Byron 2

Initiating Events

Significance: G Apr 22, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
FAILURE TO FOLLOW PROCEDURE RESULTED IN A STEAM GENERATOR LEVEL TRANSIENT
During a Unit 2 plant startup on April 22, 2001, operators failed to have the steam generator preheater bypass valves (2FW039A-D) open to maintain sufficient feedwater flow to the steam generators as required by Unit 2 Byron General Operating Procedure 100-2, "Plant Startup," Revision 20, Step 21e, as the unit entered Mode 1 and a greater amount of steam was being dumped to increase power. This resulted in a steam generator level transisient which could have tripped the unit.
Inspection Report# : 2001009*(pdf)*

Significance: G Sep 30, 2000
Identified By: NRC
Item Type: FIN Finding
INNAPROPRIATE OPERATOR ACTIONS RESULT IN UNCOMPLICATED REACTOR TRIP
Operator actions in response to a failed feedwater regulating valve controller were inappropriate and resulted in making the feedwater regulating valve controller inoperable and an uncomplicated reactor trip. The risk significance of this issue was very low because all of the mitigation systems were operable and functioned properly and barrier integrity was not challenged.
Inspection Report# : 2000014*(pdf)*

Mitigating Systems

Significance: G Apr 14, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
FAILURE TO FOLLOW MAINTENANCE WORK INSTRUCTION RESULTED IN DECAY HEAT REMOVAL NEAR MISS.
On April 16, 2001, a crew of three contract workers disassembled a feedwater system tempering line check valve from the wrong train, contrary to the work instructions.
Inspection Report# : 2001008*(pdf)*

Significance: G Mar 31, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO ACCOMPLISH POST MAINTENANCE TESTING REQUIREMENTS AFTER INSTALLING STAINLESS STEEL FLEXIBLE HOSES ON THE U1&U2 CV PUMPS
The inspectors identified a Non-Cited Violation for the licensee's failure to accomplish appropriate post-modification testing requirements after installing stainless steel flexible hoses on the Unit 1 and Unit 2 centrifugal charging pumps. As a result, several of the hoses were improperly installed. The finding was of very low safety significance because there was no immediate failure concern for the hoses in question and the licensee entered this finding into its corrective action program.
Inspection Report# : 2001006*(pdf)*

Significance: G Feb 11, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
INADEQUATE POST MAINTENANCE TESTING FOLLOWING THE REPLACEMENT OF THE 1B AUXILIARY FEEDWATER PUMP CONTROL

SWITCH
Green. The inspectors identified that following the replacement of the 1B auxiliary feedwater pump control switch, the licensee's post maintenance test failed to demonstrate that the pump auto-start feature would perform satisfactorily in service. This finding was determined to be of very low safety significance, because the failure did not result in an actual loss of the safety function of the auxiliary feedwater system. A Non-Cited Violation of 10 CFR 50 Appendix B, Criteria XI, for the failure to perform an adequate post maintenance test was identified.
Inspection Report# : 2002002*(pdf)*

