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Clinton – Quarterly Plant Inspection Findings

4Q/2017 – Plant Inspection Findings

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Initiating Events

Significance: G Jun 30, 2017

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

UNEXPECTED START OF THE DIVISION 3 EMERGENCY DIESEL GENERATOR

The inspectors documented a self-revealed finding of very low safety significance and an associated non-cited violation of Title 10 of the Code of Federal Regulations (CFR) Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to follow steps in Work Order (WO) 04640788 while performing troubleshooting on blown power transformer fuses in the division 3 emergency diesel start circuitry. Specifically, the electricians opened test switches in the wrong electrical cubicle resulting in the unexpected start of the division 3 emergency diesel generator and a loss of power to the 1C1 bus from an offsite source. The licensee entered this issue into their corrective action program (CAP) as Action Request (AR) 04012393. As corrective actions, the licensee performed a human performance review to identify the reasons the procedure was not followed and restored power to the 1C1 safety bus.

The performance deficiency was determined to be more than minor because it impacted the Initiating Events cornerstone attribute of human performance 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. Specifically, the failure of the electrical maintenance technicians to follow their procedures resulted in a loss of power to the 1C1 electrical bus. The finding was screened against the Initiating Events cornerstone and determined to be of very low safety significance because the loss of power to the 1C1 bus occurred while Clinton was in a refueling outage when the high pressure core spray system was removed from service and not being relied upon for shutdown safety defense in depth. The loss of the 1C1 bus did not affect decay heat removal from the core, did not affect reactor coolant inventory, and the event occurred while the refuel cavity was flooded up for refueling operations. The inspectors determined that this finding affected the cross-cutting area of human performance in the aspect of avoid complacency where individuals implement appropriate error reduction tools. Specifically, as documented in the licensee's human performance review, the electricians performing the work did not utilize any human performance tools to flag the

equipment to be operated and improperly performed the concurrent verification of the component to be manipulated. [H.12]

Inspection Report# : 2017002 (*pdf*)

Significance:  Jun 30, 2017

Identified By: NRC

Item Type: NCV Non-Cited Violation

ROOT CAUSE EVALUATION FAILED TO IDENTIFY CORRECTIVE ACTION TO PRECLUDE REPETITION

The inspectors identified a finding of very low safety significance and an associated non-cited violation of 10 CFR Part 50, Appendix B, Criterion II, "Quality Assurance Program," for the failure to implement a quality assurance program procedure. Specifically, the licensee failed to document a root cause and develop a corrective action to preclude repetition for the 1A bus transformer failure in accordance with quality assurance procedure PI-AA-125-1001, "Root Cause Analysis Manual." The licensee entered this issue into their CAP as AR 01594407. The corrective actions in response to this issue were to revise the root cause report with a root cause of insulation degradation of the phase windings over time and develop a corrective action to prevent recurrence by using Doble testing to ensure indication of transformer insulation degradation was discovered prior to failure.

The performance deficiency was determined to be more than minor because if left uncorrected the performance deficiency had the potential to lead to a more significant safety concern. Specifically, the root cause and corrective actions to prevent recurrence were not identified until the licensee was prompted by the inspectors. As a result, additional transformer failures could have occurred. The finding was screened against the Initiating Events cornerstone and determined to be of very low safety significance because the finding did not involve the complete or partial loss of a support system that contributes to the likelihood of or cause an initiating event nor did it affect mitigation equipment. The inspectors determined this finding affected the cross-cutting area of human performance, in the aspect of resources, where leaders ensure that personnel, equipment, procedures and other resources are available and adequate to support nuclear safety. Specifically, the licensee's station procedure did not provide guidance on when a corrective action to preclude repetition is required, regardless of whether a risk assessment was performed. [H.1]

Inspection Report# : 2017002 (*pdf*)

Significance:  May 08, 2017

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

FAILURE TO DEVELOP AND REVIEW A WORKER TAG OUT

The inspectors documented a self-revealed finding of very low safety significance and associated non-cited violation of Technical Specification 5.4.1, "Procedures," for the licensee's failure to develop and review a worker tag out in accordance with station procedure OP-AA-109-10, "Clearance and Tagging," Revision 12. Specifically, the licensee failed to identify the effect of a worker tag out on the in-service steam jet air ejector suction valve, which caused condenser vacuum to degrade resulting in the operators entering the off normal procedure for loss of condenser vacuum. The licensee entered this issue into their corrective action program as action request (AR) 03980495. As corrective actions, the operations department issued a standing order to require worker tag outs to be challenged by a second senior reactor operator.

