



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW, SUITE 23T85
ATLANTA, GEORGIA 30303-8931

January 6, 2005

Westinghouse Electric Company
ATTN: Mr. M. Fecteau, Manager
Columbia Plant
Commercial Nuclear Fuel Division
Drawer R
Columbia, SC 29250

SUBJECT: NRC INSPECTION REPORT NO. 70-1151/2004-005 AND NOTICE OF VIOLATION

Dear Mr. Fecteau:

The U.S. Nuclear Regulatory Commission (NRC) conducted an announced routine inspection in the areas of regional criticality/operational safety and operator training, and an announced regional initiative inspection in the areas of maintenance and surveillance. The inspections were conducted at your facility in Columbia, South Carolina, from December 6 through 9, 2004. The purpose of the inspections was to determine whether activities involving licensed materials were conducted safely and in accordance with regulatory requirements. An exit meeting was held on December 9, 2004, during which time observations from the inspections were discussed with you and members of your staff.

The inspection consisted of facility walk downs; selective examinations of relevant procedures and records; examinations of safety-related structures, systems, equipment and components; interviews with plant personnel; and observations of plant conditions and activities in progress. Throughout the inspection, observations were discussed with your managers and staff.

Based on the results of this inspection, the NRC has determined that two Severity Level IV violations of regulatory requirements occurred. The first violation involved the failure to perform periodic reviews of procedures as required by the license application. This violation was evaluated in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, which is included on the NRC's web site at <http://www.nrc.gov/what-we-do/regulatory/enforcement.html>. The violation is cited in the enclosed Notice of Violation (Notice).

In regard to this cited violation, the NRC has concluded that the corrective actions taken to correct the violation are already adequately addressed on the docket in this inspection report. However, you are required to submit a written statement or explanation pursuant to 10 CFR 2.201 if the description therein does not accurately reflect your corrective actions or your position.

The second Severity Level IV violation of NRC requirements is being treated as a non-cited violation (NCV), consistent with Section VI.A of the Enforcement Policy. The NCV involved the failure to follow procedures with regard to heating a uranium hexafluoride cylinder with a Hunt Valve without first performing a required cold pressure check on the valve. If you contest the

violation or significance of the NCV, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001, with copies to the Regional Administrator, Region II, and the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

In accordance with 10 CFR 2.390 of NRC's "Rules of Practice," this document may be accessed through the NRC's public electronic reading room, Agency-Wide Document Access and Management System (ADAMS) on the Internet at <http://www.nrc.gov/reading-rm/adams.html>.

Please note that on October 25, 2004, the NRC terminated public access to ADAMS and initiated an additional security review of publicly available documents to ensure that potentially sensitive information is removed from the ADAMS database accessible through the NRC's web site. Interested members of the public may obtain copies of the referenced documents for review and/or copying by contacting the Public Document Room pending resumption of public access to ADAMS. The NRC Public Documents Room is located at NRC Headquarters in Rockville, MD, and can be contacted at (800) 397-4209.

Should you have any questions concerning this letter, please contact us.

Sincerely,

/RA/

Jay L. Henson, Chief
Fuel Facility Inspection Branch 2
Division of Fuel Facility Inspection

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

Enclosures: 1. Notice of Violation
2. NRC Inspection Report

cc w/encls: (See page 3)

cc w/encls:

Sam McDonald, Manager
Environment, Health and Safety
Commercial Nuclear Fuel Division
Westinghouse Electric Corporation
P. O. Box R
Columbia, SC 29250

Henry J. Porter, Assistant Director
Div. of Radioactive Waste Mgmt.
Dept. of Health and Environmental
Control
Electronic Mail Distribution

R. Mike Gandy
Division of Radioactive Waste Mgmt.
S. C. Department of Health and
Environmental Control
Electronic Mail Distribution

Distribution w/encls:

J. Henson, RII
D. Seymour, RII
J. Lubinski, NMSS
M. Galloway, NMSS
J. Olivier, NMSS
P. Silva, NMSS
D. Stout, NMSS
PUBLIC

*see previous concurrence

OFFICE	RII:DFFI	RII:DFFI	RII:DFFI	H:NMSS	H:NMSS
SIGNATURE	MC 1/6/05	DS 1/6/05	MC 1/6/05		
NAME	*J. Jimenez	*D. Seymour	*M. Crespo		
DATE					
COPY?	YES NO	YES NO	YES NO	YES NO	YES NO

