Perry 1
4Q/2012 Plant Inspection Findings

Initiating Events

Significance: G Jun 30, 2012
Identified By: NRC
Item Type: FIN Finding
FAILUR TO FOLLOW OPERATIONS PROCEDURES
The inspectors identified a finding of very low safety significance when the licensee failed to identify logged readings on the Daily Surveillance Requirements Sheets which were above Operational Decision Making Issue (ODMI) trigger points and subsequently failed to take actions in accordance with the ODMI. Specifically, from April 16 through April 26, 2012, the logged leak rate on the 5A feedwater heater drain valve line exceeded an ODMI trigger point and no action was taken by several different operating crews which were on watch over that time span. The issue was entered into the licensee's corrective action program as Condition Report 2012-06660.

The inspectors determined that the finding was more than minor because it is similar to example 4.h of Appendix E to IMC 0612 and it impacted the Human Performance attribute of the Initiating Events Cornerstone, adversely affecting the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during power operations. In addition, if left uncorrected, this issue could lead to a more significant safety concern. In accordance with IMC 0609, Attachment 4, Phase 1, "Initial Screening and Characterization of Findings," the finding was determined to be of very low safety significance (Green) by answering 'no' to the questions in the Initiating Events column of Table 4a, since the finding does not contribute to both a reactor trip and the likelihood that mitigation equipment or functions will not be available. This finding was associated with a cross-cutting aspect in the Work Planning (H.4(c)) component of the Human Performance cross cutting area because licensee supervisory personnel failed to make risk-significant decisions when faced with uncertain or unexpected plant conditions to ensure safety was maintained. Specifically, the licensee's supervisory oversight of the daily surveillance logs did not recognize readings above the ODMI trigger points and as a result, took no actions to correct an out of specification condition as logged for more than 10 days.

Inspection Report# : 2012003 *(pdf)*

Significance: G Jun 30, 2012
Identified By: Self-Revealing
Item Type: FIN Finding
INADEQUATE LIFT PLANT CAUSES LIFING RIG FAILURE
A self-revealed finding of very low safety significance was identified when a rigging evolution in the fuel handling building resulted in suspension of an approximately 10,000 pound support column by only part of the planned lift rig. Specifically, on April 19, 2012, the licensee failed to develop an adequate lift plan in accordance with the licensee procedure. While lifting an approximately 10,000 pound column to the vertical position, the load developed a rolling motion and caused a lifting strap to part. Subsequently, as the load settled, the flat side of the baseplate impacted the fuel handling building floor. The licensee entered the issue into the corrective action program as Condition Report 2012-06153.

The finding was evaluated using IMC 0612, Appendix E and was not similar to any of the examples, but was determined to be more than minor because if left uncorrected the safety concern would become more significant. Additionally, the performance deficiency impacted the Human Performance 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. In accordance with IMC 0609, Attachment 4, Phase 1, "Initial Screening and Characterization of Findings," the finding was determined to be of very low safety significance (Green) by answering 'no' to the questions in the Initiating Events column of Table 4a, since

the finding does not contribute to both a reactor trip and the likelihood that mitigation equipment or functions will not be available. This finding was associated with a cross-cutting aspect in the Work Practices (H.4(a)) component of the Human Performance cross-cutting area because licensee personnel proceeded in the face of uncertainty or unexpected consequences. Specifically, the licensee continued the attempted lift of the column despite indications that the load was not reacting as would be expected for a properly designed lifting rig attached to the column.

Inspection Report# : 2012003 *(pdf)*

Significance: G Apr 13, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Implement Transient Combustible Program
The inspectors identified a finding of very low safety significance and associated NCV of Technical Specifications Section 5.4.1.a for the failure to control transient combustible materials in accordance with fire protection program requirements. Specifically, the licensee failed to remove transient combustibles from the plant after they were no longer required to support a work activity. Upon discovery the licensee entered the issue into their corrective action program and removed the transient combustibles from the area.

The inspectors determined that this finding was more than minor because the transient combustible materials were stored below safety-related Division 1 cables in cable trays and formed a credible fire scenario. This finding was of very low safety significance because the materials would not result in ignition of a fire from existing sources of heat or electrical energy. The finding did not have a cross-cutting aspect because it was isolated and not reflective of current performance.

