

South Texas 2

4Q/2014 Plant Inspection Findings

Initiating Events

Significance: G Apr 04, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Establish Adequate Screening Criteria in the Boric Acid Corrosion Control Program

The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” for an inadequate procedure associated with the boric acid corrosion control program (BACCP). Specifically, Procedure OPGP03-ZE-0133, “Boric Acid Corrosion Control Program,” Revision 7, failed to provide adequate screening criteria for boric acid leaks. As a result, the inspectors identified multiple instances where the licensee inadequately screened boric acid leaks by failing to take into account all the characteristics of the leak commensurate to the affected component. The licensee entered the finding into the corrective action program as Condition Report 14-5393.

The inspectors determined that the failure to establish adequate screening criteria for boric acid leaks in Procedure OPGP03-ZE-0133 was a performance deficiency. The finding is more than minor because it is associated with the procedure quality attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Using Inspection Manual Chapter 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” Exhibit 1, the finding was determined to be of very low safety significance (Green) because the assessment of degradation did not result in exceeding the RCS leak rate for a small LOCA and did not affect other systems used to mitigate a LOCA resulting in a total loss of their function. The inspectors determined the finding has a cross-cutting aspect in the area of human performance associated with conservative bias because the licensee failed to use decision-making practices that emphasize prudent choices over those that are simply allowable [H.14].

Inspection Report# : [2014002](#) (*pdf*)

Significance: G Mar 28, 2014

Identified By: NRC

Item Type: VIO Violation

Failure to Accurately Document Completion of a Maintenance Activity

The inspectors identified a violation of 10 CFR 50.9; 10 CFR 50, Appendix B, Criterion XVII; and Technical Specification 6.8.1.a, for failure to accurately document completion of a maintenance activity. Specifically, on November 7, 2011, a maintenance supervisor documented that a work order step to hot torque the Unit 2 pressurizer spray valve hold down bolts had been performed, when this activity was never completed. The NRC’s investigation determined that this falsification was deliberate violation that impacted the NRC’s ability to perform its regulatory function, so this violation is being cited in accordance with the NRC Enforcement Policy (EA-13-213). This issue was entered into the licensee’s corrective action program under Condition Report 14-4633. The individual who falsified the document was subject to administrative action in accordance with the licensee’s program, and licensee management reinforced the need to ensure accurate quality records with workers.

The failure to accurately document completion of a maintenance activity was a performance deficiency. The

performance deficiency was more than minor, therefore, a finding, because it affected the initiating events cornerstone, and adversely affected the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Using the Inspection Manual Chapter 0609, Appendix A, Exhibit 1, Section A, “LOCA Initiators,” the inspectors determined that the finding was of very low safety significance (Green) because the performance deficiency did not result in an actual degradation of the reactor coolant pressure boundary. In addition, this finding was evaluated under traditional enforcement due to the conclusion that it was a deliberate violation that impacted the NRC’s ability to perform its regulatory function, and was determined to be a Severity Level IV violation. The finding was not assigned a cross-cutting aspect because it was not representative of current licensee performance in that the violation occurred more than 2 years ago.

Inspection Report# : [2014007](#) (*pdf*)

Significance:  Feb 06, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Develop Adequate Procedures for Loss of All Seal Cooling to a Reactor Coolant Pump

The team identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” which states, in part, “Instructions, procedures, or drawings shall include appropriate qualitative and quantitative acceptance criteria for determining that important activities have been satisfactorily accomplished.” Specifically, prior to January 29, 2014, the licensee failed to include appropriate qualitative and quantitative criteria in emergency operating procedures, off-normal operating procedures, and annunciator response procedures that are used during a loss of all seal cooling to a reactor coolant pump to prevent increased risk of a reactor coolant pump seal loss of coolant accident. In response to this issue, the licensee implemented changes to the affected procedures and communicated the changes to the operating staff. This finding was entered into the licensee’s corrective action program as Condition Report 14-1635.