NOTICE OF VIOLATION

Westinghouse Electric Company, LLC
Columbia, SC

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

During an NRC inspection conducted on December 6 - 9, 2004, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedures for NRC Enforcement Actions," NUREG-1600, the violation is listed below:

- A. Safety Condition No. S-1 of Special Nuclear Material License No. 1107, requires that material be used in accordance with statements, representations, and conditions in the License Application dated April 30, 1995, and supplements thereto.

Section 3.4.1(c), "Procedure Review Frequencies," of the License Application, requires that the maximum frequencies of reviews-for-updating for regulatory-significant procedures will be: Annual, for Category-1 and Category-2 Procedures; and, Biennial for Category-3 Procedures.

Contrary to the above, prior to August 6, 2004, the frequency of reviews-for-updating for numerous regulatory-significant procedures was greater than annually for Category-1 and Category-2 Procedures, and greater than biennially for Category-3 Procedures. Specifically, the Electronic Training and Procedure System (E-TAPS) was not properly installed in March of 2000, and therefore failed to make the appropriate notifications to initiate reviews of regulatory significant procedures. This failure lead to approximately two hundred procedures being overdue for their periodic review.

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

The NRC has concluded that the corrective actions taken to correct the violation are already adequately addressed on the docket in this Inspection Report. However, you are required to submit a written statement or explanation pursuant to 10 CFR 2.201 if the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to respond, clearly mark your response as a "Reply to a Notice of Violation," and send it to the U. S. Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington, D.C. 20555 with a copy to the Regional Administrator, Region II, within 30 days of the date of the letter transmitting this Notice.

Because any response will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS), 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. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room). 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

Enclosure 1

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 2.390(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 6th day of January, 2005

U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No: 70-1151

License No.: SNM-1107

Report No.: 70-1151/2004-005

Licensee: Westinghouse Electric Company

Location: Columbia, SC

Inspection Dates: December 6-9, 2004

Inspectors: Manuel Crespo, Fuel Facility Inspector
Jose Jimenez, Fuel Facility Inspector

Approved: Jay Henson, Chief
Fuel Facility Inspection Branch 2
Division of Fuel Facility Inspection
Region II

EXECUTIVE SUMMARY

Commercial Nuclear Fuel Division NRC Inspection Report 70-1151/2004-005

This announced inspection incorporated a routine inspection of the licensee's plant operations and operator training. The inspection also included a regional initiative inspection of maintenance and surveillance. The inspection identified the following aspects of the licensee's programs as outlined below:

Plant Operations

- The work environment reflected the safety practices outlined by the license. The operators were knowledgeable of how to communicate safety concerns and issues to management, and adequately communicated these concerns to management (Paragraph 2.a).
- For selected process areas, adequate safety controls and procedures were implemented in accordance with the safety analyses. Safety controls were present and adequately performing their safety function (Paragraph 2.b).
- The licensee conducted operations safely and in accordance with procedures. Operators were knowledgeable of their procedures and the safety controls in their areas. Housekeeping in the scrap recovery area was noted to need improvement (Paragraph 2.c).
- Safety significant controls were properly identified and in place in URRS. Operators were knowledgeable about the configuration control program in their areas. The licensee adequately implemented the configuration control and change control programs (Paragraph 2.d).
- Procedures were clearly written, incorporated the safety and administrative controls for the particular work area, and included instructions for normal and abnormal conditions (Paragraph 2.e).
- The URRS safety audits were thorough and detailed. Findings were adequately addressed and tracked to completion in the Licensee's Corrective Actions Process System (Paragraph 2.f).
- The licensee adequately controlled and tested the criticality and fire alarm systems (Paragraph 2.g).
- A non-cited violation was identified for the inadvertent heating of a uranium hexafluoride cylinder equipped with a Hunt valve prior to performing the required cold pressure check on the Hunt valve (Paragraph 2.h).
- One violation was identified for the failure to perform periodic reviews of regulatory significant procedures (Paragraph 2.i. (4)).