Inspection Report# : 2012008 *(pdf)*

Significance: G Mar 31, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
REACTOR MANUAL SCRAM ASSOCIATED WITH INADEQUATE MAINTENANCE RISK EVALUATION
A self-revealed finding of very low safety significance (Green) and an associated NCV of 10 CFR 50.65(a)(4) was identified for failure to assess and manage risk associated with maintenance activities. Specifically, the licensee planned and conducted maintenance on a stator water cooling system pressure gauge on March 1, 2012, as a lower risk evolution than required, and conducted the maintenance online despite several decision points which indicated that this maintenance should have been conducted with the unit offline. When performed on line, the activity caused a reactor scram. The licensee entered the issue into the corrective action program as Condition Report 2012-03231.

The finding was evaluated using IMC 0612, Appendix E, “Examples of Minor Issues,” and was determined to be more than minor because it is similar to Example 7.e and resulted in a reactor scram. Additionally, the performance deficiency impacted the Human Performance 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 power operations. In accordance with IMC 0609, Appendix K, “Maintenance Risk Assessment and Risk Management Significance Determination Process,” a Region III Senior Reactor Analyst performed an analysis of the risk deficit for the unevaluated condition associated with work on a stator water system pressure gauge resulting in a reactor scram. The Perry Standardized Plant Analysis Risk (SPAR) model version 8.15 and SAPHIRE version 8.0.7.18 was used to calculate an Incremental Core Damage Probability Deficit (ICDPD). The result was an ICDPD of less than 7E-8. The dominant core damage sequences involved: (1) loss of the main condenser, failure of suppression pool cooling, failure of containment spray, failure of the power conversion system, failure of containment venting, and failure of late injection; and (2) failure of the reactor protection system to shutdown the reactor with failure of the recirculation pumps to trip. In accordance with IMC 0609, Appendix K, because the calculated ICDPD was not greater than 1E-6, the finding was determined to be of very low safety significance. This finding was associated with a cross-cutting aspect in the Work Planning (H.3(a)) component of the Human Performance cross-cutting area because the licensee did not incorporate appropriate risk insights into the development of the work package. Specifically, the

licensee did not evaluate, during the planning phase of the work preparation, for the impact of re-installation of the pressure gauge and the potential for a pressure spike; a spike which caused a sustained runback of the main turbine generator with a resultant required action by the operators to manually scram the reactor.

Inspection Report# : 2012002 *(pdf)*

Mitigating Systems

Significance: G Dec 31, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
INAPPROPRIATE PROCEDURES FOR RESTORING LPCI MODE OF RHR FOLLOWING A LOCA AT MODE 3
The inspectors identified a finding of very low safety significance and associated non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to establish appropriate procedures capable of restoring low pressure coolant injection (LPCI) mode of residual heat removal (RHR), while in the shutdown cooling (SDC) mode, following a loss-of-coolant accident (LOCA) in Mode 3. Specifically, the licensee failed to prescribe procedures which ensured: (1) LPCI could be restored using only safety-related/seismic structures, systems and components; (2) no unanalyzed water hammer event occurred; (3) the equipment used for venting the system were appropriate; and (4) operator safety was maintained. This finding was entered into the licensee's corrective action program and the licensee instituted compensatory actions to declare RHR trains INOPERABLE while aligned to SDC. Additionally, procedures affected are prohibited from use while the plant is in Mode 3.

The performance deficiency was determined to be more than minor because, if left uncorrected it could have the potential to lead to a more significant safety concern. Specifically, the inspectors had concerns that procedures, as currently written, would have been unsuccessful in restoring LPCI. The finding screened as having a very low safety significance based on a Phase II Significance Determination Process evaluation. The result was a delta core damage frequency less than 1.0E-6/year. The inspectors determined this finding had a cross-cutting aspect in the area of Problem Identification and Resolution, Operating Experience, because the licensee did not implement operating experience through changes to the station's process, procedures, and equipment. Specifically, the licensee's evaluation of Information Notice 2010-11 incorrectly concluded sufficient barriers were in place to prevent the occurrence of steam voiding in the RHR system (P.2(b)).

