Fermi 2
3Q/2012 Plant Inspection Findings

Initiating Events

Significance: G Sep 30, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Inspection Procedure for Reactor Pressure Vessel Head Strongback and Steam Dryer/Separator Lifting Device Omitted Testing Requirements
A finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified by the NRC inspectors. Specifically, the licensee failed to perform dimensional testing of the reactor pressure vessel head strongback and the steam dryer/steam separator lifting device required by American National Standards Institute (ANSI) N14.6-1978. In addition, the license failed to perform nondestructive testing of steam dryer/steam separator lifting device major load carrying welds and critical areas required by ANSI N14.6-1978. These issues were entered into the licensee's corrective action program.

The finding was determined to be more than minor because the finding was associated with the Initiating Events Cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown. Specifically, the purpose of the dimensional testing of reactor pressure vessel head strongback and steam dryer/steam separator lifting device and nondestructive testing of the steam dryer/steam separator lifting device major load carrying welds and critical areas is to limit the likelihood of a reactor pressure vessel head strongback or steam dryer/steam separator lifting device structural component failure, and hence, to ensure safe load handling of heavy loads over the reactor core or over safety-related systems, structures and components. The inspectors determined the finding was of very low safety significance following a qualitative significance determination process review performed by the Region III Senior Risk Analyst. The inspector did not identify a cross-cutting aspect associated with this finding because the concern was related to licensing basis established in the 1980s, and thus was not necessarily indicative of current licensee performance.
Inspection Report# : 2012004 *(pdf)*

Significance: G Sep 30, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Evaluation of Steam Dryer/Steam Separator Lifting Device
A finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was identified by the NRC inspectors for the failure to ensure the adequacy of the steam dryer/steam separator lifting device design. Specifically, the inspectors identified four examples where the licensee failed to perform adequate evaluations of the structural elemets and structural connections in accordance with ANSI N14.6 requirements as defined in Updated Final Safety Analysis Report section 9.1.4.4. These issues were entered into the licensee's corrective action program.
The finding was determined to be more than minor because the finding was associated with the Initiating Events Cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown. Specifically, the purpose of the lifting device design requirements was to limit the likelihood of a structural component failure, and hence, to ensure safe load handling of heavy loads over the reactor core or over safety-related systems. The inspectors determined the finding was of very low safety significance following a

qualitative significance determination process review performed by the Region III Senior Risk Analyst. The inspector did not identify a cross-cutting aspect associated with this finding because the concern was related to a calculation from the 1980s, and thus was not necessarily indicative of current licensee performance.
Inspection Report# : 2012004 *(pdf)*

Significance: G Jun 30, 2012
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Monitor Reactor Pressure during Reactor Pressure Vessel Hydrostatic Test
A self-revealed Green finding and associated NCV of Technical Specification (TS) 5.4.1.a was identified for the licensee's failure to establish and implement procedures recommended by Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. Specifically, the licensee failed to control reactor pressure in the band specified in the reactor pressure vessel hydrostatic test procedure. A valid high pressure reactor scram actuation was received after operators failed to recognize that the reactor pressure vessel pressure instrument being monitored became inaccurate. Immediately after the scram, operators stabilized the plant at approximately 600 psig and reset the reactor scram. The licensee entered this issue into their corrective action program as CARD 12-23824.

The inspectors evaluated the finding using IMC 0609, Appendix G, Attachment 1, "Shutdown Operations Significance Determination Process - Phase 1 Operational Checklists for Both Power Water Reactors (PWRs) and Boiling Water Reactors (BWRs)." The inspectors consulted Checklist 8, "BWR Cold Shutdown or Refueling Operation; Time to Boil > 2 Hours: RCS Level < 23' Above Top of Flange." The inspectors determined the finding did not adversely impact any shutdown defense-in-depth or mitigation attributes on the checklist, nor did it meet any of the checklist specific requirements for a Phase 2 or Phase 3 SDP analysis. Consequently, the finding was determined to be of very low safety significance. This finding has a cross-cutting aspect in the area of human performance, work practices component, because the licensee failed to use human error prevention techniques commensurate with the risk of the assigned task, such that activities are performed safely. Specifically, the licensee failed to monitor the specified primary instrumentation for critical plant parameters. (H.4(a))
Inspection Report# : 2012003 *(pdf)*

