

April 23, 2009

Mr. Cary Alstadt, Plant Manager
Westinghouse Electric Company
Commercial Nuclear Fuel Division
P.O. Drawer R
Columbia, SC 29250

SUBJECT: INSPECTION REPORT NO.: 70-1151/2009-201 AND NOTICE OF VIOLATION

Dear Mr. Alstadt:

The U.S. Nuclear Regulatory Commission (NRC) conducted a routine and announced criticality safety inspection at your facility in Columbia, South Carolina, March 23-26, 2009. The purpose of the inspection was to determine whether activities involving licensed material were conducted safely and in accordance with NRC requirements. Observations and findings were discussed with your staff throughout the inspection and during an exit meeting held on March 26, 2009.

The inspection, which is described in the enclosure, focused on; (1) the most hazardous activities and plant conditions; (2) the most important controls relied on for safety and their analytical basis; and the principal management measures for ensuring controls are capable, available; and (3) reliable to perform their functions relied on for safety. The inspection consisted of analytical basis review, selective review of related procedures and records, examinations of relevant nuclear criticality safety (NCS)-related equipment, interviews with NCS engineers and plant personnel, and facility walkdowns to observe plant conditions and activities related to safety basis assumptions and related NCS controls.

Based on the results of this inspection, NRC has determined that one Severity Level IV violation of NRC requirements occurred. The violation was evaluated in accordance with the NRC Enforcement Policy included on the NRC's web site at www.nrc.gov; select **What We Do, Enforcement**, then **Enforcement Policy**. The violation is being cited in the enclosed Notice of Violation (Notice), and the circumstances surrounding it is described in detail in the inspection report. The violation is being cited in the Notice because it involves multiple failures to meet the requirements of Subpart H of Title 10 *Code of Federal Regulations* (10 CFR) Part 70, and was identified by NRC during the inspection. The violation is being cited as a Severity Level IV, the failure to include credible events in the Integrated Safety Analysis (ISA) and identify items relied on for safety in the ISA Summary.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.390 of NRC's "Rules of Practice," a copy of this letter and the enclosure will be made publicly available in the public electronic reading room of the NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/ADAMS.html>.

If you have any questions concerning this report, please contact Christopher Tripp, of my staff, at (301) 492-3214.

Sincerely,

/RA/

Patricia Silva, Chief
Technical Support Branch
Division of Fuel Cycle Safety
and Safeguards
Office of Nuclear Material Safety
and Safeguards

Docket No.: 70-1151
License No.: SNM-1107

Enclosures:

1. Notice of Violation
2. Inspection Report 70-1151/2009-201

cc w/enclosures:

Mr. Marc Rosser
Westinghouse Electric Company

cc w/o enclosures:

T. Pearce O'Kelley
Bureau of Radiological Health
South Carolina Department of Health
and Environmental Control

C. Alstadt

- 2 -

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NOTICE OF VIOLATION

Westinghouse Electric Company
Columbia, South Carolina

Docket No. 70-1151
License No. SNM-1107

During a U.S. Nuclear Regulatory Commission (NRC) inspection from March 23 through 26, 2009, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below.

Safety Condition S-1 of Special Nuclear Material License No. 1107 requires that material be used in accordance with the statements, representations, and conditions in the license application dated June 27, 2007, and supplements thereto.

Section 4.1.2 of the License Application states, in part, that the ISA "is developed in accordance with methods acceptable to the Columbia Fuel Fabrication Facility (CFFF) management, as approved by the Handbook [titled "Baseline ISA and ISA Summary Handbook"]...Subsection 7.2 activities are specific commitments to the NRC and must be executed, as described, for each ISA."

Section 7.2.3 of the ISA Handbook states, in part: "Any one of the following three independent acceptable sets of qualities could define an event as not credible, and therefore do not have to be considered in the ISA...Process deviations for which there is a convincing argument, given physical laws, that they are not possible, or are unquestioningly extremely unlikely. (The validity of the argument must not depend on any feature of the design or materials controlled by the facility's system of safety significant controls [SSCs] or management measures.)"

Contrary to the above, on and before March 23, 2009, the licensee performed Criticality Safety Evaluations (CSEs) in which events were classified as incredible based on the dependence on features of the design or materials controlled by the facility's system of SSCs or management measures.