Operator Training

- The licensee adequately implemented refresher training for: nuclear criticality safety, general employee, radiation protection, and general emergencies (Paragraph 3.a).
- The training system used to maintain qualified operators was adequate (Paragraph 3.b).

Maintenance/Surveillance

- The observed maintenance work conducted at the facility was properly performed. Maintenance personnel implemented the proper authorizations and procedures. The personnel performing the work were qualified for their positions and tasks (Paragraph 4.a).
- The licensee performed timely surveillance tests and calibrations of equipment, in accordance with procedures, and adequately documented the results (Paragraph 4.b).

REPORT DETAILS

1. **Summary of Plant Status**

Routine fuel manufacturing operations and maintenance activities were conducted in the ammonium diuranate (ADU) conversion, Pelleting, Integrated Fuel Burnable Absorber (IFBA), and Erbia areas. The solvent extraction system for the Uranium Recycle and Recovery System (URRS) was down for maintenance. Other routine operations in URRS proceeded normally.

2. **Plant Operations (Inspection Procedure (IP) 88020)**

a. Management and Administrative Practices (O3.01)

(1) Inspection Scope and Observations

The inspectors interviewed upper management and operation supervisors to verify that the present work environment reflected the safety practices outlined by the license. In order to enhance the safety culture and to improve operations, the licensee had been implementing a human performance program. Weekly human performance meetings were implemented in which operators were able to communicate concerns or issues to supervisors and managers. The meetings also provided feedback to operators about issues. The groups also benefitted from detailed huddle meetings (shift turnover) where the day's goals and potential challenges were laid out. The inspectors also questioned operators on what actions would they take during an unusual upset condition or a discovery of an error in a procedure. The operators responded properly by stating that they would stop operations and obtain guidance from either supervisors or the safety department. Operators were also aware of the Redbook System for initiating reviews of issues or events. No issues were noted.

(2) Conclusions

The work environment reflected the safety practices outlined by the license. The operators were knowledgeable of how to communicate safety concerns and issues to management, and adequately communicated these concerns to management.

b. Safety Function (O3.02)

(1) Inspection Scope and Observations

The inspectors reviewed the performance of a new safety control to prevent unanalyzed pump-outs of uranium nitrate (UN) solution. The new control was run in parallel with the existing control of physically locking critical valves. The new control was the addition of computer controlled valves interlocked with the requisite lab analysis results. Westinghouse plans to eventually remove the locks and keys on the critical valves and depend on the computer controlled valves and the lab analysis interlock. No performance issues were noted.

The inspectors also reviewed the input program used by the lab technicians for the new control. The inspectors noted that the program required the lab analysis results to be input twice, for confirmation of the results, prior to opening the interlock. This acts as an additional safeguard from mistyping data. No issues were noted with the control.

The inspectors also reviewed a sample of the safety analyses pertaining to the conversion and pelleting processing areas to verify that adequate controls and procedures were implemented according to these analyses. The inspectors conducted a walk down of a manufacturing line from the input of uranium hexafluoride to the formation of pellets. The safety controls, procedures, safety information, safety limits and parameters were found to be in accordance with the analyses. The administrative controls were verified by the information provided by the operators when questioned about the safety function of equipment. No issues were noted.

(2) Conclusions

For selected process areas, adequate safety controls and procedures were implemented in accordance with the safety analyses. Safety controls were present and adequately performing their safety function.

c. Plant Activities (O3.03)

(1) Inspection Scope and Observations

The inspectors performed plant tours of the IFBA, Erbia, chemical conversion, powder preparation, and pelleting areas. The inspectors also reviewed operations in the URRS area. The inspectors interviewed first and second shift URRS operators about the new electronic verification for pump outs to the UN Bulk tanks. The operators were knowledgeable of the new safety controls and the hazards posed by pumping unanalyzed material to the UN Bulk tanks. No issues were noted.

The inspectors also attended the URRS operations morning meetings and noted adequate communication of the day's goals and challenges. During observations of operations, the inspectors interviewed operators on the requirements for performing a line break due to plugging. The operators knew the requirements for personnel protective equipment for specific process lines. The operators were also aware that line breaks were authorized in their isolation of lines procedure. The operators were also able to explain items relied on for safety (IROFS) pertaining to their process areas. Observations of the conduct of operations reaffirmed the information obtained from interviewed operators.