Significance: G Feb 03, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Safety Evaluation for the Online Noble Chemical Metal Process
The inspectors identified a Severity Level IV, Non-Cited Violation (NCV) of 10 CFR 50.59(d)(1), "Changes, Tests, and Experiments," and an associated (Green) finding for the licensee's failure to provide an adequate written safety evaluation to demonstrate that application of the On-Line NobleChem™(OLNC) process did not require a license amendment. Specifically, the licensee had not provided an evaluation to demonstrate that application of the OLNC process did not increase the likelihood for hydrogen induced detonation and piping failures for six areas of the balance of plant (BOP) piping susceptible to hydrogen accumulation. The licensee entered the issue into its corrective action program as CARD 12-20812 and intended to revise safety evaluation No.10-0286 to provide an adequate written basis for the OLNC process prior to the next scheduled application of OLNC materials.

The finding was determined to be more than minor because the inspectors could not reasonably determine if the application of the OLNC process would not have required NRC prior approval (e.g., a license amendment). The finding was also determined to be more than minor because the finding was associated with the Initiating Events Cornerstone attribute of Equipment Performance and affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions. Absent NRC identification, the licensee would have continued to introduce OLNC materials into the reactor feed system without confirming that the OLNC process did not increase the likelihood for hydrogen induced detonation and piping failures in the BOP piping segments that

would upset plant stability and challenge safety systems. The finding was of very low safety significance because 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. This finding has a cross-cutting aspect in the Decision Making component of the Human Performance cross-cutting area because the licensee did not use conservative assumptions to ensure the proposed action was safe. Specifically, the licensee's failure to provide a written safety evaluation, which demonstrated that application of the OLNC process did not increase the likelihood for
hydrogen induced detonation and piping failures was the result of a non-conservative assumption that the OLNC process was safe
Inspection Report# : 2012007 *(pdf)*

Mitigating Systems

Significance: G Sep 30, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Perform ASME Inservice Testing Comprehensive Pump Test
A finding of very low safety significance and an associated NCV of 10 CFR 50.55a(f), "Inservice testing requirements," and 10 CFR Part 50, Appendix B, Criteria V, "Instructions, Procedures, and Drawings," was identified by the NRC inspectors. Specifically, the licensee failed to perform a required comprehensive pump test for division 1 and 2 emergency equipment cooling water makeup pumps within 2 years of the start of the third inservice testing interval. The third inservice testing interval commenced on February 17, 2010, and included a requirement to perform a comprehensive pump test for the division 1 and 2 emergency equipment cooling water makeup pumps within two years and every two years thereafter. The required comprehensive pump tests were not performed prior to February 17, 2012.
The finding was determined to be more than minor because the finding was associated with the configuration control attribute of the Mitigating Systems Cornerstone and impacted the cornerstone objective of ensuring the capability of systems to prevent undesirable consequences (i.e., core damage). This finding was determined to be of very low safety significance because, following IMC 0609, Appendix E, Table 4a, "Characterization Worksheet for Initiating Events, Mitigating Systems, and Barrier Integrity Cornerstones," all questions were answered "no." This finding has a cross-cutting aspect in the area of Human Performance, Decision Making, supervisory and management oversight aspect because the licensee failed to appropriately oversee the development and implementation of the comprehensive pump testing
Inspection Report# : 2012004 *(pdf)*