- A. CSE-3-G, "UF₆ Cylinder Vaporizer and Condensate System Upsets," Rev. 0, dismissed criticality in the vaporizer trench as incredible based on dimensions of the trench and a volume limiter in the trench sump.
- B. CSE-03-M, "Conversion Quarantine Tank System," Rev. 3, dismissed criticality in the non-favorable geometry Q-Tanks based on the presence of Raschig rings.
- C. CSE-03-E, "CSE for the CFFF Decanter (De-Watering Decanter D-x07, Decanter Solids Discharge Receiver Tank V-x19, Intermediate Liquid Discharge Receiver Tank V-x12)," Rev. 1, dismissed criticality in the nitrogen system based, in part, on the presence of two valves on the nitrogen supply line.

This is a Severity Level IV Violation (Supplement VI).

Pursuant to the provisions of 10 CFR 2.201, Westinghouse Electric Company is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555, with copies to the Chief, Technical Support

Branch, Division of Fuel Cycle Safety and Safeguards, NMSS, and Regional Administrator, Region II, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include: (1) the reason for the violation, or, if contested, the basis for disputing the violation; (2) the corrective steps that have been taken and the results achieved; (3) the corrective steps that will be taken to avoid further violations; and (4) the date when full compliance will be achieved. Your response may reference or include previously docketed correspondence if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an Order or Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other actions as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001.

Because your response will be made available electronically for public inspection in the NRC Public Document Room (PDR), or from the NRC's document system (ADAMS), accessible from the NRC web site at <http://www.nrc.gov/reading-rm/adams.html>, to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld, and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.790(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days.

Dated this 23rd day of April 2009

**U. S. NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS**

Docket No.: 70-1151

License No.: SNM-1107

Report No.: 70-1151/2009-201

Licensee: Westinghouse Electric Company

Location: Columbia, South Carolina

Inspection Dates: March 23-27, 2009

Inspectors: Christopher Tripp, Senior Nuclear Process Engineer
Blake Purnell, Nuclear Process Engineer
Christian Farmer, General Engineer

Approved by: Patricia Silva, Chief
Technical Support Branch
Division of Fuel Cycle Safety
and Safeguards, NMSS

EXECUTIVE SUMMARY

Westinghouse Electric Company NRC Inspection Report 70-1151/2009-201

Introduction

Staff of the U.S. Nuclear Regulatory Commission (NRC) performed a routine and announced nuclear criticality safety (NCS) inspection of the Westinghouse Electric Company (WEC), Columbia, South Carolina facility from March 23-26, 2009. The inspection included an on-site review of the licensee NCS program, NCS evaluations, NCS training, NCS audits, recent NCS-related events, and open items. The inspection focused on risk-significant fissile material processing activities and areas including ammonium diuranate conversion, fuel manufacturing, integrated fuel burnable absorber (IFBA) and Erbium fuel manufacturing, and uranium recovery.

Results

- A Severity Level IV violation was identified regarding multiple instances of incorrectly basing incredibility determinations for criticality accident sequences on features of the design controlled by safety significant controls (SSCs).
- An Unresolved Item (URI) was identified regarding criticality calculations for the newly installed decanter in ammonium diuranate conversion, crediting fixed neutron absorbers without meeting the requirement of ANSI/ANS-8.21-1995.
- The inspectors closed violation 70-1151/2008-204-01 regarding failure to remove postings from two rod transfer carts upon changing the Criticality Safety Evaluation (CSE).
- No safety concerns were identified regarding NCS training and qualification.
- No safety concerns were identified regarding NCS inspections and audits.
- No safety concerns were identified during observation of facility operations.
- No safety concerns were identified during review of the internal event and problem reporting system.
- No safety concerns were identified regarding criticality code validation.
- With the exception of the Severity Level IV violation and URI mentioned above, no other safety concerns were identified during this inspection.

REPORT DETAILS

1.0 Summary of Plant Status

WEC manufactures light water reactor fuel at its Columbia, South Carolina facility. During the inspection, the plant operated normally.