Inspection Report# : 2012005 *(pdf)*

Significance: G Dec 31, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
DEFICIENCIES WITH PERIODIC VENTING PROCEDURES AND VOID QUANTIFICATION
The inspectors identified a finding of very low safety significance and associated non-cited violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," for the failure to ensure adequate test instrumentation was available and used during the performance of periodic venting. This finding was entered into the licensee's corrective action program and the licensee will revise the affected procedures to require the use of a timepiece.

The performance deficiency was determined to be more than minor because it was associated with the Mitigating Systems cornerstone attribute of "Procedure Quality: Maintenance and Testing Procedures." Specifically, by not using adequate test instrumentation to measure the time gas was vented, the licensee introduced further uncertainty to an already inaccurate method. The finding screened as having very low safety significance because the finding involved a design or qualification deficiency that did not result in a loss of operability. Specifically, review of the licensee's corrective action program documents for resolution of Generic Letter 2008 01 determined that voids had been identified following system restoration (initial fill and vent) while the system was inoperable, and voids identified when the system was online had been significantly below the calculated acceptance criteria. This finding had a cross-

cutting aspect in the area of Problem Identification and Resolution, Operating Experience, because the licensee did not thoroughly evaluate relevant external operating experience. Specifically, the licensee's evaluation of Nuclear Energy Institute 09-10, Revision 0, failed to identify the importance of having adequate venting time information when quantifying vented voids (P.2(a)).

Inspection Report# : 2012005 *(pdf)*

Significance: G Apr 13, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Ensure Design Spray Density is Achieved
The inspectors identified a finding of very low safety significance (Green) and associated Non-Cited Violation of License Condition 2.C(6) for the failure to ensure design spray density was achieved for the Unit 1 Division 2 cable chase area. Specifically, the placement of spray nozzles for cable trays did not ensure that the design spray density specified by design calculations would be achieved. The licensee entered the issue into their corrective action program and planned to evaluate their calculation and the actual water density required.

The inspectors determined that the finding was more than minor because the failure to ensure that the design spray density would be achieved resulted in the potential that a fire involving cable trays would not be suppressed. The finding was of very low safety significance due to a combination of low ignition frequencies for the area and only one train of equipment would be affected. The inspectors did not identify a cross-cutting aspect associated with this finding because the finding was an original design issue and not representative of current performance.
Inspection Report# : 2012008 *(pdf)*

Significance: G Apr 13, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Ensure Sprinkler Piping Could be Drained
The inspectors identified a finding of very low safety significance (Green) and associated Non-Cited Violation of License Condition 2.C(6) for the failure to ensure that sprinkler piping could be drained. Specifically, the licensee failed to install sprinkler piping in accordance with the standard for sprinkler systems which required that all sprinkler pipe and fittings shall be so installed that the system may be drained. The licensee entered the issue into their corrective action program and planned to further assess existing conditions of the piping and determine what changes are needed to ensure piping is drained after a system actuation.

The finding was determined to be more than minor because some corrosion of internal sprinkler piping was observed which could result in blockage of individual sprinkler heads or spray nozzles thereby reducing the effectiveness of the sprinkler system. This finding was of very low safety significance because the inspectors concluded that significantly less than 10 percent of the spray nozzles and sprinkler heads would be affected. This finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Operating Experience, because the licensee did not evaluate relevant external operating experience. Specifically, the licensee had reviewed operating experience relating to blockage of pre-action sprinkler systems, but did not sufficiently evaluate the operating experience to recognize that it applied to the Perry Nuclear Power Plant.
Inspection Report# : 2012008 *(pdf)*

Significance: G Apr 13, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Install Sequential Timing Device for Fire Pumps
The inspectors identified a finding of very low safety significance (Green) and associated Non-Cited Violation of License Condition 2.C(6) for the failure to install a sequential timing device for the diesel driven fire pump. Specifically, the standard for fire pumps required that controllers for multiple pump units, such as those at the Perry Nuclear Power Plant, incorporate a sequential timing device to prevent any one pump starting simultaneously with

any other pump. The licensee entered the issue into their corrective action program and initiated a modification to install a time delay for the pump.

