



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW, SUITE 23T85
ATLANTA, GEORGIA 30303-8931

March 26, 2009

EA-09-089
NMED NO. 0808892

Ms. Lisa Price
Chief Executive Officer and Facility Manager
Global Nuclear Fuel - Americas, L.L.C.
P.O. Box 780
Wilmington, NC 28402

SUBJECT: NRC INSPECTION REPORT NO. 07001113/2009-001

Dear Ms. Price:

This refers to the inspection conducted on February 23 - 27, 2009 at the Wilmington, NC facility. The purpose of the inspection was to determine whether activities authorized by the license were conducted safely and in accordance with NRC requirements. The enclosed report presents the results of this inspection. The results of this inspection were discussed with members of your staff at the inspection exit meeting on February 27, 2009.

This inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions in your license. Within these areas, the inspection consisted of a selected examination of procedures and representative records, observations of activities, and interviews with personnel.

Based on the results of this inspection, an apparent violation was identified and is being considered for escalated enforcement action in accordance with the NRC Enforcement Policy. The current Enforcement Policy is included on the NRC's Web site at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforc-pol.pdf>. This apparent violation, discussed in Paragraph 4 of the enclosed inspection report, involved the failure to adhere to Section 6.4, "Criticality Accident Alarm System," of the license application. The circumstances surrounding this apparent violation, the significance of the issues, and our evaluation of your corrective actions were discussed with members of your staff at the inspection exit meeting on February 27, 2009. As a result, it may not be necessary to conduct a predecisional enforcement conference in order to enable the NRC to make an enforcement decision.

Before the NRC makes its enforcement decision, we are providing you an opportunity to either: (1) respond to the apparent violation addressed in this inspection report within 30 days of the date of this letter or (2) request a predecisional enforcement conference. If a conference is held, it will be open for public observation. The NRC will also issue a press release to announce the conference. Please contact Mr. Daniel Rich at (404) 562-4721 within seven (7) days of the date of this letter to notify the NRC of your intended response.

If you choose to provide a written response, it should be clearly marked as a "Response to An Apparent Violation in Inspection Report No. 07001113/2009-001; EA-09-089, and should include for the apparent violation: (1) the reason for the apparent violation, or, if contested, the basis for disputing the apparent 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. Additionally, your response should include your assessment of the risk significance of the event. In presenting your corrective actions, you should be aware that the promptness and comprehensiveness of your actions will be considered in assessing any civil penalty for the apparent violation. The guidance in NRC Information Notice 96-28, "Suggested Guidance Relating to Development and Implementation of Corrective Action," included on the NRC Web site may be helpful. Your response may reference or include previously docketed correspondence, if the correspondence adequately addresses the required response. If an adequate response is not received within the time specified or an extension of time has not been granted by the NRC, the NRC will proceed with its enforcement decision or schedule a predecisional enforcement conference.

In addition, please be advised that the number and characterization of the apparent violation described in the enclosed inspection report may change as a result of further NRC review. You will be advised by separate correspondence of the results of our deliberations on this matter.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response, if you choose to provide one, will be made available electronically for public inspection in the NRC Public Document Room 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, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

Sincerely,

/RA/ D. Jackson for

Joseph W. Shea, Director

Division of Fuel Facilities Inspection

Docket No. 70-1113

License No. SNM-1097

Enclosure: NRC Inspection Report

cc w/encl:

Scott Murray, Manager

Facility Licensing

Global Nuclear Fuels - Americas, L.L.C.

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Beverly Hall, Chief

Radiation Protection Section

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ADAMS: Yes ACCESSION NUMBER: _____

SUNSI REVIEW COMPLETE

OFFICE	RII:DFFI	RII:DFFI	RII:DFFI	RII:EICS			
SIGNATURE	DR for 3/26/09	RG 3/26/09	DR 3/26/09	Sws 3/26/09			
NAME	CCramer	RGibson	DRich	SSparks			
DATE	3/ /2009	3/ /2009	3/ /2009	3/ /2009	3/ /2009	3/ /2009	3/ /2009
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY DOCUMENT NAME: G:\ENFORCE\GLOBAL NUCLEAR FUEL\EA-09-XXX - CRITICALITY WARNING SYSTEM DISABLED\NOV COVER LETTER.DOC

U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.: 70-1113

License No.: SNM-1097

Report No.: 70-1113/2009-001

Licensee: Global Nuclear Fuel - Americas, L.L.C.