2.0 NCS Program (IP 88015, IP 88016)

a. Inspection Scope

The inspectors reviewed selected CSEs generated or revised since the last inspection to determine the adequacy of the analytical basis for facility operations. The inspectors reviewed selected aspects of the following documents:

- CSE-3-G, "CSE for UF₆ Cylinder Vaporization and Condensate Systems," Rev 0, dated February 2009.
- CN-CRI-07-43, "UF₆ Cylinder Vaporizer and Condensate System Upsets," Rev. 0.
- CN-CRI-08-28, "UF₆ Bay Trenches," Rev. 0, October 2008.
- CSE-17-B, "CSE for Final Assembly Wash Pit," Rev. 1, September 2008.
- RA-310, "Nuclear Criticality Safety Independent Technical Review," Rev. 12.
- CSE-7-A, "CSE for the Solvent Extraction System," Rev. 4, dated February 2009.
- CN-CRI-05-12, "Calculations to Determine the k_{eff} of the Array of Tanks in the Solvent Extraction Area Following Addition of Fifteen 10-inch Schedule 40 Tanks, an Adding Tank, Seven Miniature Centrifugal Concatros, One Light Phase Holding Vessel, and One Heavy Phase Holding Vessel Using MCNP 4B," Rev. 0.
- RA-313, "CSE," Rev. 7, dated April 3, 2008
- CSE-03-E, "CSE for the CFFF Decanter (De-Watering Decanter D-x07, Decanter Solids Discharge Receiver Tank V-x19, Intermediate Liquid Discharge Receiver Tank V-x12)," Rev. 1, dated January, 2009
- CN-CRI-08-38, "CQ1000 Decanters, Solids Discharge Receiver Tanks (Cylindrical Geometry), and Liquid Discharge Receiver Tanks (Cylindrical Geometry)," Rev. 1, dated January, 2009
- CSE-03-M, "Conversion Quarantine Tank System," Rev. 3, dated January, 2009
- RA-314, "Implementation of Criticality Safety Evaluations," Rev. 8, dated January 15, 2009
- RA-314-1, "CSE Implementation Plan for CSE-03-E, Rev. 1," Rev. 4, not dated
- CRI-07-33, "SCALE 5.1 Benchmark Calculations for Low Enriched Heterogeneous Systems," Rev. 0
- CRI-07-34, "SCALE 5.1 Benchmark Calculations for Low Enriched Homogeneous Systems," Rev. 0
- CRI-07-36, "Determination of Bias for Heterogeneous Systems Modeled using SCALE 5.1," Rev. 0
- CRI-07-36, "Determination of Bias for Heterogeneous Systems Modeled using SCALE 5.1," Rev. 0

b. Observations and Findings

The inspectors reviewed several CSEs and Calculation Notes issued or revised since the last Headquarters NCS inspection in November 2008. The inspectors determined that the analyses were performed by qualified NCS engineers, that independent reviews were performed in accordance with procedure RA-310, "Nuclear Criticality Safety Independent Technical Reviews," Rev. 12, as documented on Form RAF-310-2, and that analyses in general provided for subcriticality of operations. The CSEs in general established appropriate criticality controls and limits based on validated computer calculations. Validation was specifically looked at for the different CSEs that use the SCALE computer code, the CSEs appeared to be within the scope of the validation.

The inspectors noted that several processes reviewed had no credible criticality accident sequences listed in the CSE. The inspectors reviewed the licensee's discussion of why these events were incredible and determined that, in many cases, they were based on engineered and/or administrative controls. CSE-3-G dismissed criticality in the vaporizer trench as incredible based on dimensions of the trench and a volume limiter (with both dimensions and material composition requirements) in the trench sump. With these controls in place the trench and sump were evaluated to be subcritical under credible abnormal conditions. CSE-03-M dismissed criticality in the non-favorable geometry Q-Tanks based on the presence of Raschig rings. CSE-03-E dismissed criticality in the nitrogen system based, in part, on the presence of two valves on the nitrogen supply line. The staff noted that in most cases the design features and human actions relied on in making the incredibility determination were classified as SSCs. The licensee stated that these SSCs were not, in general, items relied on for safety. These SSCs and their associated accident sequences were not included in the licensee's Integrated Safety Analysis (ISA) Summary.