The performance deficiency was determined to be more than minor because it impacted the Initiating Events cornerstone attribute of configuration control and adversely affected the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during power operations. Specifically, the failure to properly develop the worker tag out caused the condenser vacuum to degrade, challenging the operators to

quickly diagnose the issue and take action to avoid a turbine trip. The finding was screened against the Initiating Events cornerstone and determined to be of very low safety significance because it did not cause a reactor trip or the loss of mitigation equipment relied upon to transition the plant from the onset of a trip to a stable shutdown condition. The inspectors determined that this finding affected the cross-cutting area of human performance in the aspect of avoid complacency, where individuals recognize and plan for the possibility of mistakes, latent issues, and inherent risk, even while expecting successful outcomes. Individuals implement appropriate error reductions tools. Specifically, the operations department failed to implement appropriate error reduction tools such as questioning attitude and thorough work product reviews to ensure the worker tag out considered all potential effects to other plant equipment. [H.12]
Inspection Report# : 2017001 (*pdf*)

Mitigating Systems

Significance:  Nov 06, 2017

Identified By: NRC

Item Type: NCV Non-Cited Violation

FAILURE TO EVALUATE DEFEATING REACTOR CORE ISOLATION COOLING SYSTEM INTERLOCKS AND TRIPS BEFORE ADDING THEM TO AN EMERGENCY OPERATING SUPPORT PROCEDURE

The inspectors identified a Severity Level IV NCV of Title 10 *Code of Federal Regulations* (CFR) 50.59(d)(1), ? Changes, Test, and Experiments,? and an associated finding, for the licensee?s failure to perform a written evaluation which provided the bases for the determination that a change did not require a license amendment. Specifically, the licensee made a change pursuant to 10 CFR 50.59(c) with the change to an emergency operating procedure (EOP) support procedure to incorporate three reactor core isolation cooling (RCIC) system interlock defeats and did not provide a basis for the determination that this change would not create a possibility for a malfunction of a structure, system or component (SSC) important to safety with a different result than any previously evaluated in the updated safety analysis report. The licensee entered this issue into the CAP as action request (AR) 04056394 and planned to perform a screening for the procedure change.

This performance deficiency was determined to be more than minor in accordance with Inspection Manual Chapter (IMC) 0612, ?Power Reactor Inspection Reports,? Appendix B, ?Issue Screening,? dated September 7, 2012, because it was associated with the Mitigating Systems cornerstone attribute of procedure quality and affected the cornerstone objective of ensuring the availability, reliability, and capability of mitigating systems to respond to initiating events to prevent undesirable consequences. Specifically, the change did not ensure RCIC system reliability and availability during and following design basis accidents because it introduced a new failure mode and added reliance on monitoring activities and manual actions. 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 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. Traditional enforcement applied to this finding because it involved a violation that impacted the regulatory process. The inspectors determined it to be of Severity Level IV significance because it resulted in a condition evaluated by the SDP as having very low safety significance (Enforcement Policy example 6.1.d.2). The team determined that this finding had a cross-cutting aspect of Resources in the area of Human Performance because the licensee did not ensure that procedures, and other resources were available and adequate to support nuclear safety. Specifically, the procedure which required a 50.59 screening for changes to EOP support procedures, was not explicit in requiring the screening. [H.1]

Inspection Report# : 2017007 (*pdf*)