Location: Wilmington, NC 28402

Dates: February 23, 2009 - February 27, 2009

Inspector: C. Cramer, Fuel Facility Inspector

Approved by: Joseph W. Shea, Director
Division of Fuel Facilities Inspection

Enclosure

EXECUTIVE SUMMARY

Global Nuclear Fuel - Americas, L.L.C.
NRC Inspection Report 70-1113/2009-001

This was an announced inspection that included observations and evaluations of management organization and controls and operator training, as well as follow up to an event involving the criticality warning system (CWS) being degraded. The inspection involved interviews with plant personnel, review of selected records, and observation of work activities. The inspection identified the following aspects of the licensee's programs as outlined below:

Management Organization and Controls

- No significant changes in management occurred since the previous management organization and controls inspection.
- The inspector reviewed the licensee's system to track plant issues which ensures items relied on for safety (IROFS) are maintained and operational. No significant issues were identified.

Operator Training

- No significant issues were identified regarding the licensee's process for training maintenance personnel and operators.

Criticality Warning System Disabled

- One apparent violation was identified for the failure of the licensee to adhere to Nuclear Safety Instruction (NSI) O-10.0 Revision 2, which states, in part, that while the CWS alarm is silenced, a radiation protection monitor (RPM) must monitor the console and be prepared to activate the alarm if a criticality is detected. The result of this failure was the CWS alarms in the fuel manufacturing building were disabled for four days. (Paragraph 4)

Attachment:

Partial List of Persons Contacted

Inspection Procedures Used

List of Items Opened, Closed, and Discussed

REPORT DETAILS

1. Summary of Plant Status

The Global Nuclear Fuel - Americas L.L.C. (GNF-A) facility converts gaseous UF₆ to UO₂ powder and fabricates uranium fuel for use in commercial nuclear power reactors. During the inspection, routine operations were being conducted at GNF-A.

2. Management Organization and Controls

a. Inspection Scope and Observations

There have been no significant changes in licensee management and there have been no changes in licensed positions since the last inspection. The inspector reviewed the licensee's change control program to ensure that changes to procedures were appropriately controlled and approved.

The inspector reviewed changes to functional tests to ensure that changes were approved by appropriate licensee representatives (i.e. nuclear criticality safety, radiation safety, etc.) before the new functional tests were performed.

The inspector reviewed the plant safety committee's charter and discussed the plant safety committee recent activities with GNF-A staff. Also, the inspector reviewed the Employee Concern Program and discussed the Employee Concern Program with GNF-A staff.

The inspector reviewed the licensee's audit programs to ensure that audits were performed to meet the requirements of the license. Also, the inspector reviewed the audit findings to ensure that they were properly tracked and appropriate corrective actions were implemented by the licensee.

The inspector reviewed the unusual incident reports to determine if the licensee had adequately classified incidents, performed a root-cause analysis when warranted, and tracked the necessary corrective actions required to close unusual incident reports so that the licensee could ensure that items relied on for safety (IROFS) were available and reliable to perform their intended function when needed. No significant issues were identified.

b. Conclusions

The licensee addressed plant issues to ensure that IROFS were maintained to ensure safe operation of the facility. No significant issues were identified with regards to the licensee's management organization and controls.

3. Operator Training

a. Inspection Scope and Observations

The inspector reviewed initial and refresher training for operators. The inspector also reviewed the licensee's program to comply with 10 CFR 19.12.

The licensee adequately trained operators on administrative IROFS and emergency preparedness.

The inspector reviewed procedures that implemented the training program to determine that the procedures identified training requirements, materials, maintenance of records, and refresher training. The licensee also had a system in place to ensure initial training for visitors was completed before visitors were allowed access to the controlled area.

The inspector interviewed technicians, operators, and management, to ensure that the licensee had installed a training program commensurate with the employees' position.

b. Conclusions

Training for operators and maintenance personnel was adequately conducted. Training on the maintenance and operation of IROFS to ensure the safety of the facility was adequately performed. No significant issues were identified in regards to training.

4. Criticality Warning System Disabled

a. Inspection Scope and Observations

On December 12, 2008 at approximately 0600 two of the Fuel Manufacturing Operation (FMO) criticality detectors malfunctioned, causing the building Criticality Warning System (CWS) alarm to sound an immediate evacuation of the FMO. The site emergency organization responded and determined dose rates for the affected areas were normal and no criticality had occurred. The emergency organization requested the CWS horns be silenced to begin the process of allowing personnel to re-enter the facility. The CWS horns were silenced by switching the CWS alarm control located in the Emergency Control Center (ECC) from automatic mode to manual mode.