Significance: SL-IV Dec 29, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO OBTAIN PRIOR NRC APPROVAL FOR A CHANGE TO THE DIESEL GENERATOR VENTILATION SYSTEM THAT RESULTED IN AN UNREVIEWED SAFETY QUESTION
The inspectors identified a Severity Level IV Non-Cited Violation. In July 1998, the licensee implemented a change to the diesel generator (DG) ventilation system that involved an unreviewed safety question and failed to obtain prior NRC approval in accordance with the 10 CFR 50.59 requirements in effect at the time. Specifically, the licensee failed to adequately evaluate the defeating of the automatic actuation of the DG ventilation system and replacing it with operator manual actions to recover the system's function. This change increased the probability of occurrence of a malfunction of equipment important to safety previously evaluated in the safety analysis report. Because the SDP was not designed to assess the significance of violations that potentially impact or impede the regulatory process, this issue is being dispositioned using the traditional enforcement process in accordance with Section IV of the NRC Enforcement Policy. The result of this violation (when a DG was inoperable due to the implementation of the procedure) was assessed significance through the SDP and the severity level of the violation was based on the significance determination. This issue was considered to have more than minor significance, in that, it had a credible impact on safety by affecting the operability, availability, reliability, or function of the DGs. Because the licensee caused one DG to be inoperable for about 21 days which was longer than the outage time allowed by Technical Specification, the inspectors performed a bounding Phase II SDP analysis. The inspectors evaluated the loss of offsite power and a loss of offsite power coincident with a loss of one division of AC power accident sequences using the following assumptions: (1) minimal credit for operator recovery actions, (2) the DG was inoperable at the start of the event; and (3) the exposure time for this type of failure occurred for an entire year instead of just during the winters months. The result of these analyses determined that this issue was of very low safety significance (i.e., Green). The regional senior reactor analyst also performed a qualitative Phase III SDP analysis and determined that external conditions would not be sufficient to increase the safety significance of the issue. Therefore, this issue was classified as a Severity Level IV violation of 10 CFR 50.59. However, because this issue is of very low safety significance and it was captured in the licensee's corrective action program, this issue is being treated as a Non-Cited Violation, consistent with Section VI.A.1 of the NRC Enforcement Policy.
Inspection Report# : 2001016*(pdf)*

Significance: SL-IV Aug 19, 2000
Identified By: NRC
Item Type: VIO Violation
DISPOSITION OF URI 50-454/455-99020-02(DRP) EA 00-103, NOV LETTER 7/21/2000
In January, May, July, and November 1999, a mechanical maintenance individual deliberately failed to perform the visual inspection of 15 portable fire extinguishers at monthly intervals in the Turbine and Auxiliary Buildings. Furthermore, in March, May and June 1999, the individual deliberately failed to perform the visual inspection of 13 fire hose stations at monthly intervals in the turbine and Auxiliary Buildings.
Inspection Report# : 2001010*(pdf)*
Inspection Report# : 2000012*(pdf)*

Significance: G Jul 25, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO PROPERLY MONITOR THE FUNCTION OF THE VA VENTILATION DAMPERS FOR THE AUXILIARY FEEDWATER MOTOR DRIVEN PUMPS WITHIN THE MAINTENANCE RULE
The inspectors identified that the licensee failed to appropriately monitor the ventilation supply dampers for the motor driven auxiliary feedwater (AF) pumps within the scope of the licensee's maintenance rule program. A noncited violation was issued. The damper failures reviewed did not result in a loss of safety function for the motor driven AF pumps and with the diesel driven AF pumps still available, this issue was determined to be of very low safety significance.
Inspection Report# : 2000009*(pdf)*

Barrier Integrity

Significance: G Aug 13, 2001
Identified By: Licensee

Item Type: NCV NonCited Violation
REACTOR POWER LIMIT EXCEEDED DUE TO IMPROPERLY CALCULATED FEEDWATER MASS FLOWRATE UTILIZED IN REACTOR POWER CALORIMETRIC.
The licensee identified two discrepancies with the feedwater flow calibration constants utilized in the calculation of feedwater mass flowrate and reactor thermal power level, which affected the accuracy of the thermal power calorimetric calculation in a non-conservative direction. Because of these discrepancies, the licensee had operated both Unit 1 and Unit 2 in excess of 100 percent power as defined in their respective Facility Operating Licenses between May 2000 and May 2001. This is a violation of the operating licenses.
Inspection Report# : 2001010*(pdf)*