Significance: **W** Aug 14, 2017

Identified By: Self-Revealing

Item Type: TE Traditional Enforcement w/o associated F

FAILURE TO EVALUATE REPLACEMENT RELAY DROPOUT VOLTAGE

A self-revealed finding preliminarily determined to be of low to moderate safety significance, and an associated apparent violation of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion III, "Design Control," was identified on March 9, 2017, for the licensee's failure to implement measures for the selection and review for suitability of application replacement relays for the Division 1 Emergency Diesel Generator (EDG) Room Vent Fan, which were components subject to the requirements of 10 CFR Part 50, Appendix B. Specifically, Engineering Changes 330624 and 366624 failed to evaluate the change in the actual drop out voltages for replacement relays on the associated fan circuitry, and instead, introduced new relays into the circuit that resulted in the failure of the fan to operate during an under voltage condition. This rendered the Division 1 EDG inoperable for a time longer than its technical specification allowed outage time, which was a violation of Technical Specification 3.8.1, "AC Sources-Operating." The licensee entered this issue into the corrective action program as action request (AR) 03982792. Corrective actions for this issue included restoring the circuit to allow the ventilation fan to operate and returning the emergency diesel generator to an operable condition.

The inspectors determined that the licensee's failure to verify the suitability of the replacement relays for the Division 1 EDG room vent fan was contrary to the requirements of 10 CFR Part 50, Appendix B, Criterion III and a performance deficiency which was within the licensee's ability to foresee and correct. The performance deficiency was determined to be more than minor because it was associated with the design control attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of the systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure to verify the suitability of the replacement relays prior to installation in the Division 1 EDG room vent fan circuitry resulted in the inoperability and unavailability of the Division 1 EDG from May 18, 2016 to March 11, 2017, when one of the unsuitable relays was replaced. Using IMC 0609, Appendix A, "Significance Determination Process for Findings At Power," dated June 19, 2012, a Significance and Enforcement Review Panel preliminarily determined the finding to be of low to moderate safety significance. The inspectors determined that this finding affected the cross-cutting area of human performance in the aspect of challenge the unknown, where individuals stop when faced with uncertain conditions. Risks are evaluated and managed before proceeding. Specifically, a questioning attitude was not used to understand the consequence of the differences in relay features resulting with installing a relay that was incompatible with the current design. [H.11]

In the initial report, the item number was listed incorrectly as 2016009-01 in the "List of Items Open, Closed, and Discussed" section. The correct tracking number of 2017009-01 was entered into RPS.

Inspection Report# : 2017009 (*pdf*)

Inspection Report# : 2017010 (*pdf*)

Significance: **G** Jun 30, 2017

Identified By: NRC

Item Type: NCV Non-Cited Violation

FAILURE OF OPERATORS TO MEET TIME CRITICAL OPERATOR ACTIONS

The inspectors identified a finding of very low safety significance and an associated non-cited violation of Title 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to assure that applicable regulatory requirements and the design basis was correctly translated into specifications, drawings, procedures, and instructions

and that design control measures provided for verifying or checking the adequacy of design, such as by the performance of design reviews, by the use of alternate or simplified calculational methods, or by the performance of a suitable testing program. Specifically, the licensee failed to assure/validate operators were able to complete the standby liquid control time critical action for an anticipated transient without a scram specified in their licensing documents. The licensee entered this issue into their CAP as AR 03980202. As corrective actions, the licensee determined the scram choreography required to complete the time critical action in the specified time, initiated a standing order to inform the operating crews, processed a procedure change for the anticipated transient without scram choreography and performed an evaluation to determine the impact of initiating the standby liquid control system at 172 seconds.

The performance deficiency was determined to be more than minor because the finding was associated with the procedure quality attribute of the Mitigating Systems cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, with the operators initiating standby liquid control at 172 seconds instead of 120 seconds, the accident analysis calculations were required to be re-performed to assure the accident analysis requirements were met. The finding was screened against the Mitigating Systems cornerstone and determined to be of very low safety significance because the inspectors were able to answer all of the associated screening questions "No." The inspectors determined that this finding is not indicative of current performance and therefore did not assign a cross-cutting aspect.