The inspectors determined that the finding was more than minor because the failure to install a sequential timing device for the diesel driven fire pump could result in both fire pumps starting simultaneously and a significant water hammer which could damage fire protection piping or equipment. The finding was of very low safety significance due to a combination of low ignition frequencies for the affected areas and only one train of equipment would be affected for fires in those areas. This finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Self and Independent Assessments, because the licensee did not conduct a self-assessment of sufficient depth. Specifically, a self-assessment reviewed an Unresolved Item (URI) relating to this issue for another plant, but failed to identify that the Perry Nuclear Power Plant had the same configuration and requirements as described in the URI.
Inspection Report# : 2012008 *(pdf)*

Significance: G Apr 13, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Provide Full Area Detection
The inspectors identified a finding of very low safety significance (Green) and associated Non-Cited Violation of License Condition 2.C(6) for the failure to provide detection throughout Fire Area 1CC-4a. Specifically, Fire Area 1CC-4a was described by the USAR as having an early warning detection system. However, the corridor area of Fire Area 1CC-4a lacked detection. The licensee entered the issue into their corrective action program and planned to evaluate a change to their detection system.

The inspectors determined that the finding was more than minor because the lack of detection in the corridor area of Fire Area 1CC-4a could result in delayed detection of a fire which, if unmitigated, could affect safety-related cables above the corridor area. The finding was of very low safety significance because the portion of Fire Area 1CC-4a which contained safety-related cables did have smoke detectors and a sprinkler/spray system. This finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Self-Assessments, because the licensee did not conduct a self-assessment of sufficient depth. Specifically, a self-assessment reviewed Fire Area 1CC-4a, but did not assess the design of systems in terms of the licensing basis.
Inspection Report# : 2012008 *(pdf)*

Barrier Integrity

Significance: G Dec 31, 2012
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
INADEQUATE FUEL HANDLING BUILDING CRANE MAINTENANCE CHALLENGES SINGLE-FAILURE-PROOF COMPLIANCE
A finding of very low safety significance and associated non-citied violation of
10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” was self revealed for the failure to perform adequate maintenance on the single-failure-proof fuel handling building (FHB) crane used to handle dry storage casks containing spent nuclear fuel. The licensee corrected the issue prior to conducting lifts containing spent nuclear fuel and entered it into their corrective action program (Condition Reports 2012-13234, 2012-13315, and 2012-12933).

The inspectors determined the performance deficiency was more than minor in that it affected the Human Performance attribute (maintenance performance) of the Barrier Integrity cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radioactive releases caused by accidents or events. Additionally, if left uncorrected, a malfunction of the FHB crane could lead to a more significant safety concern. Based on answering “No” to all the screening questions in IMC 0609, Appendix A, Exhibit 3, “Barrier Integrity Screening Questions,” the finding was determined to be of very low safety-significance (Green). This finding

had a cross-cutting aspect in the area of Human Performance, Resources, because the licensee failed to have complete, accurate, and up-to-date procedures that ensured personnel, equipment, procedures, and other resources were available and adequate to assure nuclear safety. Specifically, the licensee failed to have maintenance procedures that ensured the FHB crane would be capable of performing its single failure proof design functions that assure nuclear safety (H.2 (c)).

Inspection Report# : 2012005 *(pdf)*

Emergency Preparedness

Significance: G Dec 31, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO CLASSIFY AND UNUSUAL EVENT
The inspectors identified a finding of very low safety significance with an associated non-citied violaiton of 10 CFR 50.54(q)(2) for the failure to follow the Perry Nuclear Power Plant Emergency Plan that uses a standard emergency classification and action level scheme. Specifically, on June 7, 2012, Perry personnel failed to classify an Unusual Event for an unexpected increase in plant radiation levels when health physics surveys indicated an increase by a factor of 1000 times over normally expected area radiation levels. On June 14, 2012, the licensee initiated CR 2012-09729 to determine why an Unusual Event was not classified for the June 3, 2012, resin spill, and why there was a failure to classify the unexpected increase in plant radiation levels identified in surveys of the 574' elevation of the radwaste building on June 7. On November 29, 2012, the licensee initiated CR 2012-18622 to identify and investigate reasons for the Unusual Event requirements.