The inspectors observed maintenance on equipment in conversion lines one and two. The maintenance workers demonstrated adequate knowledge of the systems, implemented As Low as Reasonable Achievable (ALARA) requirements, followed procedures, and used the correct personal protective equipment.

During the walk down of the facility, the inspectors noted that the licensee's housekeeping, for the most part, was adequate. However, the inspectors noted that the scrap recovery area housekeeping needed improvement because of periodic minor

leaks and spills. These housekeeping conditions were addressed once the inspectors brought the area to the attention of the licensee. The inspectors interviewed the personnel responsible for the area. The inspectors noted that they were aware of the area's potential for contamination and had taken measures to mitigate the problem by routinely cleaning the area.

(2) Conclusions

The licensee conducted operations safely and according to procedures. Operators were knowledgeable of their procedures and the safety controls in their areas of responsibility. Housekeeping in the scrap recovery area was noted to need improvement.

d. Configuration Control (O3.04), Change Control (O3.05)

(1) Inspection Scope and Observations

The inspectors used process and instrument diagrams (P&IDs) to perform walk downs of the configuration of critical portions of URRS and a conversion line. The inspectors verified that safety significant controls were properly identified and in place. The inspectors interviewed operators and determined that they were able to adequately identify the items under configuration control in their areas. The inspectors also noted that the operators were aware of tasks that would require the use of the change control procedure. The inspectors found no issues with the work done in the facility. The inspectors reviewed several modifications done in the plant and found that the appropriate steps were taken to make sure the changes were properly reviewed, approved and documented. The inspectors also reviewed procedures to verify that they were updated with the most recent modifications to the process. No issues were noted.

The inspectors reviewed the change control documentation for the installation of the electronic verification system in URRS. All approvals for the installation and testing were properly obtained prior to installation. The project was not closed because the control was still under evaluation. In the interim, the valve interlock and the administrative controls of the locks on the valves were both implemented. No issues were noted.

(2) Conclusions

Safety significant controls were properly identified and in place in URRS. Operators were knowledgeable about the configuration control program in their areas. The licensee adequately implemented the configuration control and change control programs.

e. Operating Procedures (O3.06)

(1) Inspection Scope and Observations

The inspectors reviewed selected procedures and verified that they were clearly written, incorporated the safety and administrative controls for the particular work area, and included instructions for different normal and abnormal conditions.

The inspectors reviewed selected procedures in URRS and noted that they were updated to include the new electronic verification system. The inspectors also noted that the most recent procedure revisions were available through the Electronic Training and Procedure System (E-TAPS). However, a violation was identified (see Section i.(4) below) for the failure to perform periodic reviews of regulatory significant procedures.

(2) Conclusions

Procedures were clearly written, incorporated the safety and administrative controls for the particular work area, and included instructions for normal and abnormal conditions.

f. Safety Audits (3.09)

(1) Inspection Scope and Observations

The inspectors reviewed several periodic self-assessment audits for URRS. The inspectors noted that the audits were thorough in their review of safety in the area. The audits were proceduralized by a detailed checklist of items to review, which gave adequate guidance to perform the audit. The inspectors also obtained the Corrective Actions Process (CAPs) reports on the audit results to verify that findings were addressed. The inspectors noted that the CAPs system adequately tracked and documented when the findings were corrected. No issues were noted.

(2) Conclusions

The URRS safety audits were thorough and detailed. Findings were adequately addressed and tracked to completion in the CAPs.

g. Criticality Alarm Systems (O3.10)

(1) Inspection Scope and Observations

The inspectors confirmed the testing of both the fire and criticality alarms. The inspectors also verified that both were properly announced and tested on a weekly basis for all three shifts. The fire alarm system was in the process of receiving upgrades to allow communication between the three stations through a land line. The inspectors also noted the criticality alarms were adequately controlled through lock and keys to prevent inadvertent disabling. No issues were noted.