The inspectors reviewed the licensee's ISA document entitled "Baseline ISA and ISA Summary Handbook" and determined that it contained several criteria consistent with NRC guidance for incredibility. The ISA Handbook, Section 7.2.3, also states that the validity of the incredibility argument "must not depend on any feature of the design or materials controlled by the facility's system of SSCs or management measures." The inspectors determined that in each of the above three cases, the incredibility argument was based on facility SSCs. The licensee stated that it did not follow the ISA Handbook, but rather followed (less explicit) guidance in the NCS Handbook and in procedure NCS-010, "Categorizing Potential Criticality Scenarios and Criticality Safety Significant Controls." The inspectors reviewed both the ISA and NCS Handbook and determined that they used slightly different language. However, the inspectors determined that the analyses of the aforementioned processes were not in accordance with the requirements of the ISA Handbook.¹ The licensee stated that the incredibility argument did not really rely on the SSCs, and that they were just identified to provide defense-in-depth. However, there was no other documented basis for why these events were incredible other than the discussion of the SSCs.

The inspectors determined that these SSCs appeared to be adequate as criticality controls. The licensee stated that the SSCs were treated the same as IROFS by its facility management systems. The inspectors reviewed ISA Handbook Section 6.6.2, "Safety-Related Controls," and determined that SSCs appeared to be appropriately

¹ A similar issue was raised in Inspection Report 70-1151/2007-202, and was closed in Inspection Report 70-1151/2008-201, based in part on the revision to procedure NCS-010. The criteria in the procedure appear adequate, but the licensee is not correctly implementing them.

incorporated into its facility management measures programs. With regard to how they are handled within the facility programs, SSCs are treated the same as IROFS. However, only safety controls that are classified as IROFS, and only accident sequences that are considered incredible, are included in the licensee's ISA Summary. Certain regulatory requirements in 10 CFR Part 70 apply in particular to IROFS. While the inspectors do not consider this issue to have safety significance (because controls appear to be appropriate and are treated as IROFS within the facility), this issue does have high regulatory significance. The licensee's repeated failure to apply its own criteria for criticality classifying events as incredible is **Violation (VIO) 70-1151/2009-201-01**.

The inspectors reviewed the CSE and Calculation Note (CN) for the new decanter. It was noted that some of the decanter's internal steel components (bowl and scroll shaft) were designated as SSCs. The CSE stated that the bowl and scroll shaft were credited for NCS purposes because they limit the internal volume of the decanter and will absorb some neutrons. The CSE specified a large number of dimensional limits on the decanter as well as the type of steel that must be used for the bowl and scroll shaft. The inspectors noted that the manufacturer certified that the decanter met the design requirements specified by the NCS staff, and provided an elemental analysis of the steel components. Based upon discussions with the licensee staff, the inspectors also determined that the corrosion allowance specified in the CSE for the bowl and scroll shaft was conservative.

The inspectors noted that neutron absorbers were not listed as a controlled parameter in the CSE for the decanter. The CSE did not include any analysis of the decanter that would demonstrate that the neutron absorption properties of the steel were not needed to demonstrate that the decanter would be adequately subcritical. The inspectors questioned why neutron absorbers were not considered to be a controlled parameter when the CSE stated that the ability to absorb neutrons was an important property of the steel components. The licensee's NCS staff stated that since the equipment had to be made out of something, and they did not explicitly procure equipment with a strong absorber (e.g., boron), they did not consider the steel components to be a neutron absorber in the context of controlled parameters.

Westinghouse has specific commitments in its license regarding the use of neutron absorbers as a controlled parameter, including a commitment to follow ANSI/ANS-8.21 (1995), "Use of Fixed Neutron Absorbers in Nuclear Facilities Outside Reactors." NCS staff indicated that they did not follow ANS-8.21 since they did not believe it applied in this case. The inspectors determined that the standard does apply, and therefore must be complied with, for the following reasons:

- The standard defines a neutron absorber as a neutron-capture material. Steel is therefore a neutron absorber for the purpose of the standard.
- The standard states that fixed neutron absorbers are materials that are an integral part of equipment, and are incorporated into the design to assure safety margins for subcriticality as needed for normal and abnormal operating conditions. The bowl and scroll shaft are an integral part of the process equipment and have neutron absorbing properties that were relied upon to ensure adequate subcriticality.

However, it was not readily apparent which specific requirements of the standard were being met. In particular, the standard requires that periodic inspections be performed on the neutron absorber at a frequency determined by the licensee. The implementation documents indicated that there were no inspection requirements for the bowl and scroll shaft, which appeared to be based upon the application of a conservative corrosion allowance. It was not clear if this was sufficient to meet the requirements of the standard. The inspectors also noted that the decanter was only recently installed, and in-service inspections were not likely to be needed this early in its operations, and therefore this is not an immediate safety issue. The reliance in the CSE on the neutron absorber properties of the internal steel components of the decanter without implementing ANS-8.21 will be tracked as **Unresolved Item (URI) 70-1151/2009-201-02**.