The team determined that the failure to include appropriate qualitative and quantitative criteria in emergency operating procedures, off-normal operating procedures, and annunciator response procedures for a loss of all seal cooling to a reactor cooling pump was a performance deficiency. This finding was more than minor because it adversely affected the Initiating Events Cornerstone attribute of Procedure Quality and affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, operating procedures did not contain appropriate attributes to ensure timely action to prevent an increased likelihood of a reactor coolant pump seal loss of coolant accident. In accordance with Inspection Manual Chapter 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” dated June 19, 2012, Exhibit 1, “Initiating Events Screening Questions,” the team determined a detailed risk evaluation was necessary because, after a reasonable assessment of degradation, the finding could result in exceeding the reactor coolant system leak rate for a small loss of coolant accident. Therefore, the senior reactor analyst performed a bounding detailed risk evaluation. The analyst determined that the change to the core damage frequency would be less than 1E-7 per year (Green). This finding had a cross-cutting aspect in the area of human performance, training component because the licensee did not provide training and ensure knowledge transfer to maintain a knowledgeable, technically competent workforce and instill nuclear safety values. [H.9]

Inspection Report# : [2013007](#) (*pdf*)

Mitigating Systems

Significance:  Sep 25, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Loop Flow Test

The team identified a non-cited violation of Technical Specification 6.8.1.d for the failure to implement and maintain written procedures for fire protection program implementation. Specifically, the licensee failed to have procedures for and to flow test the portions of the underground piping that supplied water to the diesel generator buildings since the initial startup test. The licensee initiated actions to perform the flow testing within two months and entered the deficiency into their corrective action program as Condition Report 14-17098.

The failure to conduct flow testing of the entire underground fire protection piping loop was a performance deficiency. This performance deficiency was more than minor because it was associated with the protection against external factors attribute (fire) and adversely affected the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure to performance test the underground fire protection piping loops supplying the emergency diesel generator buildings for both units did not demonstrate the continued capability to deliver adequate flow and pressure to the fire suppression systems supplying those buildings.

The team evaluated the finding using Inspection Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," because it affected fire protection defense-in-depth strategies involving fire water supply. Using Appendix F, the team determined that the finding screened to very low safety significance. Specifically, the finding did not prevent the reactor from achieving safe shutdown since only one safe shutdown train would be affected at a time. Since these underground fire protection piping loops had not been flow tested since initial installation and nothing caused the licensee to reevaluate the test, the team determined that this failure did not reflect current performance.

Inspection Report# : [2014008](#) (*pdf*)

Significance:  Feb 06, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Properly Evaluate Safety-Related Equipment Electrical Load Requirements when Verifying the Adequacy of Voltage from the Nuclear Steam Supply System Inverter/Rectifier

The team identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," which states, in part, "Measures shall be established to assure that applicable regulatory requirements and the design basis, for those structures, systems, and components to which this appendix applies are correctly translated into specifications, drawings, procedures, and instructions." Specifically, prior to February 11, 2014, the licensee failed to adequately verify by analysis that safety-related nuclear steam supply system instrumentation loads would be capable of operating at the minimum inverter output voltage, when the inverter is fed from the station battery, and when considering the actual voltage drop to the load. In response to this issue, the licensee performed a preliminary voltage drop analysis that supported an immediate operability determination. This finding was entered into the licensee's orrective action program as Condition Report 14-2017.

The team determined that failure to maintain design control of the nuclear steam supply system instrumentation power supply load was a performance deficiency. This finding was more than minor because if left uncorrected, it would lead to a more significant safety concern. Specifically, the incorrect analysis resulted in a reasonable question of operability of nuclear steam supply system instrumentation to operate at the minimum inverter output voltage, when the inverter is fed from the station battery, and when the actual voltage drop to the load for that condition was considered. In accordance with Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," dated June 19, 2012, Exhibit 2, "Mitigating Systems Screening Questions," the issue screened as having very low safety significance (Green) because it was a design or qualification deficiency that did not represent a loss of operability or functionality; did not represent an

actual loss of safety function of the system or train; did not result in the loss of one or more trains of non-technical specification equipment; and did not screen as potentially risk significant due to seismic, flooding, or severe weather. The team determined that this finding did not have a cross-cutting aspect because the most significant contributor did not reflect current licensee performance.
Inspection Report# : [2013007](#) (pdf)