(2) Conclusions

The licensee adequately controlled and tested the criticality and fire alarm systems.

h. Review of Previous Events (O3.12)

(1) Inspection Scope and Observations

The inspectors reviewed an event that occurred on November 3, 2004, where a cylinder equipped with a Hunt valve was inadvertently heated in the vaporizers prior to performing a cold pressure check on the Hunt valve. An operator inadvertently selected the wrong cylinder number to load into the vaporizer. During the evolution, an operator erroneously determined that the cylinder had a Hunt valve but did not need a cold pressure check. During heating of the cylinder, the licensee recognized that the cylinder needed a cold pressure check and stopped heating of the cylinder. Once the cylinder was removed, the cylinder successfully passed the cold pressure check, which indicated that the event was of low safety significance. The licensee's procedures state that cylinders equipped with a Hunt valve that cannot be confirmed to have successfully passed a cold pressure check are to be held aside for review by Environmental, Health and Safety (EH&S) and process engineering prior to heating. The licensee's failure to do this constituted a failure to follow procedures.

The licensee's short term corrective actions for this event was to retrain all conversion area operators on the requirements for cold pressure checks. The licensee's long term corrective actions were to implement an electronic bar code system that would eliminate the mistake that allowed the wrong cylinder to be processed. Therefore, this non-repetitive, licensee-identified violation is being treated as a non-cited violation (NCV), consistent with Section VI.A.8 of the NRC Enforcement Policy (NCV 70-1151/2004-05-01, Inadvertent Heating of Cylinder with Hunt Valve).

(2) Conclusions

A non-cited violation was identified for the inadvertent heating of a uranium hexafluoride cylinder equipped with a Hunt valve prior to performing the required cold pressure check on the Hunt valve.

i. Follow-up on Previously Identified Issues (O3.13)

(1) (Closed) Violation (VIO) 70-1151/2003-09-01: Failure to Follow Procedures

This violation involved four examples where the licensee failed to follow procedures. The inspectors looked at the corrective actions taken by the licensee, and assessed the adequacy of the results obtained. The inspectors noted that the licensee had completed, and documented, the corrective actions listed in their response to the NRC for this violation. One major component of the licensee's corrective actions was holding huddle meetings with all shifts and providing training in the huddle meetings emphasizing procedure compliance. The huddle meetings were a component of the licensee's implementation of the Human Performance tools.

The inspectors interviewed employees from two shifts to assess the adequacy of the huddle meetings. The employees interviewed were knowledgeable in the areas of procedure adherence, self checking, maintaining a questioning attitude, and the actions to take when unexpected circumstances arise. The inspectors also attended a huddle meeting and were able to verify that the information discussed in these meetings reinforced these concepts as well as the importance of thorough shift turnovers. The inspectors concluded that the training provided to the employees to make sure procedures are followed was adequate. Based on this review, this violation is closed.

(2) (Closed) VIO 70-1151/2003-09-02: Failure to Complete Training Prior to Performing Process Operations

The inspectors reviewed the licensee's corrective actions for operators who performed tasks in URRS for which they were not fully qualified. The corrective actions were appropriate. The inspectors also reviewed the qualifications and performance of the operators in the URRS area to verify that they were knowledgeable of their current positions and areas of responsibility. No issues were noted. Based on this review, this violation is closed.

(3) (Closed) VIO 70-1151/2004-04-01: Failure to Follow Procedure

The inspectors reviewed the new electronic safety interlock (discussed in Section 2.b. above) that will prevent inadvertent pump outs to the UN Bulk tanks without adequate lab analysis results. No issues were noted. Based on this review, this violation is closed.

(4) (Closed) Unresolved Item (URI) 70-1151/2004-202-17: Tracks Determination of Last Procedural Review

The inspectors reviewed the licensee's investigation into the Electronic Training and Procedure System (E-TAPS) error that made the procedural review notification nonfunctional. The licensee's investigation determined that the error in E-TAPS was present since the installation of the program, which occurred in late 2000 and early 2001. Since E-TAPS was relied upon to make notifications to perform the periodic review of procedures, the licensee had not performed any reviews until the NRC made the observation on August 3, 2004. The licensee attributed the error to an inexperienced programmer that developed the system and a lack of functional testing of the program for programming errors such as this one.

