

# Catawba 1

## 4Q/2003 Plant Inspection Findings

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### Initiating Events

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### Mitigating Systems

**Significance:**  Dec 20, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Adequately Implement Containment Closeout Inspection Surveillance To Identify Debris In Containment Sump**

The inspectors identified a non-cited violation for failure to adequately implement a surveillance procedure in accordance with TS 5.4.1.a. Specifically, the licensee failed to identify approximately six gallons of material in the Unit 1 containment sump during a containment closeout inspection in accordance with the licensee's surveillance procedure. The finding is greater than minor because the finding was associated with the reactor safety mitigating system cornerstone objective to ensure the availability, reliability, and capability of a system that responds to initiating events to prevent core damage. The finding is of very low safety significance because the debris in the containment sump did not result in the actual loss of function or loss of a single train of safety injection equipment. (Section 4OA5)

Inspection Report# : [2003005\(pdf\)](#)

**Significance:**  Dec 20, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Identify and Correct Known Conditions Adverse to Quality - two examples: (1) 1B Containment Spray Heat Exchanger and (2) 2B Diesel Generator Battery**

The inspectors identified the first of two examples of a non-cited violation for failure to comply with 10 CFR 50 Appendix B, Criterion XVI, due to a failure to promptly identify and take effective corrective actions. Specifically, in this first example, the licensee failed to take effective corrective actions to prevent the 2B diesel generator battery bank from becoming inoperable sometime between October 18 - 25, 2003. Corrective actions resulting from the increased battery surveillance frequency were not adequate to identify an adverse trend in cell voltages prior to multiple cells being below the TS voltage. This finding is greater than minor because it affected the reactor safety mitigating system cornerstone attribute to ensure availability, reliability, and capability of the system. The finding is of very low safety significance because there was no loss of safety function on the battery bank. The safety function was verified by the licensee performing capacity testing on two battery cells, which showed sufficient capacity existed and therefore cell reversal conditions were not present. (Section 1RST)

The inspectors identified the second of two examples of a non-cited violation for failure to comply with 10 CFR 50 Appendix B, Criterion XVI, due to a failure to promptly identify and take corrective actions. Specifically, in this second example, the licensee failed to promptly identify and correct deficiencies and nonconformances in the 1B containment spray heat exchanger for known structural degradation of the tube support baffle plates from

approximately 1992 until October 6, 2003. The finding is greater than minor because the finding effected the Barriers cornerstone objective of providing reasonable assurance that physical barriers protect the public from radio nuclide releases caused by accidents or events, specifically the cornerstone attribute of maintaining the functionality of the containment by maintaining design structural integrity. Additionally, the finding is greater than minor because the heat exchanger actually was declared inoperable in excess of the allowed TS LCO time, which directly affected the cornerstone objective of functionality of the containment. The finding is under the Barrier Integrity cornerstone and is of very low safety significance because, the finding did not represent an actual reduction of the atmospheric pressure control function of the reactor containment since the other train was available and was designed for one hundred percent capability to meet design requirements. Extensive licensee engineering analysis, with vendor support, determined that heat exchanger past operability was maintained because service water flow during design accident system configurations was below newly developed limits due to system flow balancing.(Section 1R12)

Inspection Report# : [2003005\(pdf\)](#)



**Significance:** Jun 28, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Inadequate Cooling Water Flow Test Procedure**

The inspectors identified a non-cited violation for failure to comply with 10 CFR 50, Appendix B, Section XI, Test Control because a test procedure was inadequate to assure that the 1A containment spray (NS) heat exchanger (HX) would perform satisfactorily in service. The licensee's test procedure acceptance criteria limit was set too low to meet the intent of the stated purpose of the test and was inadequate to obtain test data that could be trended appropriately to adequately assure that the HX would perform satisfactorily in service. This allowed the 1A NS HX to become inoperable. The finding was more than minor because the heat exchanger actually became inoperable, which directly affected the cornerstone objective of preserving the containment boundary. The finding was only of very low safety significance because it did not represent an actual reduction of the atmospheric pressure control function of the reactor containment since the other train was available and was designed for one hundred percent capability to meet design requirements. (Section 1R12)

Inspection Report# : [2003003\(pdf\)](#)



**Significance:** Jan 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Update and Maintain Control of Design Calculations**