The inspectors reviewed several other recently issued or revised CSEs, and determined that, with the exception of the issues discussed above, they appeared to be adequate. In several cases administrative controls had been replaced or augmented with more robust engineered controls. Modifications seemed to be in line with the goals of the NCS Improvement Project, which is due to be completed in June 2009.

c. Conclusions

A Severity Level IV violation was identified regarding the classification of events as incredible based on facility SSCs. A URI was identified regarding application of the commitments regarding fixed neutron absorbers. No other safety concerns were identified.

3.0 NCS Training and Qualification (IP 88015)

a. Inspection Scope

The inspectors reviewed selected aspects of criticality safety training to determine whether NCS staff is involved in the development and oversight of NCS training and to determine whether the NCS training program addresses NCS aspects of facility hazards affecting fissile material operations. The inspectors reviewed selected aspects of the following documents:

- TRN-061, "SSC Training," Rev. 4
- TRN-062, "Criticality Safety Sign Training," Rev. 3

b. Observations and Findings

The inspectors reviewed selected aspects of the slides that make up the criticality safety training, observed part of a training session on criticality safety for managers, and observed an operator during his oral qualification board answer questions about criticality safety. During the training session there was a senior member of the criticality safety staff there to answer any additional questions that were raised, which demonstrated the involvement that the NCS staff has in training. The qualification board demonstrated that the operator had sufficient knowledge of the variety of aspects of criticality safety affecting his fissile material operations. The training observed demonstrated that the NCS staff is doing appropriate training for staff and operators.

c. Conclusions

No safety concerns were identified during the review of the licensee criticality safety training for staff and operators.

4.0 NCS Inspections, Audits, and Investigations (IP 88015)

a. Inspection Scope

The inspectors reviewed results of the most recent NCS quarterly audits to assure that appropriate issues were identified and resolved. The inspectors reviewed selected aspects of the following documents:

- RA-316, "NCS Facility Walkthrough Assessments," Rev. 2, dated May 22, 2008
- "Checklist for NCS Facility Walkthrough Assessments," 4th quarter, 2008
- "Checklist for NCS Facility Walkthrough Assessments," 1st quarter, 2009
- EHS-AUDIT-09-03, "NCS Program Audit," dated March 18, 2009

b. Observations and Findings

The inspectors reviewed the licensee procedure for conducting NCS walkthroughs and the walkthrough checklists from the last two quarters. The inspectors also reviewed the recently completed external audit of the NCS program. The inspectors determined that NCS walkthroughs were conducted in accordance with written procedures. The inspectors noted that the auditor reviewed recently completed CSEs and their implementation in the facility.

c. Conclusions

No safety concerns were identified regarding licensee NCS audits.

5.0 Nuclear Criticality Safety Event Review and Follow-up (IP 88015, 88016, 88017)

a. Inspection Scope

The inspectors reviewed the licensee's Redbook for internal reporting of conditions in order to ensure that the licensee staff has a means to report and correct criticality safety-related problems.

b. Observations and Findings

The inspectors reviewed selected open and closed Redbook items. The inspectors noted that licensee staff, including process operators, routinely reported suspect conditions and other problems and that these reports are evaluated by engineering and safety staff for resolution. The events selected were in the process of being closed out, but had not been completely resolved at the time of the inspection

c. Conclusions

No safety concerns were identified during review of the licensee internal event and problem reporting system.

6.0 Plant Operations (IP 88015, IP 88016)

a. Inspection Scope

The inspectors walked down significant portions of the facility to determine whether risk-significant fissile material operations were being conducted safely and in accordance with regulatory requirements (including those addressed by newly issued or revised CSEs mentioned under Section 2.0).

b. Observations and Findings

The inspectors observed ongoing operations, interviewed operators, and discussed the fissile material operations with NCS staff. The areas covered during these walkdowns included ammonium diuranate conversion, fuel manufacturing, integrated fuel burnable absorber (IFBA) and Erbium fuel manufacturing, and uranium recovery. The observed operations appeared to be conducted safely and in accordance with regulatory and procedural requirements.

c. Conclusions

With the exception of the aforementioned Severity Level IV violation and URI, no safety concerns were identified during plant walkdowns.