Significance: G Sep 30, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure of Control Rod 10-35 to Fully Scram during Scram Time Testing
A self-revealed finding of very low safety significance and an associated NCV of 10 CFR 50 Appendix B, Section V, "Instructions, Procedures, and Drawings," was identified for the failure to adequately prevent foreign material from entering the hydraulic control unit for control rod 10-35, which caused control rod 10-35 to fail to fully insert on October 24, 2010. Subsequently, on November 18, 2011, control rod 10-35 again failed to fully insert during scram time testing. The root cause team identified the presence of foreign organic material and concluded it had been present for a long time, i.e., at least since or prior to 2006, and this material was the cause of the deficient operation of control rod 10-35 in October 2010 and November 2011.
The inspectors determined this finding was more than minor because it was associated with the configuration control

attribute of the Mitigating Systems Cornerstone and impacted the cornerstone objective of ensuring the capability of systems to prevent undesirable consequences (i.e., core damage). This finding was determined to be of very low safety significance because, following IMC 0609, Appendix E, Table 4a, "Characterization Worksheet for Initiating Events, Mitigating Systems, and Barrier Integrity Cornerstones," all questions were answered "no." There was no cross-cutting aspect for this finding and NCV because the foreign material entered hydraulic control unit 10-35 sometime prior to 2006; and, therefore, the foreign material exclusion program inadequacies do not represent current performance.
Inspection Report# : 2012004 *(pdf)*

Significance: G Jun 30, 2012
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Energizing Bus 65E with Ground Truck Installed and Subsequent Loss of Shutdown Cooling
A self-revealed Green finding and associated NCV of 10 CFR 50 Appendix B, Section V, "Instructions, Procedures, and Drawings," for failure to follow procedureswhen the licensee energized a safety-related electrical bus with a ground truck installed in bus 65E breaker position E4. This resulted in the loss of the safety-related bus and a temporary loss of shutdown cooling. The licensee failed to comply with sequence step 61 of Safety Tagging Record 2012-001122, which had connected a ground truck in bus 65E position E4 and installed a red danger tag. The Operations Conduct Manual, Chapter 12 (MOP12), 3.6.2 specifies that red tagged equipment is not to be operated. The licensee entered this item into their corrective action program as CARD 12-23118.

The inspectors determined this finding was more than minor because it was associated with the configuration control attribute of the Mitigating Systems Cornerstone and impacted the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). This finding was determined to be of very low safety significance because, following IMC 0609, Appendix G, Attachment 1, "Shutdown Operations Significance Determination Process Phase 1 Operational Checklist for both PWRs and BWRs," concluded the finding did not require quantitative assessment. Therefore, the finding was determined to be of very low safety significance. This finding has a cross-cutting aspect in the area of Human Performance, Work Practices, supervisory and management oversight aspect because the licensee failed to appropriately oversee the proper clearance of Safety Tagging Record 2012-001122 (H.4(c)).
Inspection Report# : 2012003 *(pdf)*

Significance: G Feb 03, 2012
Identified By: NRC
Item Type: FIN Finding
Inadequate Safety Evaluation for the Online Noble Chemical Metal Process
The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to identify and correct a condition adverse to quality. Specifically, the licensee failed to identify and evaluate that the installed Neutral Grounding Resistors (NGRs) for emergency diesel generators (EDGs) exceeded the maximum design value specified in the design basis calculation. The field measurement data obtained by the licensee in support of the 4.16kV cable replacement modification, in November 2011, exceeded the design value of 4.225 ohms specified in calculation DC-5373. The licensee entered this issue into their corrective action program to revise the design calculation to incorporate using the measured or the resistor's maximum tolerance value.

The inspectors determined that the finding was more than minor because the finding was associated with the Mitigating Systems cornerstone's attribute of Equipment Performance and affected the cornerstone's objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the licensee failed to assure that the measured NRG for EDG-11 and

EDG-13, which exceeded the maximum design value specified in the design basis calculation would perform their design function during overvoltage and fault conditions. The finding was of very low safety significance because it did not result in a loss of operability. No cross-cutting aspects were associated with this finding.

