W

Significance: Sep 30, 2003

Identified By: NRC

Item Type: VIO Violation

IMPROPER MAINTENANCE CAUSES EMERGENCY SERVICE WATER PUMP FAILURE

A self-revealed apparent violation of Technical Specification (TS) 5.4 occurred when the Division 1 emergency service water (ESW) pump failed during routine pump operation. The licensee rebuilt the pump in 1997 and during this reassembly, failed to properly reassemble the pump shaft connections. The improper reassembly led to pump failure on September 1, 2003.

The NRC assessed this finding through Phase 3 of the Significance Determination Process and made a preliminary determination that it is an issue with low to moderate safety significance. On January 28, 2004, a final significance determination letter was issued which characterized this issue as white.

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

G**Significance:** Mar 31, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE SAFETY EVALUATION FOR THE NOBLECHEM™ PROCESS

The inspectors identified a Severity Level IV Non-Cited Violation associated with the failure to perform an adequate safety evaluation review as required by 10 CFR 50.59 for changes made to the facility as described in the Updated Final Safety Analysis Report. The licensee initiated a NobleChem™ process, which involved deposition of noble metals on primary plant components, but failed to provide a basis for the determination that this change was acceptable without a license amendment. Specifically, the safety evaluation failed to address the impact of the NobleChem™ process on the fuel peak cladding temperature in a post loss-of-coolant accident environment due to catalytic action involving two exothermic reactions.

Because the Significance Determination Process is not designed to assess the significance of violations that potentially impact or impede the regulatory process, this issue was dispositioned using the traditional enforcement process in accordance with Section IV of the NRC Enforcement Policy. However, the results of the violation, that is, the failure to fully evaluate the NobleChem™ process, were assessed using the Significance Determination Process.

The inspectors considered this issue of more than minor significance, because the finding could have become a more significant safety concern in that, the licensee failed to demonstrate through a documented analysis that the integrity of fuel cladding was not affected by the NobleChem™ process. Because a subsequent vendor analysis adequately demonstrated the integrity of fuel cladding, it was determined that the licensee's failure to provide an adequate basis for the safety evaluation 01-0007 was an issue of very low safety significance and the violation of 10 CFR 50.59 was classified as a Severity Level IV Non-Cited Violation, consistent with the NRC Enforcement Policy.

Inspection Report# : [2005002\(pdf\)](#)**G****Significance:** Mar 31, 2005

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

DROPPED JET PUMP PLUG

A finding of very low safety significance and a violation of Technical Specification 5.4 was self-revealed on February 28, 2005. Specifically, while removing a jet pump plug assembly from the reactor vessel, the plug broke loose from the handling pole and roped L-hook while being lifted over the refuel floor auxiliary platform. As a result, the plug dropped approximately 60 feet, primarily through water, and landed on top of several fuel bundles in the reactor core.

The inspectors determined that dropping a jet pump plug assembly, weighing approximately 25 pounds, onto the top of the reactor core was a performance deficiency warranting significance evaluation. The inspectors determined that the issue was more than minor because it could reasonably be viewed as a precursor to a significant event. Further, the finding was associated with the barrier integrity cornerstone attribute of human performance and affected the cornerstone objective of providing reasonable assurance that physical design barriers (fuel cladding) protect the public from radionuclide releases caused by accidents or events. Although not suitable for Significance Determination Process review, regional management determined that the finding was of very low safety significance because the dropped plug was subsequently determined to not have caused damage to the fuel. The finding affected the cross-cutting issue of Human Performance because a personnel error caused the plug to be dropped.

Inspection Report# : [2005002\(pdf\)](#)**G****Significance:** Mar 31, 2005

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

INADVERTENT CONTROL ROD WITHDRAWAL

A finding of very low safety significance and a violation of Technical Specification 5.4 was self-revealed on March 10, 2005. Specifically, while attempting to verify the position of control rod 18-55, a senior reactor operator (SRO) inadvertently withdrew control rod 58-35 from position 00 to position 02. Upon recognition of the condition, the SRO took the Technical Specification required actions and immediately reinserted the control rod.