7.0 Open Item Review

VIO 70-1151/2008-204-01

This item concerned the licensee's failure to update a sketch and to remove criticality safety postings from two rod transfer carts, a required change to the system, after completing the implementation of Rev. 2 of CSE-12-A, "CSE for Rod Transfer Caskets." The licensee had responded to the Notice of Violation by letter dated December 19, 2008, in which it acknowledged the violation, determined the root cause, and committed to corrective action. The licensee completed immediate corrective actions as described in the letter. In addition, the licensee committed to longer-term corrective actions of revising procedure RA-314 to better define roles and responsibilities for implementing CSEs, developing a training package for use by the team implementing CSEs, and clarifying guidance on posting placement. During the current inspection, the licensee stated that procedure RA-314 is mostly concerned with implementation, and that procedure RA-302, "Criticality Signs," Rev. 14, has been revised to address the posting issues. The inspectors reviewed RA-314 and RA-302 and determined that they clearly delineated roles and responsibilities, with most responsibility for postings being by the NCS staff. The requirements appeared to be reasonably clear. The licensee also stated that the other two corrective actions were ongoing, but that it had undertaken an initiative to periodically walk through the facility and monitor postings for placement and accuracy. The inspectors noted that RA-302 step 4.3.G had been added, requiring that all applicable SSC numbers be listed on new or revised postings. The inspectors observed during facility walkdowns that more recent postings included the CSE number and revision, as well as SSC numbers, and were reasonably clear and distinctively marked.

The inspectors did note that, in some cases, postings were supplemented with "stickers" that either reiterated administrative controls on the postings or steps in procedures. The

stickers did not have any revision number or date on them. The inspectors did not identify any stickers with incorrect or out-of-date controls, but the use of such operator aids without any apparent approval or revision control is a potential weakness of the criticality posting program.

Based on changes to procedures RA-314 and RA-302, and on field observations and the inclusion of the additional corrective actions in the licensee's corrective action program, this item is closed.

8.0 Exit Meeting

The inspectors presented the inspection scope and results to members of the licensee's management and staff during an exit meeting on March 26, 2009. The licensee acknowledged and understood the findings as presented.

SUPPLEMENTARY INFORMATION

1.0 List of Items Opened, Closed, and Discussed

Items Opened

VIO 70-1151/2009-201-01 Failure of licensee to correctly apply criteria from ISA Handbook for classifying events as incredible when relying on facility SSCs

URI 70-1151/2009-201-02 Tracks the reliance on the neutron absorbing properties of steel components in a decanter in the CSE without implementing ANSI/ANS-8.21 (1995).

Items Closed

VIO 70-1151/2008-204-01 Repeated occurrences of licensee failure to carry out instructions in procedure RA-314 during implementation of CSEs.

Items Discussed

None

2.0 Inspection Procedures Used

IP 88015 Nuclear Criticality Safety Program
IP 88016 Nuclear Criticality Safety Evaluations and Analyses

3.0 Partial List of Persons Contacted

WEC

R. Winiarski	NCS Manager
C. Snyder	NCS
S. Gough	NCS
M. Rosser	EH&S Manager
B. Ervin	EH&S
E. Byrd	EH&S
R. Bates	Maintenance
J. Peterson	Maintenance Manager
C. Alstadt	Plant Manager
E. Hill	Pelleting Area Manager
B. Phillips	Conversion Manager
A. Moreno	Rod Operations Manager
D. Precht	Operations

NRC

C. Tripp	Sr. Nuclear Process Engineer
B. Purnell	Nuclear Process Engineer
C. Farmer	General Engineer

D. Hartland Sr. Fuel Facility Inspector
P. Glenn Fuel Facility Inspector

All attended the exit meeting on March 26, 2009.

4.0 List of Acronyms

ADAMS	Agencywide Documents Access and Management System
CFFF	Columbia Fuel Fabrication Facility
CFR	Code of Federal Regulations
CSE	criticality safety evaluation
EH&S	environment, health, and safety
IFBA	integral fuel burnable absorber
IP	inspection procedure
IROFS	item relied on for safety
ISA	integrated safety analysis
NCS	nuclear criticality safety
NCSIP	nuclear criticality safety improvement project
SSC	safety-significant control
URI	unresolved item
WEC	Westinghouse Electric Company (licensee)
NSA	nuclear safety analysis