Inspection Report# : 2017002 (*pdf*)

Significance:  Jun 30, 2017

Identified By: NRC

Item Type: FIN Finding

FAILURE TO PERFORM PREVENTIVE MAINTENANCE ON A SAFETY-RELATED BREAKER CUBICLE

The inspectors identified a finding of very low safety significance for the licensee's failure to perform maintenance on a safety-related motor control center cubicle. Specifically, the licensee failed to perform thermography on the division 1 shutdown service water pump room cooler breaker cubicle in accordance with the maintenance strategy/template without providing justification for differing from the template as required by MA-AA-716-210, "Performance Centered Maintenance Process," Revision 3. This resulted in the division 1 shutdown service water pump room cooler fan failing because of a high resistance connection that went undetected. The licensee entered this issue into their CAP as AR 02667822. As corrective actions, the licensee replaced the thermal overload relays and created a preventative maintenance action to perform thermography on this equipment on a periodic basis.

This performance deficiency was determined to be more than minor because it impacted the Mitigating Systems cornerstone attribute of equipment performance and adversely affected the cornerstone objective of ensuring the availability, capability and reliability of equipment that responds to initiating events. Specifically, the room cooler fan failure directly impacted the operability of the division 1 shutdown service water pump and the division 1 emergency diesel generator which are safety-related, risk significant systems. The finding was screened against the Mitigating Systems cornerstone and determined to be of very low safety significance because the inspectors were able to answer all of the associated screening questions "No." The inspectors determined that this finding is not indicative of current plant performance and therefore did not assign a cross-cutting aspect.

Inspection Report# : 2017002 (*pdf*)

Significance:  May 30, 2017

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Perform Required Surveillances on Multiple Fire Dampers (Section 1R05.2b)

Green. The inspectors identified a finding of very-low safety significance (Green), and an associated Non-Cited Violation of License Condition 2.C(f) for the licensee's failure to adequately implement surveillance procedures and work processes associated with fire barrier damper inspections. Specifically, the licensee failed to perform fire barrier damper inspections for 15 fire dampers once every 48 months (plus an additional 25 percent grace period) as required by the Fire Protection Program. The licensee entered the issue into their Corrective Action Program, and will inspect the fire barrier dampers during the next refueling outage.

The inspectors determined that the performance deficiency was more-than-minor because the licensee's failure to inspect the fire barrier dampers could result in not identifying degraded dampers which could affect their ability to prevent a fire from spreading from one fire area to another. The finding was of very-low safety significance because the failure to inspect the fire barrier dampers did not impact the plant's ability to reach and maintain safe-shutdown. The finding has a cross-cutting aspect in the area of Human Performance, Work Management because the licensee failed to execute a work order to inspect the fire dampers in accordance with the required frequency in Procedure CPS 9601.01 and instead improperly extended the frequency of the fire damper inspections. (Section 1R05.2b) [H.5]

Inspection Report# : 2017008 (*pdf*)

Significance:  May 08, 2017

Identified By: NRC

Item Type: NCV Non-Cited Violation

PLANT BARRIER CONTROL PROGRAM FAILED TO COMPENSATE FOR AN IMPACTED FLOOD BARRIER

The inspectors identified a finding of very low safety significance and an associated non-cited violation of Title 10 of the Code of Federal Regulations (CFR) Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to implement the plant barrier control program for an impacted flood barrier. Specifically, the plant barrier impairment (PBI) permit, PBI-2017-02-003, for work on watertight door 1SD1-24, failed to identify the door as a flood barrier and that appropriate compensatory measures for 1SD1-24 being open for an extended period were identified or implemented in accordance with station procedure CC-AA-201, "Plant Barrier Control Program," Revision 11. The licensee entered this issue into their corrective action program as AR 03980495. The corrective actions in response to this violation were to identify appropriate compensatory measures for impairment of 1SD1-24 and incorporate them into the PBI log.