Significance: G Jul 28, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
FAILURE TO FOLLOW PROCEDURE RESULTED IN AN INOPERABLE CONTROL ROOM VENTILATION FILTRATION SYSTEM.
Technical Specification 5.4.1.a requires, in part, that written procedures shall be established, implemented and maintained covering the applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. Appendix A of Regulatory Guide, Revision 2, February 1978, specifies authorities and responsibilities for safe operations and shutdown as an example of an administrative procedure. Nuclear Station Procedure OP-AA-101-102, "Roles and Responsibilities of On-Shift Personnel," Revision 3, Step 4.4.5, states that the unit supervisors are to ensure operations are conducted within the bounds of the TS in accordance with the Operations Standards and approved procedures. On July 18, 2001, during a maintenance activity that rendered the Unit 0B control room ventilation filtration actuation instrumentation inoperable, operators failed to correctly align the redundant control room ventilation filtration system train in the normal mode or emergency mode as required by Unit 0 Byron Operating Limits Procedure 3.7, "LCOAR [Limiting Condition for Operation Action Requirement], Control Room Ventilation Filtration System Actuation Instrumentation TS LCO [Limiting Condition for Operation] 3.3.7," Revision 2, Step A.
Inspection Report# : 2001010*(pdf)*

Significance: G Apr 28, 2001
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
FAILURE TO FOLLOW PROCEDURE RESULTED IN UNIT 2 REACTOR POWER OPERATION IN EXCESS OF ITS LICENSED THERMAL POWER LIMIT.
The inspectors identified a Non-Cited Violation of Technical Specification (TS) 5.4.1.a for the operators' failure to follow Unit 2 Byron General Operating Procedure 100-3T5, "Load Change Instruction Sheet for Power Increases less than 15 percent in 1 Hour," Revision 4. Operators incorrectly initiated a turbine generator power increase (a change directly affecting reactivity) and did not appropriately monitor Unit 2 plant parameters for the expected response during the increase in power. This resulted in Unit 2 reactor power operation in excess of its licensed thermal power limit. This finding had a credible impact on safety because the inappropriate operator actions associated with this event could have resulted in operation outside the safety analysis if reactor power exceeded 102 percent rated thermal power. Although this finding could have affected the integrity of the fuel cladding by exceeding fuel design criteria, the inspectors determined that this finding was of very low safety significance because Unit 2 reactor power did not exceed 102 percent.
Inspection Report# : 2001010*(pdf)*

Significance: G Nov 15, 2001
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
INADEQUATE POST MAINTENANCE TESTING RESULTED IN AN INOPERABLE CONTAINMENT ISOLATION INSTRUMENTATION
The inspectors identified that the licensee's post maintenance test failed to demonstrate that the Unit 2 containment radiation monitor 2AR11J output relay would perform satisfactory in service. This finding was determined to be of very low safety significance because the failure did not result in an actual open pathway in the physical integrity of the reactor containment. A Non-Cited Violation of 10 CFR 50 Appendix B, Criterion XI for the failure to perform an adequate post maintenance test was identified.
Inspection Report# : 2001015*(pdf)*

Significance: G Nov 15, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO IDENTIFY AND CORRECT THE CONTAINMENT RADIATION MONITOR AFTER THE EXPECTED RESPONSE WAS NOT OBTAINED DURING A MAINTENANCE ACTIVITY
The inspectors identified that the licensee failed to adequately evaluate the unlit "instrument available" light on the Unit 2 containment radiation monitor 2AR11J which resulted in the failure to identify that the radiation monitor was inoperable. This finding was determined to be of very low safety significance because the failure did not result in an actual open pathway in the physical integrity of the reactor containment. A Non-Cited

Violation of 10 CFR 50 Appendix B, Criterion XVI was identified.
Inspection Report# : 2001015*(pdf)*