Inspection Report# : 2012007 *(pdf)*

Significance: G Feb 03, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Identify EDG's Neutral Grounding Resistor Exceeded its Design Values
The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to identify and correct a condition adverse to quality. Specifically, the licensee failed to identify and evaluate that the installed Neutral Grounding Resistors (NGRs) for emergency diesel generators (EDGs) exceeded the maximum design value specified in the design basis calculation. The field measurement data obtained by the licensee in support of the 4.16kV cable replacement modification, in November 2011, exceeded the design value of 4.225 ohms specified in calculation DC-5373. The licensee entered this issue into their corrective action program to revise the design calculation to incorporate using the measured or the resistor's maximum tolerance value.

The inspectors determined that the finding was more than minor because the finding was associated with the Mitigating Systems cornerstone's attribute of Equipment Performance and affected the cornerstone's objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the licensee failed to assure that the measured NRG for EDG-11 and EDG-13, which exceeded the maximum design value specified in the design basis calculation would perform their design function during overvoltage and fault conditions. The finding was of very low safety significance because it did not result in a loss of operability. No cross-cutting aspects were associated with this finding.

Inspection Report# : 2012007 *(pdf)*

Significance: G Dec 31, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO DEVELOP APPROPRIATE CORRECTIVE ACTIONS FOR A MAINTENANCE RULE (a)(1) MONITORED SYSTEM
The NRC inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR 50.65 for failure to develop appropriate corrective actions for an (a)(1) monitored system. The licensee failed to determine the cause of repeated SS 1 computer and printer lock ups in the D1100 process radiation monitor system. They determined the D1100 SS-1 computer should be monitored as (a)(1) status, and established (a)(1) monitoring goals, established a get-well plan, and implemented their plan. However, the get-well plan corrective actions failed to meet the (a)(1) monitoring goals and further inspection revealed the weaknesses in the causal determination and the ineffectiveness of the corrective actions. The inspectors determined this finding was more than minor because it was associated with the equipment performance attribute of the Mitigating Systems Cornerstone and impacted the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). This finding was determined to be of very low safety significance because all the screening questions in IMC 0609, Attachment 04, Table 4a, for the Mitigating Systems Cornerstone were answered "no."
This finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action, problem evaluation aspect because the licensee failed to appropriately evaluate the causes of the D1100 SS-1 computer problems (P.1 (c)).

Inspection Report# : 2011005 *(pdf)*

Barrier Integrity

Significance: G Dec 31, 2011
Identified By: Self-Revealing
Item Type: FIN Finding
PLACING A FUEL BUNDLE IN THE WRONG CELL DURING FUEL SHUFFLE
A self-revealed finding of very low safety significance (Green) was identified by the inspectors for placing a fuel bundle in the wrong cell during a fuel shuffle in the spent fuel pool. The error was noted later in the fuel shuffle when another bundle was moved to the same location, and the operators noted that the cell was filled. Specifically, on November 1, 2011, movement of spent fuel in the Spent Fuel Pool was taking place in preparation for testing of boron concentration in the high density racks. While performing step 150 of the approved MES32003, "Special Nuclear Material/Component Transfer Form," the presence of a fuel bundle already occupying the target location (4N 12) for step 150 was self-revealed. The Refuel Floor Coordinator was informed, and the bundle was returned to its original starting location. This issue was placed in the licensee's corrective action program as CARD 11-29841, "Fuel Move Error in Spent Fuel Pool." The inspectors determined that this finding was more than minor because if left uncorrected the performance deficiency had the potential to lead to a more significant safety concern. This finding was determined to be of very low safety significance because all the screening questions in IMC 0609 Attachment 0609.04 Table 4a, Characterization Worksheet for IE, MS, and BI Cornerstones were answered "no". This finding had a cross-cutting aspect in the area of human performance, work practices because the licensee failed to provide direct licensed operator oversight (H.4(c)) of fuel handling operations in the spent fuel pool

Inspection Report# : 2011005 *(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

Last modified : November 30, 2012