The failure to implement the emergency plan and classify an Unusual Event was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it affected the Emergency Response Organization performance attribute of the Emergency Preparedness cornerstone and adversely affected the cornerstone objective to ensure the licensee is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. Using Inspection Manual Chapter 0609, Appendix B, "Emergency Preparedness Significance Determination Process," Attachment 1, the finding was determined to have very low safety-significance (Green) because the actual event implementation problem was associated with an Unusual Event. This finding had a cross-cutting in the area of Problem Identification and Resolution, Corrective Action Program, for evaluation and extent of condition (P.1c)). Specifically, Perry personnel failed to properly evaluate and classify an Unusual Event for the June 3, 2012, resin spill conditions in CR 2012-09447, dated June 7, 2012, and CR 2012-09729, dated June 14, 2012.

Inspection Report# : 2012005 *(pdf)*

Occupational Radiation Safety

Significance: G Dec 31, 2012
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
FAILURE TO APPROPRIATELY CONTROL ACCESS TO A LOCKED HIGH RADIATION AREA
A finding of very low safety significance and associated non-cited violation of
10 CFR 20.1501 was self-revealed for the failure of the licensee to make surveys to ensure compliance with 10 CFR 20.1601 and Technical Specification 5.7.2 from June 3 through June 7, 2012. Specifically, the licensee failed to evaluate the radiological conditions and potential radiological hazards associated with the spill of radioactive resins on the 574' elevation of the radioactive waste processing building that resulted in the failure to properly barricade and

conspicuously post the area as required by 10 CFR 20.1601 and Technical Specification 5.7.2. The area was found to be accessible to personnel with radiation levels such that a major portion of the whole body could receive in 1 hour a dose greater than or equal to 1000 millirem. Corrective actions included performing complete radiological surveys of the area, posting and controlling the area as required by licensee Technical Specifications. These actions were completed on June 7, 2012.

The inspectors determined that this finding was more than minor because it was associated with the program and process attribute of the Occupational Radiation Safety cornerstone and adversely affected the associated cornerstone objective of protecting worker health and safety from exposure to radiation. Specifically, not barricading and conspicuously posting high radiation areas may result in unnecessary and unplanned radiation exposures to workers. The inspectors reviewed the finding in accordance with Inspection Manual Chapter 0609, Appendix C, Occupational Radiation Safety Significance Determination Process, and determined that the finding was of very low safety significance because the finding did not involve as-low-as-is-reasonably-achievable (ALARA) planning or work controls, there was no overexposure or substantial potential for an overexposure, nor was the licensee's ability to assess worker dose compromised. The inspectors concluded that the most significant contributor to the finding was in the cross-cutting area of Human Performance with the component of decision making (H.1.(b)).

Inspection Report# : 2012005 *(pdf)*

Significance: W Sep 14, 2012
Identified By: NRC
Item Type: FIN Finding
Parallel White PI Finding
The inspectors identified a White parallel PI inspection finding for the failure to provide assurance that the corrective actions for performance issues associated with the Occupational Exposure Control Effectiveness PI were sufficient to address the root and contributing causes and to prevent recurrence. This finding has been entered into the licensee's Corrective Action Program (CAP) as Condition Report (CR)-2012-18695.

In accordance with IP 95002 and IMC 0305, "Operating Reactor Assessment Program," the parallel PI inspection finding is assigned the same safety significance as the initiating PI. Because the initiating PI had a low to moderate safety significance (White), this parallel inspection finding has been assigned a low to moderate safety significance (White). This finding was not assessed for cross-cutting aspects.
Inspection Report# : 2012009 *(pdf)*

Significance: G Sep 14, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Implement Existing Plant Procedures)
The inspectors identified a finding of very low safety significance and multiple examples of an associated NCV for failure to comply with Technical Specification (TS) 5.4.1. Specifically, the inspectors identified that the licensee failed to implement multiple procedural requirements associated with a spill of radioactive material in the Radioactive Waste Building. The failure to implement these procedural requirements occurred across multiple organizations (Radiation Protection, Work Control, and Operations). The licensee entered this issue into their CAP as CR-2012-09447.