Significance: G Feb 06, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Improper Sequencing of Maintenance of 4160 VAC Circuit Breakers Prior to As-Found Tests

The team identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," which states, in part, "A test program shall be established to assure that all testing required to demonstrate that structures, systems, and components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents." Specifically, prior to January 13, 2014, the licensee's preventive maintenance Procedures OPMPO5-NA-002, "4160V Gould Breaker Test," and OPMP05-NA-0018 "4160 Volt Gould HK Breaker Overhaul/Lubrication," failed to assure that the 4160 VAC Gould circuit breakers would perform satisfactorily in service when the licensee performed maintenance prior to completing as-found tests to verify the circuit breakers would function properly. In response to this issue, the licensee validated that the components had passed their required surveillance tests and remained operable. This finding was entered into the licensee's corrective action program as Condition Reports 14-738 and 14-1633.

The team determined that failure to establish a test and maintenance program which ensures that safety-related 4160 VAC Gould circuit breakers would perform satisfactorily in service was a performance deficiency. This finding was more than minor because if left uncorrected, it would lead to a more significant safety concern. Specifically, the failure to perform as-found tests prior to performing maintenance in preventive maintenance procedures was a significant programmatic deficiency which could cause unacceptable conditions to go undetected. In accordance with Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," dated June 19, 2012, Exhibit 2, "Mitigating Systems Screening Questions," the issue screened as having very low safety significance (Green) because it was a design or qualification deficiency that did not represent a loss of operability or functionality; did not represent an actual loss of safety function of the system or train; did not result in the loss of one or more trains of non-technical specification equipment; and did not screen as potentially risk significant due to seismic, flooding, or severe weather. This finding had a crosscutting aspect in the area of human performance, documentation component because the licensee failed to create and maintain complete, accurate, and up-to-date documentation. [H.7]

Inspection Report# : [2013007](#) (pdf)

Significance: G Feb 06, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Establish an Adequate Test Program for Safety-Related 480 VAC Circuit Breakers

The team identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," which states, in part, "A test program shall be established to assure that all testing required to demonstrate that structures, systems, and components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents." Specifically, prior to January 13, 2014, the licensee's preventative and post-maintenance procedures for safety-related 480 VAC Westinghouse DS circuit breakers failed to include manufacturers recommended testing of breaker control circuits at the minimum expected control voltage levels postulated to exist at the device terminals during design basis

events. In response to this issue, the licensee validated that the components had passed their required surveillance tests and remained operable. This finding was entered into the licensee's corrective action program as Condition Reports 11-4895 and 14-738.

The team determined that the failure to include manufacturers recommended testing of safety-related circuit breaker control circuits at the voltages postulated to exist at the device terminals during design basis events or to provide justification for not performing the tests was a performance deficiency. This finding was more than minor because if left uncorrected, it would lead to a more significant concern. Specifically, the failure to perform the breaker testing at reduced voltage using minimum expected control voltage levels could cause unacceptable conditions to go undetected. In accordance with Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," dated June 19, 2012, Exhibit 2, "Mitigating Systems Screening Questions," the issue screened as having very low safety significance (Green) because it was a design or qualification deficiency that did not represent a loss of operability or functionality; did not represent an actual loss of safety function of the system or train; did not result in the loss of one or more trains of non-technical specification equipment; and did not screen as potentially risk significant due to seismic, flooding, or severe weather. This finding had a crosscutting aspect in the area of problem identification and resolution, evaluation component because the licensee failed to thoroughly evaluate the issue to ensure that resolution addressed causes and extent of condition commensurate with their safety significance. [P.2]

Inspection Report# : [2013007](#) (pdf)

Significance:  Feb 06, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Maintain Design Control of Safety Injection Pump Room Cooler

The team identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," which states, in part, "Measures shall be established to assure that applicable regulatory requirements and the design basis are correctly translated into specifications, drawings, procedures, and instructions." Specifically, prior to February 13, 2014, documented requirements in purchase specification 3V259VS0005 were not correctly translated into specifications, drawings, and instructions evaluated in calculations MC-06482 and MC-06482A for the safety injection pump room coolers. In response to this issue, the licensee revised the associated calculations and established that the room coolers remained operable. This finding was entered into the licensee's corrective action program as Condition Report 14-2673.