The inspectors determined that a personnel error that resulted in the inadvertent withdrawal of a control rod was a performance deficiency warranting significance evaluation. The inspectors determined that the issue was more than minor because it could reasonably be viewed as a precursor to a significant event. Further, the finding was associated with the barrier integrity cornerstone attribute of human performance and affected the cornerstone objective of providing reasonable assurance that physical design barriers (fuel cladding) protect the public from radionuclide releases caused by accidents or events. Although not suitable for Significance Determination Process review, regional management determined that the finding was of very low safety significance because the rod movement had minimal impact of reactivity as evidenced by the lack of response by source range instrumentation and subsequent licensee shutdown margin assessment. Further, the error was immediately recognized and the control rod was inserted to position 00 in less than 15 seconds. Additionally, the SRO's use of the withdraw pushbutton self-limited the movement to one notch. The finding affected the cross-cutting issue of Human Performance because a personnel error resulted in an inadvertent step withdrawal of a control rod.

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

G**Significance:** Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

IMPROPERLY INSTALLED SCAFFOLDING

A finding of very low safety significance was self-revealed on October 25, 2004, for a violation of Technical Specification 5.4, "Procedures." On October 25, after operations initiated the clearance (tagout) for the maintenance activities, maintenance personnel noticed that the linear converter shaft for the damper was pressing down into the scaffold that was built directly underneath the component. On October 18 the licensee installed a scaffold underneath the annulus exhaust gas treatment system (AEGTS) exhaust damper 'B' which interfered with the movement of the component's linear converter shaft and prohibited the full opening of the damper. The AEGTS 'B' train was thus rendered inoperable due to the interference of the scaffold onto the damper. Once identified, the licensee declared the system inoperable, took prompt action to reposition the scaffold, and performed testing of the damper to assess potential damage. The primary cause of this finding was related to the cross-cutting area of Human Performance.

This finding was more than minor because it was associated with the reactor safety cornerstone attribute of barrier performance and affected the cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. The finding was of very low safety significance because, per Inspection Manual Chapter 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," the finding only represented a degradation of the radiological barrier function of the AEGTS.

Inspection Report# : [2004015\(pdf\)](#)**G****Significance:** Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

IMPROPER USE OF FIX-IT-NOW PROCESS TO ADJUST VALVE PACKING

A finding of very low safety significance was self-revealed on November 17 for a violation of Technical Specification 5.4 "Procedures." Specifically, contrary to the requirements of NOP-WM-9001 "FIN/Toolpouch Maintenance Process" the Fix-It-Now process was used to adjust the packing on the demineralized water system containment isolation valve P22-F0010. As a consequence, the licensee used an incorrect procedure to adjust the packing, failed to perform post-maintenance testing on the valve and failed to stroke the valve to consolidate the packing. Once identified, the licensee took prompt action to perform valve maintenance and subsequent testing for satisfactory valve performance. The primary cause was related to the cross-cutting area of Human Performance.

The finding was more than minor because it could reasonably be a precursor to a more significant event. Specifically, key steps to ensure proper valve operation were omitted from the work process. Using Inspection Manual Chapter 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," the inspectors reviewed the finding against the Phase I Screening Worksheet Containment Barriers Cornerstone. The inspectors determined the finding did not involve an actual open pathway in the physical integrity of the reactor containment and therefore concluded that the finding was of very low safety significance.

Inspection Report# : [2004015\(pdf\)](#)

Emergency Preparedness

W**Significance:** Nov 19, 2004

Identified By: NRC

Item Type: VIO Violation

Failure to Perform Emergency Dose Assessment During an Alert Within 15 minutes Required by EAL HA1

The inspectors identified an apparent violation having preliminarily low-to-moderate safety significance when the licensee failed to follow the requirements of the Perry Emergency Plan during an Alert level event declared on July 20, 2004. During this event, the licensee staff failed to perform a Computer Aided Dose Assessment Program (CADAP) run within 15 minutes of the Alert declaration as required by the licensee's Emergency Plan.

The finding was determined to be greater than minor because it affected the Emergency Preparedness Cornerstone objective of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. Specifically, the issue was more than minor because it represented a failure to implement a regulatory requirement during a real event which could have prevented the correct emergency classification. The finding was preliminarily determined to be of low to moderate safety significance because the licensee failed to implement a risk significant planning standard (10 CFR 50.47(b)(4)) during an actual Alert emergency.

After considering the information developed during the inspection and the additional information provided in your January 26, 2005, letter, the NRC has concluded that the inspection finding is appropriately characterized as White (i.e., an issue with low to moderate increased importance to safety, which may require additional NRC inspections).

Inspection Report# : [2004016\(pdf\)](#)Inspection Report# : [2005007\(pdf\)](#)

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

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

Miscellaneous

Last modified : June 17, 2005