The licensee determined that, at the time of discovery, 919 active documents had gone beyond their required review period. The overdue reviews included mechanical operating procedures, chemical operating procedures, quality control instructions, and maintenance and calibration operating procedures, and included Category-1, 2, and 3 procedures. The safety significance of the overdue reviews was low because a large percentage of these procedures were not safety significant (approximately two hundred procedures dealt with NRC licensed activities), and because the licensee's modification process also included a determination of whether the procedure needed revising as a result of the modification.

The License Application states, in Section 3.4.1 (c), "Procedure Review Frequencies," that the maximum frequencies of reviews-for-updating for regulatory-significant procedures would be annual for Category-1 and 2 procedures, and biennial for Category-3 procedures. The failure to meet this license requirement is identified as VIO 70-1151/2004-005-02: Failure to Perform Routine Reviews of Procedures. Based on this review, URI 70-1151/2004-202-17 will be closed.

In order to rectify the procedure review issue, the licensee opened a Corrective Action Process System (CAPS) item to initiate the appropriate reviews of procedures. At the time of this inspection, nearly all the procedures had obtained their appropriate review. The error in the E-TAPS system was also corrected. The licensee also initiated modifications to change procedures and program testing to include a review by an EH&S representative to ensure that regulatory requirements were properly incorporated into programs.

3. **Operator Training (IP 88010)**

a. 10 CFR 19.12 Training (F2.01), General Nuclear Criticality Safety Training (F2.02), General Radiological Safety Training (F2.03), and General Emergency Training (F2.04)

(1) Inspection Scope and Observations

The inspectors reviewed the annual refresher for site access. The refresher included radiation protection, nuclear criticality safety, and emergency evacuation instructions. The inspectors also reviewed the test results for select operators and noted adequate scores and proper testing materials. The inspectors also noted that the refresher satisfied the requirements for 10 CFR 19.12. No issues were noted.

(2) Conclusions

The licensee adequately implemented refresher training for: nuclear criticality safety, general employee, radiation protection, and general emergencies.

b. Operator Procedure Training (F2.05), and On-the-job Training (F2.06)

(1) Inspection Scope and Observations

The inspectors noted that the licensee was performing adequate on-the-job training for chief operators in the conversion area. The inspectors also reviewed test results for the training of operators on URRS procedures. The inspectors noted that operators were properly qualified for their positions and had scored adequately on the procedure exams. The inspectors noted that the control of training records for URRS was adequate.

(2) Conclusions

The training system used to maintain qualified operators was adequate.

4. Maintenance and Surveillance (IP 88025)

a. Conduct of Maintenance (F1.01), Work Control Procedures (F1.02), Work Control Authorizations (F1.03), Qualification of Maintenance Personnel (F1.04)

(1) Scope and Observations

The inspectors reviewed the licensee's conduct of maintenance, including the proper use of procedures and the process to obtain work authorizations, to ensure that maintenance work did not adversely impact the safety of plant operations or the worker. The inspectors observed several maintenance jobs performed in the plant to ensure that the workers knew the requirements for the job. The workers interviewed were able to explain the work orders and the safety implications for the jobs.

The work orders reviewed by the inspectors contained the appropriate initiating and completion instructions for the work. Any unique requirements, such as special clothing, respirator, health physics, or surveillance requirements, were indicated on the work order. The work orders were properly written with adequate descriptions of the problem. In cases where the work was done on a system with safety-related equipment, a special form was attached that needed to be completed prior to completing the work. This special form was an administrative control designed to ensure that workers were aware that a safety component was involved. The form also dictated whether or not a functional test was required after the completion of the job. No issues were noted from the work orders reviewed.

The maintenance work observed by the inspectors was performed properly. The workers appropriately implemented their work order instructions. Peer checks were performed during special circumstances to verify completed tasks were done correctly. The inspectors also verified that the maintenance and operations department communicated prior to starting work and following the completion of the work. No issues were noted, and the tasks were done without compromising safety.

The inspectors verified that personnel conducting the maintenance work were properly qualified for their jobs. A sample of personnel qualifications records were reviewed to verify that their education and training adequately qualified them for their jobs. The records reviewed contained all the necessary information confirming that the workers' expertise was adequate for the tasks assigned to them.