The performance deficiency was determined to be more than minor because it impacted the Mitigating Systems cornerstone attribute of protection against external events and adversely affected the cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. With the flood barrier nonfunctional and without compensatory actions in place the residual heat removal (RHR) 'B' and RHR 'C' pumps were inoperable. The finding was screened against the Mitigating Systems cornerstone and the inspectors determined that the finding involved the loss or degradation of equipment or function specifically designated to mitigate a seismic, flooding or severe weather initiating event. The inspectors determined that the loss of this equipment or function by itself during the external initiating event would degrade one or more trains of a system that supports a risk significant system or function and would require a detailed risk evaluation. The senior reactor analyst (SRA) performed the detailed risk evaluation and concluded the finding was of very low safety significance. The inspectors determined that this finding affected the cross-cutting area of human performance in the aspect of conservative bias, where individuals use decision making practices that emphasize prudent choices over those that are simply allowable. Proposed actions are determined to be safe in order to proceed, rather than unsafe in order to stop. Specifically, during preparation of the PBI permit, the station PBI log was reviewed and actions for previous work associated with the watertight door were deemed acceptable even though the work on the door in those instances was different than the work being performed this time. [H.14]

Inspection Report# : 2017001 (*pdf*)

Significance: G May 08, 2017

Identified By: NRC

Item Type: NCV Non-Cited Violation

FAILED TO VERIFY AN APPROPRIATE ALTERNATE METHOD OF DECAY HEAT REMOVAL

The inspectors identified a finding of very low safety significance and an associated non-cited violation of 10 CFR 50.36(c)(2)(i), "Limiting conditions for operation", for failing to meet/follow the required actions for limiting condition for operation 3.9.9 and 3.4.10. Specifically, the operators failed to verify a credited alternate decay heat removal method that would satisfy the required action for the limiting condition for operation. The licensee entered this issue into their corrective action program as AR 03987440. The corrective actions in response to this violation were to identify appropriate alternate methods of decay heat removal and incorporate them into the shutdown safety management program utilized during plant outages.

The performance deficiency was determined to be more than minor because it impacted the Mitigating Systems cornerstone attribute of equipment performance and adversely affected the cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, with the operators failing to identify a credited alternate method of decay heat removal and taking credit for the inoperable but in service RHR shutdown cooling train, the actual available methods that could have been credited were not verified to ensure their availability to provide the required function. The finding was screened against the Mitigating Systems Screening questions and determined to be of very low safety significance because the answer to all of the applicable screening questions was "No." The inspectors determined that this finding affected the cross-cutting area of human performance in the aspect of conservative bias, where individuals use decision making practices that emphasize prudent choices over those that are simply allowable. Proposed actions are determined to be safe in order to proceed, rather than unsafe in order to stop. Specifically, the senior reactor operators at the station had historically credited inoperable RHR shutdown cooling subsystems as their own alternate decay heat remove method because they believed it was allowable without determining that it was safe in order to proceed. [H.14]

Inspection Report# : 2017001 (*pdf*)

Significance: G May 08, 2017

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

FAILURE TO PERFORM MAINTENANCE ON RESIDUAL HEAT REMOVAL PUMP 'C' BREAKER IN ACCORDANCE WITH PROCEDURES

The inspectors documented a self-revealed 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 licensee's failure to perform maintenance on a safety related breaker in accordance with station procedure Clinton Power Station (CPS) 8410.12C001, "Westinghouse DHP Circuit Breaker Checklist," Revision 7. Specifically, the licensee failed to ensure the remaining travel on the latch check switch for the RHR 'C' pump breaker was within the acceptable range resulting in the RHR 'C' pump failing to start. The licensee entered this issue into their corrective action program as AR 03949655. The corrective actions taken by the licensee included providing coaching to the involved individuals as well as changing the procedure to include a block to record the latch check switch over travel.