The performance deficiency was determined to be more than minor because it could reasonably be viewed as a precursor to a significant event (lack of proper protection of workers from potential exposures), was related to the Programs and Process attribute of the Occupational Radiation Safety Cornerstone, and adversely affected the cornerstone objective to ensure the adequate protection of worker health and safety from exposure to radiation from radioactive material during routine reactor operation. Therefore, the performance deficiency was determined to be a finding or more than minor safety significance. The finding was not subject to traditional enforcement because it was not associated with a violation that impacted the regulatory process and did not contribute to actual safety consequences. The finding was assessed using IMC 0609, Appendix C, "Occupational Radiation Safety SDP," and was determined to be of very low safety significance (Green) because it was not related to As-Low-As-Is-Reasonably-

Achievable (ALARA), did not result in an overexposure or a substantial potential for overexposure, and did not compromise the licensee's ability to assess dose. This finding was associated with a cross-cutting aspect in the decision-making component of the human performance cross-cutting area. Specifically, the licensee failed to use conservative assumptions in their decisions affecting response to a radiological spill, which resulted in failure to adequately control the area for several days

Inspection Report# : 2012009 *(pdf)*

Significance: G Sep 14, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Appropriately Control Access to a Locked High Radiation Area
The inspectors identified a finding of very low safety significance and an associated NCV of TS 5.7.2 for the failure to control and establish barriers that would prevent unauthorized entry to an area that was accessible to personnel with radiation levels, such that a major portion of the whole body could receive in 1 hour, a dose greater than or equal to 1000 mRem. Specifically, the inspectors determined that the barriers used to control access to an identified Locked High Radiation Area (LHRA) around the work platform erected to support dry fuel storage cask loading and transport, did not provide reasonable assurance that the area was secure against unauthorized access and could not be circumvented. The licensee entered this issue into their CAP as CR-2012-14884. The licensee also took immediate corrective actions, which included posting an additional access control guard in the area, documenting Radiation Protection (RP) Manager standing orders for control of the area, controlling keys to operate the person-lift by the RP staff, and providing additional physical barriers to the lower areas of the scaffolding to prevent use of natural ladders of the scaffolding.

The performance deficiency was determined to be more than minor based on Example 6.g of IMC 0612, Appendix E, “Examples of Minor Issues," because LHRA conditions were actually present. As a result, the inspectors determined that the performance deficiency was a finding of more than minor safety significance. The finding was not subject to traditional enforcement because it was not associated with a violation that impacted the regulatory process and did not contribute to actual safety consequences. The finding was assessed using IMC 0609, Appendix C, “Occupational Radiation Safety SDP,” and was determined to be of very low safety significance (Green) because it was not related to ALARA, did not result in an overexposure or a substantial potential for overexposure, nor was the ability to assess dose compromised. This finding was associated with a cross-cutting aspect in the operating experience component of the problem identification and resolution cross cutting area. Specifically, the licensee failed to implement and institutionalize operating experience through changes to station processes, procedures, equipment and training programs.
Inspection Report# : 2012009 *(pdf)*

Significance: G Jun 30, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO APPRORPRATELY CONTROL ACCESS TO A LOCKED HIGH RADIATION AREA
The inspectors identified a finding of very low safety significance and an associated NCV of Technical Specification 5.7.2 for the failure to appropriately barricade and conspicuously post an area that was accessible to personnel with radiation levels such that a major portion of the whole body could receive in 1 hour a dose greater than or equal to 1000 milliRem. Specifically, on May 7, 2012, NRC inspectors identified unposted and unbarricaded access points in the turbine building 557’ catacomb area that permitted unencumbered access to locked high radiation areas in the steam affected areas under and on the turbine deck. This issue was entered into the licensee’s corrective action program as Condition Report 2012-07583.

The inspectors reviewed the guidance in IMC 0612, Appendix E, "Examples of Minor Issues," and determined that the issue was more than minor because the performance deficiency was similar to Example 6(g) in the guidance document. Using IMC 0609, Attachment C for the Occupational Radiation Safety Significance Determination Process (SDP), the inspectors determined that the finding was of very low safety significance because the finding did not involve: (1) As-Low As-Reasonably Achievable (ALARA) planning and controls; (2) a radiological overexposure; (3)

a substantial potential for an overexposure; and (4) a compromised ability to assess dose. Because this finding was of very low safety significance, was not repetitive or willful, and was entered into the Perry Nuclear Power Plant corrective action program, this violation is being treated as an NCV consistent with Section 2.3.2 of the NRC Enforcement Policy. Additionally, the primary cause of this finding was related to the cross-cutting aspect of problem identification and resolution in operating experience. Specifically, the licensee failed to implement and institutionalize operating experience through changes to station processes, procedures, equipment, and training programs (P.2 (b)).