Significance: G Nov 12, 2001
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
OPERATOR ERRORS RESULT IN VIOLATION OF CONTAINMENT ISOLATION VALVE TECHNICAL SPECIFICATION
A Non-Cited Violation of Technical Specification 3.6.3 for the operator's failure to isolate two inoperable containment penetrations was self-revealed. Operators incorrectly used a Unit 2 train "A" process sampling outboard isolation valve as an out-of-service isolation boundary for the Unit 2 train "B" process sampling line resulting in two inoperable containment penetrations. The inspectors determined that this issue had a credible impact on safety because the licensee failed to have the containment penetrations isolated as required by the Technical Specification and the valves were not capable of fulfilling their design safety function. The inspectors concluded that this issue could have affected the integrity of the reactor containment, however, because the valves were not called upon to fulfill their safety function and the small diameter penetrations would be a very small leakage path, this issue was of very low safety significance.
Inspection Report# : 2001014*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G Jan 12, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO ADEQUATELY POST AND BARRICADE A HIGH RADIATION AREA
The inspector identified a Non-cited Violation for the failure to provide an adequate barricade and to conspicuously post a high radiation area within the radioactive waste truck bay in accordance with Technical Specification 5.7.1. The finding was of very low significance because the inspector concluded that it was unlikely that an individual could have inadvertently entered the area and obtained an overexposure.
Inspection Report# : 2001004*(pdf)*

Significance: SL-IV Oct 24, 2000
Identified By: Licensee
Item Type: VIO Violation
DELIBERATE VIOLATION OF RADIATION PROTECTION PROCEDURES (EA# 00171 NOV LETTER DATED 9/22/2000)
The licensee identified that an individual deliberately violated radiation protection procedures on November 2, 1999. Specifically, the individual entered a High Contamination and High Radiation Area within the reactor containment building without having the proper authorization. Prior to the entry, the individual was instructed by his supervisor to work in another area of containment and was told by radiation protection staff that he could not enter the High Radiation Area without a pre-job briefing and a specific radiation work permit. Although no radiological consequences resulted from the individual's actions within the area, the NRC determined that the individual's actions constituted a deliberate violation of the licensee's procedure and issued the licensee a Severity Level IV Notice of Violation.
Inspection Report# : 2000016*(pdf)*
Inspection Report# : 2001004*(pdf)*

Significance: G Jun 16, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO POST A HIGH RADIATION AREA
The inspector identified a noncited violation for the failure to post a high radiation area in accordance with 10 CFR 20.1902(b). Specifically, accessible areas of the 1A letdown heat exchanger room, having radiation levels exceeding 100 millirem per hour at 30 centimeters (from the surface of the heat exchanger), were not posted as a high radiation area. Instead, the licensee had placed a caution sign with the words "NO ENTRY" on a plexiglass partition, which limited access to the area. Although the area was not adequately posted, the inspector concluded that it was unlikely that an individual could have inadvertently entered the area and obtained an overexposure. Consequently, this finding was determined to be of very low safety significance
Inspection Report# : 2000010*(pdf)*

Public Radiation Safety

Physical Protection

Significance: G Jun 30, 2001
Identified By: NRC
Item Type: FIN Finding
A PORTION OF ONE ZONE OF THE PERIMETER INTRUSION ALARM SYSTEM WAS SUSCEPTIBLE TO PENETRATION.
The inspectors observed that a portion of one zone of the licensee's perimeter intrusion alarm system was susceptible to penetration as demonstrated by a simulated jump by the licensee using their testing device. This issue had a credible impact on safety because an adversary must first penetrate the protected area intrusion alarm system by a covert or overt action. Based on the inspectors visual observation, the area in question appeared vulnerable and was tested by the licensee at the request of the inspectors. Repetitive tests by the licensee confirmed that the area could be jumped at approximately four feet. This finding was evaluated through the SDP and determined to be of very low safety significance because no intrusions had occurred, and an adversary would have encountered some level of force on their way to a target set. Additionally, there had not been greater than two findings in the last four quarters. There is no requirement for this type of test in the licensee's approved security plan. Therefore, no violation occurred. When tested using licensee's test procedure, the system passed. However, the inspectors concluded that the licensee's test procedure was inadequate to identify this type of vulnerability.
Inspection Report# : 2001009*(pdf)*