The performance deficiency was determined to be more than minor because it impacted the Mitigating Systems cornerstone attribute of equipment performance and adversely affected the cornerstone objective of ensuring the availability, capability, and reliability of equipment that responds to initiating events. Specifically, the performance deficiency adversely impacted the operability of the RHR 'C' pump. The inspectors reviewed the Mitigating Systems screening questions and determined a detailed risk evaluation was required because question A.3 was answered yes. The SRA performed the detailed risk evaluation and concluded the finding was of very low safety significance. The

inspectors determined that this finding affected the cross-cutting area of human performance in the aspect of resources, where leaders ensure that personnel, equipment, procedures, and other resources are available and adequate to support nuclear safety. Specifically, the organization failed to ensure the procedure step included a block for recording the latch check switch over travel value, which led to confusion on whether the value was required to be recorded and ultimately resulted in a failure to perform the step as written. [H.1]

Inspection Report# : 2017001 (*pdf*)

Barrier Integrity

Significance:  Aug 11, 2017

Identified By: NRC

Item Type: VIO Violation

FAILURE TO PERFORM ADEQUATE EVALUATION OF CRANE RAIL CLIPS

The inspectors identified a finding of very-low safety significance and an associated cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to properly verify the adequacy of design of the fuel building crane and crane support structure elements. Specifically, calculations involving the crane rail clips and clip bolts had multiple technical errors and failed to adequately demonstrate that the design met the design basis requirements. The licensee initiated corrective actions by documenting the deficiency in AR 4001089 and performed an evaluation demonstrating that the functionality of the crane was maintained.

The finding was determined to be more-than-minor because it was associated with the design control attribute of the Barrier Integrity cornerstone and adversely affected the cornerstone objective of maintaining the functionality of the spent fuel pool (SFP) cooling system. Specifically, crane rail clip bolts were required to ensure structural integrity of structures, systems, and components described in the Updated Safety Analysis Report, when subjected to design loads as part of safe load handling of heavy loads near the SFP and to ensure integrity of the spent fuel cask. In accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Initial Characterization of Findings," Table 2, the inspectors determined the finding affected the Barrier Integrity cornerstone because it was associated with SFP/fuel handling activities. Based on answering "No" to questions A through F in Table 3, the inspectors determined the finding could be evaluated using Appendix A, "The Significance Determination Process for Findings At-Power," Exhibit 3, for the Barrier Integrity cornerstone screening questions. Based on the crane remaining functional, the inspectors answered "No" to Questions D.1 through D.4 because the finding did not adversely affect decay heat removal capabilities, did not result from fuel handling errors, did not result in loss of SFP inventory, and did not affect the SFP neutron absorber or fuel bundle misplacement; therefore, the finding screened as having very-low safety significance. The finding was cross-cutting in the resolution aspect of the problem identification and resolution area because the licensee failed to take effective corrective actions in a timely manner to address issues identified earlier in the rail clip evaluations. [P.3]

Inspection Report# : 2017002 (*pdf*)

Significance:  Jun 30, 2017

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

FAILURE TO PROVIDE SUFFICIENT WORK INSTRUCTIONS FOR PERFORMING MAINTENANCE ON THE CONTROL ROOM VENTILATION SYSTEM CHARCOAL FILTER

The inspectors documented a self-revealed finding of very low safety significance and an associated non-cited violation of 10 of CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure of the licensee to provide sufficient work instructions for performing maintenance on the control room ventilation charcoal filter bed. Specifically, the work order used to change out the charcoal filter bed (Work Order 01494189) contained only the

minimum required amount of charcoal to place in the bed. Sometime after filling the bed April 6, 2015, the charcoal settled, resulting in the 'B' control room ventilation system being declared inoperable after failing a surveillance test. The licensee entered this issue into their CAP as AR 03995612. As corrective actions, the licensee is revising the WO instructions and Clinton Power Station Procedure 9866.03 to require that charcoal be filled completely to the bottom of the deluge piping to allow for settling.