(2) Conclusion

The observed maintenance work conducted at the facility was properly performed. Maintenance personnel implemented the proper authorizations and procedures. The personnel performing the work were qualified for their positions and tasks.

b. Surveillance Testing. (F1.06). Calibration of Equipment (F1.07)

(1) Scope and Observations

The inspectors verified that surveillance tests and calibrations of equipment were performed according to established frequencies. The inspectors also verified that safety requirements were met by the employees performing the work. The licensee's maintenance program relied on the software MAPCON to track surveillance and calibration dates of equipment. The planning group used this information to develop the schedule used by maintenance. The inspectors verified through interviews with maintenance personnel that they knew of surveillance tests and calibrations due in the upcoming weeks. The personnel were able to demonstrate how work orders were developed for these jobs and how they were implemented using established procedures. The inspectors were also able to confirm that, through a combination of MAPCON and human performance, deadlines for surveillance tests and calibration were met.

The inspectors reviewed some of the documentation for work done in the recent weeks to verify that an adequate amount of detail was incorporated. The inspectors noted adequate detail in the steps taken to complete the task, with emphasis on the safety requirements specific to the job. The procedures used for the jobs were clear and provided the required information to test the reliability of the equipment.

(2) Conclusion

The licensee performed timely surveillance tests and calibrations of equipment, in accordance with procedures, and adequately documented the results

5. **Exit Meeting**

The inspection scope and results were summarized on December 9, 2004, with the licensee. The inspectors described the areas inspected and discussed in detail the inspection results. Although proprietary documents and processes were reviewed during this inspection, the proprietary nature of these documents or processes is not included in this report. No dissenting comments were received from the licensee.

ATTACHMENT

1. **LIST OF PERSONS CONTACTED**

Licensee

- *C. Aguilar, URRS, Manager
- *M. Fecteau, Plant Manager
- *R. Gale, Chemical Operations Manager
- *D. Graham, EH&S Technician
- S. McDonald, EH&S Manager
- *T. Shannon, Operations Manager, EH&S
- *R. Byrd, Backup Maintenance Department Manager
- R. Winiarski, Nuclear Criticality Safety Manager

Other licensee employees contacted included engineers, technicians, production staff, security, and office personnel.

2. **INSPECTION PROCEDURES USED**

- IP 88010 Operator Training
- IP 88020 Regional Criticality Safety Inspection Program
- IP 88025 Maintenance and Surveillance

3. **LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED**

<u>Item Number</u>	<u>Status</u>	<u>Description</u>
70-1151/04-05-01	Opened/Closed	NCV - Inadvertent Heating of Cylinder with Hunt Valve (Paragraph 2.h)
70-1151/04-05-02	Opened	VIO - Failure to Perform Periodic Reviews of Procedures (Paragraph 2.i.(4))
70-1151/03-09-01	Closed	VIO - Failure to Follow Procedures (Paragraph 2.i.(1))
70-1151/03-09-02	Closed	VIO - Failure to Complete Training Prior to Performing Process Operations (Paragraph 2.i.(2))
70-1151/04-04-01	Closed	VIO - Failure to Follow Procedure (Paragraph 2.i.(3))
70-1151/04-202-17	Closed	URI - Tracks determination of last procedural review (Paragraph 2.i.(4))

4. **LIST OF ACRONYMS USED**

ADAMS	Agency-Wide Document Access and Management System
ADU	Ammonium Diuranate
ALARA	As Low as Reasonable Achievable
CAPs	Corrective Action Process
CFR	Code of Federal Regulations
EH&S	Environmental, Health and Safety
E-TAPS	Electronic Training and Procedure System
IFBA	Integrated Fuel Burnable Absorber
IP	Inspection Procedure
IROFS	Items Relied on for Safety
NCV	Non-Cited Violation
NOV	Notice of Violation
OP	Operating Procedure
P&ID	Process and Instrumentation Diagram
PARS	Publicly Available Records
RP	Radiation Protection
SNM	Special Nuclear Material
UN	Uranium Nitrate
URI	Unresolved Item
URRS	Uranium Recycle and Recovery System
VIO	Violation