The team determined that the failure to maintain design control of the safety injection pump room cooler was a performance deficiency. This finding was more than minor because it adversely affected the Mitigating Systems Cornerstone attribute of Design Control and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, not maintaining design control and performing a proper heat transfer calculation had the potential to challenge the availability, reliability, and capability of the safety injection pump room cooler and in turn the safety function of safety injection pumps. In accordance with Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," dated June 19, 2012, Exhibit 2, "Mitigating Systems Screening Questions," the issue screened as having very low safety significance (Green) because it was a design or qualification deficiency that did not represent a loss of operability or functionality; did not represent an actual loss of safety function of the system or train; did not result in the loss of one or more trains of non-technical specification equipment; and did not screen as potentially risk significant due to seismic, flooding, or severe weather. The team determined that this finding did not have a cross-cutting aspect because the most significant contributor did not reflect current licensee performance.

Inspection Report# : [2013007](#) (pdf)

Significance: G Feb 06, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Evaluate the Adequacy of Voltage Available at AF-19 Valve Motor to Close the Valve During Postulated High Energy Line Break Conditions

The team identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," which states, in part, "Measures shall be established to assure that applicable regulatory requirements and the design basis, for those structures, systems, and components to which this appendix applies are correctly translated into specifications, drawings, procedures, and instructions." Specifically, prior to January 28, 2014, the licensee failed to adequately verify by analysis that the AF-19 valve motor had adequate voltage available to close the valve when required during postulated high energy line break conditions. In response to this issue, the licensee performed a preliminary battery sizing and voltage analysis and verified that the valve motor had sufficient voltage to close when required by the failure modes and effects analysis. This finding was entered into the licensee's corrective action program as Condition Report 14-1374.

The team determined that the failure to evaluate and translate the requirements for adequate voltage available at the AF-19 valve motor to close the valve during postulated high energy line break conditions was a performance deficiency. This finding was more than minor because if left uncorrected, it would lead to a more significant safety concern. Specifically, the failure to analyze and translate the relevant requirements resulted in a condition where there was a reasonable question on the capability of the valve to close when required during postulated high energy line break conditions. In accordance with Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," dated June 19, 2012, Exhibit 2, "Mitigating Systems Screening Questions," the issue screened as having very low safety significance (Green) because it was a design or qualification deficiency that did not represent a loss of operability or functionality; did not represent an actual loss of safety function of the system or train; did not result in the loss of one or more trains of non-technical specification equipment; and did not screen as potentially risk significant due to seismic, flooding, or severe weather. The team determined that this finding did not have a cross-cutting aspect because the most significant contributor did not reflect current licensee performance.

Inspection Report# : [2013007](#) (*pdf*)

Significance: G Oct 31, 2012

Identified By: NRC

Item Type: VIO Violation

Failure to Timely Correct Conditions Adverse to Fire Protection

The team identified a violation of License Condition 2.E for the failure to correct a noncompliance. Procedure OPOP04-ZO-0001, "Control Room Evacuation," Revision 35, was not consistent with the post-fire safe shutdown analysis in that it failed to ensure the actions met critical time requirements. The licensee failed to implement timely corrective actions to correct this deficiency. Inspection Report 05000498/2011006 and 05000499/2011006 documented a violation involving the failure to implement and maintain in effect all provisions of the approved fire protection program. During this inspection, the team identified that the licensee had failed to restore compliance with its license condition within a reasonable time.