Inspection Report# : 2012003 *(pdf)*

Significance: W May 25, 2011
Identified By: NRC
Item Type: VIO Violation
The Licensee Failed to Appropriately Identify and Assess the Radiological Hazards when retracting a Source Range Monitor. (Section 4OA5.7)
The NRC identified a finding and three apparent violations of NRC requirements associated with the removal of a source range monitor from the reactor vessel. Specifically, the inspectors identified an apparent violation of Title 10 of the Code of Federal Regulations (CFR) part 20.1501 “Surveys and Monitoring,” because licensee failed to appropriately evaluate and assess the radiological hazards associated with retracting a source range monitor from the reactor vessel. The inspectors also identified examples of apparent violations of Technical Specifications requirements 5.4. “Procedures” and 5.7. “High Radiation Area” associated with this finding. Following this event, the licensee instituted several corrective actions including procuring a new shielded retrieval and transport cask, retracting the source range monitor (SRM) detector and cable into the cask from the carousel instead of the sub-pile room floor, and implementing changes to plant procedures and the plant planning process to more effectively control this work. Additionally, a root cause evaluation was initiated under condition report (CR) 11-932471.

The inspectors reviewed the guidance in NRC Inspection Manual Chapter (IMC) 0612, Appendix E, “Examples of Minor Issues,” and did not identify any examples similar to the performance deficiency. However, in accordance with IMC 0612, the inspectors determined that the performance deficiency was more than minor because it could be viewed as a precursor to a significant event. Therefore, the performance deficiency was a finding. The finding did not involve “as low as reasonably achievable” (ALARA) planning or work controls and there was no overexposure. However, the inspectors determined that a substantial potential for an overexposure did exist, in that, it was fortuitous that the resulting exposure did not exceed the limits of 10 CFR Part 20. The event did not occur in a very high radiation area, nor was the licensee’s ability to access dose compromised. Consequently, the inspectors concluded that the finding was preliminarily determined to be of White safety significance. The finding had a cross-cutting aspect in the area of human performance related to the cross-cutting component of decision making, in that, the licensee did not use conservative assumptions when developing the work package and authorizing the work for the removal of SRM-C (H.1.b). (Section 4OA5.7)

Final SDP Issued on August 28, 2011 (ml112371689) - with revised violation text as follows:

A. Title 10 of the Code of Federal Regulations (10 CFR) Part 20 Subpart F – Surveys and Monitoring Section 20.1501 requires, in part, that licensees make surveys that may be necessary to comply with the regulations in Part 20 and are reasonable under the circumstances to evaluate the magnitude and extent of radiation levels and the potential radiological hazards. Pursuant to 10 CFR 20.1003, survey means an evaluation of the radiological conditions and potential hazards incident to the production, use, transfer, release, disposal or presence of radioactive material or other sources of radiation.

Contrary to the above, as of April 21, 2011, the licensee failed to make surveys to evaluate the potential radiological hazards incident to work activity to assure compliance with 10 CFR 20.1201, which limits the occupational dose to individual adults. Specifically, the licensee did not perform an evaluation of the potential radiological hazards associated with the work activity prior to authorizing removal of an irradiated
in-core source range monitor (SRM).

B. Technical Specification 5.7.1.b states, in part, that entry into high and locked high radiation areas be made after the dose rate levels in the area have been established and personnel are made aware of them.

Contrary to the above, on April 21, 2011, the licensee permitted entry into a high radiation area without establishing the dose rate levels in the area and without personnel being made aware of the dose rates. Specifically, the licensee did not perform a complete radiological characterization of the SRM (a radiological source of unknown magnitude), which was being pulled toward the work area and toward the workers' escape path. Consequently, the licensee did not inform the workers of the potential dose rate levels associated with their entry into the high radiation area.