Significance: G May 22, 2001
Identified By: NRC
Item Type: FIN Finding
PARTICIPANTS IN THE STRESS FIRE WEAPON COURSE FAILED TO MEET THE LICENSEE'S LEVEL OF PROFICIENCY.
The inspectors observed that security personnel who participated in the licensee's Stress Fire Weapon Course on May 22, 2001, failed to demonstrate the level of weapon proficiency necessitated by the licensee's established protective strategy plan. This issue had a credible impact on safety because the purpose of the stress fire course is to demonstrate proficiency in the skills necessary to defend against the design basis threat. The problems identified included a course layout that differed from the licensee's procedure, target identification that differed from the procedure, and completion times that significantly exceeded those specified in the procedure. This finding was evaluated through the SDP and determined to be of very low safety significance because no intrusions had occurred, and there had not been greater than two findings in the last four quarters. There is no specific requirement for a stress fire course in the licensee's approved security plan; therefore, no violation occurred.
Inspection Report# : 2001009*(pdf)*

Miscellaneous

Significance: N/A Aug 13, 2001
Identified By: NRC
Item Type: FIN Finding
ADVERSE TREND IN OPERATOR HUMAN PERFORMANCE [THIS ISSUE WAS DISCUSSED AGAIN IN INSPECTION REPORT 454/455-2001-14.]
Similar operator human performance errors were identified in the initiating events, mitigating systems, and barrier integrity cornerstones. The inspectors noted 6 operator errors associated with procedural adherence and knowledge-based decisions over the last 12 months. These operator errors resulted in the inoperability of systems designed to mitigate the consequences of accidents and/or provide barrier integrity, resulted in the violation of TS requirements, and resulted in plant transients. While the risk significance associated with each of the individual events was very low, the number of operator human performance related incidents indicated an adverse performance trend which constitutes a significant cross-cutting issue.
Inspection Report# : 2001010*(pdf)*

Significance: N/A Dec 15, 2000
Identified By: NRC
Item Type: FIN Finding
PROBLEM IDENTIFICATION AND RESOLUTION SUMMARY
The inspectors determined the licensee staff were effective in identifying and resolving problems in accordance with the corrective action program.

Also, the inspectors concluded that the licensee staff communicated an acceptable level of responsibility for identifying and entering safety issues into the corrective action program. However, the inspectors also identified several examples of minor problems that did not result in adverse consequences and which were similar to problems identified by licensee staff during self-assessments. The inspectors identified some evaluations of condition reports that were not rigorously performed or were narrowly focused. As a result, the developed corrective actions were not always appropriate to the circumstances or were not totally effective. The inspectors also determined the licensee staff did not always develop condition reports to document and track the resolution of problems identified during effectiveness reviews of corrective actions for past condition reports.
Inspection Report# : 2000020*(pdf)*

Significance: N/A Nov 15, 2001
Identified By: NRC
Item Type: FIN Finding
PROBLEM IDENTIFICATION AND RESOLUTION SUMMARY
The inspectors concluded that the licensee adequately identified, evaluated, and resolved problems within the requirements of the corrective action program (CAP). In general, the significance threshold for entering issues into the corrective action program appeared appropriate. However, three issues of very low safety significance (Green) were identified which were related to an inconsistency in the threshold for initiating a condition report. In general, corrective actions specified were appropriate based on the identified causes and were effective in preventing recurrence of significant conditions adverse to quality. Licensee audits and assessments were thorough and identified issues similar to NRC observations. During interviews, station personnel stated they were not reluctant to raise safety issues; however, some staff members expressed hesitance to question management decisions. Additionally, while the overall program allowed the station to identify and resolve problems, a potential weakness in the station's implementation of the program related to training timeliness was identified.
Inspection Report# : 2001015*(pdf)*

Last modified : March 26, 2002