The licensee's failure to implement timely corrective actions to correct conditions adverse to fire protection as required by its Operations Quality Assurance Plan is a performance deficiency. This performance deficiency was of more than minor safety significance because it was associated with the mitigating systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events (such as fire) to prevent undesirable consequences. Specifically, the licensee failed to ensure reliability of its post-fire safe shutdown systems by demonstrating that it could achieve safe shutdown following a fire in the control room by using approved actions. The significance of this finding could not be evaluated using

Inspection Manual Chapter 0609, Appendix F, “Fire Protection Significance Determination Process,” because the performance deficiency involved a control room fire that led to control room evacuation. A senior reactor analyst determined that the upper bound for the overall change in core damage frequency that resulted from this performance deficiency was 2.702E-7/yr and was not significant with respect to large early release frequency. The analyst therefore determined that this performance deficiency was of very low risk significance (Green). The team determined that the performance deficiency had a cross-cutting aspect in the corrective action component of the problem identification and resolution cross-cutting area because the licensee did not thoroughly evaluate the problem such that resolutions addressed the cause. Specifically, the licensee failed to take adequate corrective actions to ensure that operators could perform all necessary manual actions as approved prior to exceeding the regulatory requirements (P.1(c)).
Inspection Report# : [2012007](#) (*pdf*)

Barrier Integrity

Significance:  Sep 28, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Identify a Condition Adverse to Quality for the Control Room Envelope

The inspectors identified a Green non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action,” involving the licensee’s failure to promptly identify and correct a condition adverse to quality. Specifically, following the identification of general corrosion on the Units 1 and 2 control room envelope heating, ventilation, and air conditioning ducts, the licensee failed to identify that moisture condensing and collecting was a condition adverse to quality and failed to correct the condition. As a result, corrosion caused through-wall leaks in 2008 and 2014. The licensee entered this into the corrective action program as Condition Report 14-17723, and planned to evaluate and address the issue.

The failure to promptly identify and correct a condition adverse to quality is a performance deficiency. The performance deficiency was more than minor because it is associated with the barrier performance attribute of the Barrier Integrity Cornerstone and affected the cornerstone objective. Using NRC Inspection Manual Chapter 0609, Appendix A, “Significance Determination Process (SDP) for Findings at Power,” dated June 19, 2012, the finding was determined to be of very low safety significance (Green) because the finding only represented a degradation of the radiological barrier function provided for the control room. The finding has a cross-cutting aspect in the area of problem identification and resolution associated with evaluation, because the licensee failed to thoroughly evaluate the issue to ensure that the resolution addressed the cause of extent of condition commensurate with the safety significance [P2].

Inspection Report# : [2014004](#) (*pdf*)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Significance:  Dec 18, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Proper Material Package Searches to Ensure Identification Prior to Entry into Protected Area

The team identified a non-cited violation of 10 CFR 73.55(h)(3)(i) for the failure to properly search personnel items (lunch boxes, briefcases, packages) before granting access to protected areas. Specifically, security personnel did not follow Security Instruction 2101, "Access Control," by allowing owners of packages to manipulate their packages when officers needed to search those packages for contraband prior to gaining entry into the protected area. The licensee entered the issue into the corrective action program as Condition Report 14-22811, developed, and reviewed a pre-job brief specifically for search train requirements with every oncoming officer, and covered management expectations and procedure details at all shift turnovers.

The failure to follow Security Instruction 2101 "Access Control," requirements by allowing the owners (non-security officers) to manipulate those packages that needed to be hand inspected when x-ray inspection reveals complex images or suspicious or unidentifiable images was a performance deficiency. The performance deficiency is more than minor because it was associated with the Access Control attribute and adversely affected the Safeguards/Security cornerstone objective to provide assurance that the licensee's security system uses a defense in-depth approach and can protect against the design basis threat of radiological sabotage from external and internal threats, and therefore a finding. The finding adversely affected the cornerstone objective because it could have resulted in undetected weapons or contraband being taken into the protected and vital areas.

Using the Physical Protection Significance Determination Process, the inspector determined that the cumulative total for the finding was two points. This was calculated by factoring the impact area (Vital Area) against Tier I element 71130.02-02.02(c) Search Activities, under the Access Control attribute. Because the calculated point total did not exceed the range for a Green determination (zero to six points), the inspector determined the finding to be of very low security significance. The inspectors determined that this finding has a cross-cutting aspect in the human performance area associated with complacency in that security force personnel did not implement appropriate error reduction tools due to the repetitive nature of the search train activities and the expectation of successful outcomes H.12.

Inspection Report# : [2014010](#) (*pdf*)

Last modified : February 26, 2015