The performance deficiency was determined to be more than minor because it impacted the Barrier Integrity cornerstone attribute of procedure quality and adversely affected the cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Specifically, the failure to provide sufficient guidance in the work order regarding the quantity of charcoal to be installed resulted in the 'B' control room ventilation system failing a surveillance test and being declared inoperable. The finding was screened against the Barrier Integrity cornerstone and determined to be of very low safety significance because the finding only represents a degradation of a radiological barrier function provided for the control room. The inspectors determined that this finding affected the cross-cutting area of human performance in the aspect of design margins, where the organization operates and maintains equipment within design margins. Special attention is placed on maintaining fission product barriers, defense in depth, and safety-related equipment. Specifically, when performing maintenance on the charcoal bed, the licensee failed to recognize that filling the charcoal to the minimum bed level provided no margin if settling occurred. [H.6]

Inspection Report# : 2017002 (*pdf*)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Significance:  Jun 30, 2017

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

FAILURE TO PROPERLY CLASSIFY A SHIPMENT PER DOT REGULATIONS

A finding of very low safety significance and an associated non-cited violation of Title 10 of CFR 71.5(a) and 49 CFR 173.421(b) was self revealed when the licensee failed to properly classify a shipment per Department of Transportation (DOT) regulations. The failure to properly classify the shipment per DOT regulations allowed the shipment to proceed in transit with dose rates that were greater than what was stated on the shipping manifest. When the discrepancy in dose rates was noticed by the receiving entity, the shipment was immediately isolated and the licensee was contacted about the survey results. The licensee then dispatched two radiation protection technicians to perform confirmatory surveys. The survey data was confirmed, and the licensee was able to determine that the misclassification of the shipment was caused by dust and debris contained inside of a dust collector shifting during transportation, which created the elevated dose rate. The site implemented immediate corrective actions which included all shipments classified as limited quantity to be approved by a senior manager in the Radiation Protection Department prior to shipping. Another immediate corrective action required that the first 4 shipments conducted by the site shipper after this event be under the direct observation of a fleet independent shipper and a senior manager in the Radiation Protection Department. The licensee entered this event into their CAP as AR 03961544.

The inspectors determined that the performance deficiency was more than minor because the finding impacted the program and process attribute of the Public Radiation Safety cornerstone and adversely effected the cornerstone objective of ensuring adequate protection to public health and safety from exposure to radiation from routine civilian nuclear operations. Specifically, the misclassification of the shipment per DOT regulations could have led to individuals in the public domain being exposed to radiation dose that was greater than anticipated if conditions had been slightly altered. The finding was screened against the Public Radiation Safety cornerstone and determined to be of very low safety significance because: (1) the finding did not involve a certificate of compliance issue; (2) the failure to make emergency Notifications; (3) a low-level burial issue; or (4) a breach of the transportation package occurring

during transit. The finding did involve a radioactive shipment above radiation limits. However, the shipment contained less than a Type A quantity of material (LSA I shipment), and dose rates were <2 millirem per hour on contact. The inspectors determined that this finding affected the cross cutting area of human performance in the aspect of challenging the unknown, where individuals stop when faced with uncertain conditions. Risks are evaluated and managed before proceeding. Specifically, the risk associated with the content of the dust-collector shifting during transportation and creating an area that would lead to elevated dose rates was not evaluated by Clinton Power Station radiation protection staff. [H.11]

Inspection Report# : 2017002 (*pdf*)

Security

The security cornerstone is an important component of the ROP, which includes various security inspection activities the NRC uses to verify licensee compliance with Commission regulations and thus ensure public health and safety. The Commission determined in the staff requirements memorandum (SRM) for SECY-04-0191, "Withholding Sensitive Unclassified Information Concerning Nuclear Power Reactors from Public Disclosure," dated November 9, 2004, that specific information related to findings and performance indicators associated with the security cornerstone will not be publicly available to ensure that security-related information is not provided to a possible adversary. Security inspection report cover letters will be available on the NRC Web site; however, security-related information on the details of inspection finding(s) will not be displayed.

Miscellaneous

Current data as of : February 01, 2018

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