C. Technical Specification 5.4.1 requires that written procedures be established, implemented, and maintained covering the activities in Regulatory Guide 1.33, Revision 2, Appendix A, dated February 1978.

Regulatory Guide 1.33, Revision 2, Appendix A Section 7 addresses, in part, procedures for control of radioactivity for limiting personnel exposure. Section 7.e(1) addresses procedures for access control to radiation areas including a radiation work permits system and Section 7.e(9) addresses procedures for implementation of an as low as is reasonably achievable (ALARA) program.

The licensee established Procedure HPI-C0015, Revision 00, "Radiological Controls for Highly Radioactive and Irradiated Components or Materials," to control highly radioactive objects and materials removed from the reactor vessel.

The licensee established Procedure NOP-OP-4107, Revision 05, "Radiation Work Permit," in part, for implementation of an ALARA program. Step 4.3.2.3 of this procedure states, in part, that ALARA plans are developed with sufficient detail on what requirements, considerations and actions are to be ALARA for the work activity.

Contrary to the above, as of April 21, 2011, the licensee:

a. Failed to establish a procedure that addressed access control to all radiation areas. Specifically, Procedure HPI-C0015 only addressed work activities on the refueling floor and did not address access control to the undervessel radiation area or control of highly radioactive objects and materials removed from the reactor vessel through the undervessel area.

b. Failed to implement Procedure NOP-OP-4107, in that the ALARA plan for work on the SRM lacked sufficient detail about the requirements, consideration, and actions to ensure that the work activity was performed in an ALARA manner. Specifically, the ALARA plan did not ensure that the work activity to retract the irradiated SRM-C contained steps to ensure that the ambient radiation field in the work area in the carousel and sub-pile room areas was being controlled and that the worker actions were in accordance with ALARA considerations.

A. Title 10 of the Code of Federal Regulations (10 CFR) Part 20 Subpart F – Surveys and Monitoring Section 20.1501 requires, in part, that licensees make surveys that may be necessary to comply with the regulations in Part 20 and are reasonable under the circumstances to evaluate the magnitude and extent of radiation levels and the potential radiological hazards. Pursuant to 10 CFR 20.1003, survey means an evaluation of the radiological conditions and potential hazards incident to the production, use, transfer, release, disposal or presence of radioactive material or other sources of radiation.

Contrary to the above, as of April 21, 2011, the licensee failed to make surveys to evaluate the potential radiological hazards incident to work activity to assure compliance with 10 CFR 20.1201, which limits the occupational dose to individual adults. Specifically, the licensee did not perform an evaluation of the potential radiological hazards associated with the work activity prior to authorizing removal of an irradiated
in-core source range monitor (SRM).

(Also numberd as 2011-014-01, but in reality is 2011-013-02)

The associate Traditional Enforcement Item for submitting an inaccurate PI for the associated event is being tracked as item 2011-004-04.
Inspection Report# : 2011013 *(pdf)*
Inspection Report# : 2011014 *(pdf)*

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: N/A Jan 27, 2012
Identified By: NRC
Item Type: FIN Finding
Overall Finding Perry from Nuclear Plant 2012 Problem Identification and Resolution Inspection
On the basis of the activities selected for review, the team concluded that implementation of the problem and identification process and the corrective action program (CAP) at Perry Nuclear Plant had varying elements of effectiveness. The licensee normally had a low threshold for identifying problems and entering them in the CAP with some instances of condition reports not generated until after identification by the resident inspectors. Items entered into the CAP were screened and prioritized in a timely manner using established criteria and were evaluated commensurate with their safety significance. However, the thoroughness and effectiveness of some evaluations was found deficient by the team and by licensee audits and self-assessments. The issues with the effectiveness of evaluations including the effectiveness of identifying root and contributing causes, contributed to corrective actions not consistently correcting conditions. The team concluded the licensee's overall implementation of actions that correct issues and prevent recurrence of issues was marginally effective. The team noted that the licensee reviewed Operating Experience (OE) for applicability to station activities. Audits and self assessments were determined to be performed at an appropriate level to identify deficiencies. On the basis of interviews conducted during the inspection, workers at the site expressed freedom to enter nuclear safety concerns into the CAP or to report them to supervision.
Inspection Report# : 2012007 *(pdf)*

Last modified : February 28, 2013