A non-cited violation of 10 CFR 50, Appendix B, Criterion III, "Design Control," and 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified for inadequate control of design calculations. This finding adversely affects the design control attribute of the mitigating systems cornerstone and is greater than minor because there were multiple examples of Type II calculation deficiencies that were significant enough to require revision of several design calculations to ensure the component cooling water system met design criteria. Specific examples of inadequate design calculations included failure to use appropriate and/or current calculation inputs, out of date active design calculations, and the failure to incorporate design changes into the existing design calculations. This finding is of very low safety significance because the resulting design calculation revisions did not show that the component cooling water system was operating outside of it's design criteria. (Section 1R21.231 b)

Inspection Report# : [2002008\(pdf\)](#)

## Barrier Integrity

**Significance:**  Sep 20, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

### **Effect of RCP Thermal Barrier Rupture on MOV Closure and Containment Isolation**

The inspectors identified a non-cited violation for failure to comply with 10 CFR 50 Appendix B, Criterion 3, Design Control, due to inadequate design measures. Specifically, the licensee failed to assure adequate relief valve sizing to prevent exceeding the design pressure of the component cooling water (KC) piping in the event of a reactor coolant pump (RCP) thermal barrier rupture. This finding represented a performance deficiency because it involved the licensee's failure to assure the design adequacy of the KC relief valve to protect the piping from exceeding design limits in the event of a RCP thermal barrier leak. This finding is more than minor because it affects the Reactor Safety Cornerstone, Barrier Integrity attribute of design control and affects the associated objective. The inadequately sized relief valve represents a potential open path way in the physical integrity of the reactor containment. The NRC performed a phase three significance determination screening analysis and concluded the finding is of very low safety significance. (Section 40A5.1)

Inspection Report# : [2003004\(pdf\)](#)

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## Emergency Preparedness

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## Occupational Radiation Safety

**Significance:**  Jun 28, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

### **Failure to Post a Radiation Area**

The inspectors identified a non-cited violation for failure to post a radiation area as required by 10 CFR 20.1902, Posting Requirement, paragraph (a), Posting of Radiation Areas. Radioactive samples having a dose rate greater than 5 millirem/hour at 30 centimeters were stored in the chemistry lab in such a manner that an individual could receive a whole body dose from the stored material without the proper radiation sign posting. The finding was more than minor because it was associated with the Occupational Radiation Safety Cornerstone and affected the process attribute of exposure/contamination control and monitoring. The finding was determined to be of very low safety significance using the Occupational Radiation Safety SDP, because this finding was not an overexposure or substantial potential for an overexposure, and did not compromise the ability to assess dose, nor was it an ALARA issue. (Section 20S1.1)

Inspection Report# : [2003003\(pdf\)](#)

**Significance:**  Jun 28, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

### **Failure to Perform Adequate Routine Surveys**

The inspectors identified a non-cited violation for failure to perform adequate radiological surveys as required by 10

CFR 20.1501, General, paragraph (a). Three radiological surveys conducted in the chemistry laboratory over a three month period were insufficient to detect radiation levels from potential radiological hazards that could create radiation areas. The finding was more than minor because they were associated with the Occupational Radiation Safety Cornerstone and affected the process attribute of exposure/contamination control and monitoring to protect the worker from exposure to radiation. The finding was determined to be of very low safety significance using the Occupational Radiation Safety SDP, because it was not an overexposure or substantial potential for an overexposure and did not compromise the ability to assess dose, nor was it an ALARA issue. (Section 2OS1.2)

Inspection Report# : [2003003\(pdf\)](#)

**Significance:** N/A Mar 29, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

### **Falsification of Radiological Survey Records**

A Severity Level IV violation that was characterized as an NCV of Technical Specification 5.4 and 10 CFR 50.9 was identified for a period of at least January 1 through June 4, 2002. This involved a health physics technician failing to perform required, routine radiation surveys on numerous occasions and deliberately fabricating data on the radiological survey records, which are required to be maintained by 10 CFR 20.2103. Because this issue involved willfulness on the part of a licensee employee and inaccurate information which impacts the regulatory process, it was not subject to the provisions of the Reactor Oversight Process, and was dispositioned in accordance with traditional enforcement. The finding was determined to be greater than minor because it was willful and involved required radiation surveys, some involving high radiation areas, that were not made over an extended period of time. (Section 4OA5.2)

Inspection Report# : [2003002\(pdf\)](#)

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## **Public Radiation Safety**

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## **Physical Protection**

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## **Miscellaneous**

Last modified : March 02, 2004