The radiation protection monitor (RPM) then monitored the CWS panel in the ECC as required, until the Nuclear Safety Advisor (NSA) instructed the RPM to leave the ECC and survey operators who had left the FMO during the evacuation and had not surveyed themselves before leaving the FMO. The RPM and the NSA failed to ensure that the CWS alarm control was being monitored when the RPM left to survey operators. Shortly after, the Emergency Director determined that the situation had been resolved and stood down operations in the ECC. Once the ECC stood down, the emergency organization exited the ECC without returning the CWS to automatic mode. After building re-entry, the Radiation Protection Manager instructed another RPM to place the CWS console in the radiation protection office in manual mode and monitor the console while maintenance was performed on the detectors. Once the maintenance was completed, the RPM in the radiation protection office put the CWS console back into automatic mode, assuming that the CWS console in the ECC was already in automatic mode, and that the system should be working as designed. There was a trouble light on the CWS console in the radiation protection office that would have alerted the RPM that the system was not functioning correctly, however it had burned out. The licensee had identified this condition on December 10, and a change request had been generated, but the work had not yet been performed.

At approximately 6:00 a.m. on December 16, a radiation technician was performing maintenance on the computer console associated with the CWS control panel in the radiation protection office. The radiation technician was experiencing difficulty with the system and rebooted the computer several times. Still unable to fix the problem, the radiation technician went to check the control panel in the ECC and realized that the CWS was set on manual mode. Upon discovery, the CWS horns were immediately returned to the automatic mode in the ECC. Shortly after, a test was performed on the CWS horns to ensure proper operability. The licensee reported the disabled CWS to the NRC within 24 hours of discovery pursuant to 10 CFR 70.50(b)(2).

The inspector reviewed the licensee's root cause, interviewed staff and management, reviewed documents regarding the incident, and reviewed the corrective actions that were put into place to prevent recurrence of the event. The licensee determined that the lack of understanding as to the importance of the burned out trouble indicator on the CWS console and human performance issues were the root causes of this event. The inspector determined that an adequate root cause investigation was performed and agreed with the licensee's conclusions of the investigation.

The licensee's immediate corrective actions included: (1) immediately returning the CWS building horns to automatic mode in the ECC; (2) notifying the site emergency director and investigation into site activities to ensure that there were no unusual events that would have actuated the system during the period when the CWS was in manual mode; and (3) the building CWS was tested to ensure proper system operability. The short and long-term corrective actions included: (1) adding indicator lights and improved labeling to the CWS consoles to allow for an easier determination of the status of the CWS; (2) a stand down with RPMs and staff to ensure they were aware of the event and knowledgeable of procedures to be followed during CWS alarm maintenance and/or testing; (3) during Emergency Organization annual training, adding a greater emphasis on expectations of adequate turnover between Emergency Organization individuals following an event; and (4) improving procedural guidance related to the CWS. The inspector concluded the licensee's root cause investigation was satisfactory and proposed corrective actions were adequate.

Section 6.4.2 of the license application, "Criticality Accident Alarm System," states, in part, that the criticality alarm system initiates immediate evacuation of the facility. Section 5.3 of Nuclear Safety Instruction (NSI) O-10.0, Revision 2, "Criticality Warning System," states, in part, that while the CWS alarm is silenced, a radiation protection monitor must monitor the console and be prepared to activate the alarm if a criticality is detected. The failure to monitor the CWS console while the CWS alarm was silenced as required by NSI O-10.0 Revision 2 is considered an apparent violation. (AV 70-1113/2009-001-01)

b. Conclusions

One apparent violation was identified for the failure of the licensee to adhere to Nuclear Safety Instruction (NSI) O-10.0 Revision 2, which states, in part, that while the CWS alarm is silenced, a radiation protection monitor must monitor the console and be prepared to activate the alarm if a criticality is detected.

5. **Exit Meeting**

The inspection scope and results were summarized on February 27, 2009, with Sean Fuller and other members of your staff. No dissenting comments were received.

ATTACHMENT

1. PERSONS CONTACTED

Partial List of Licensee's Persons Contacted

Harry Knight	Manager, Fuels EHS
Scott Murray	Manager, Licensing & Liabilities
John Zino	Manager, GNF-A Criticality Safety
Mike Grimstead	Manager, CMC
Kyle Maloy	Radiological Protection

2. INSPECTION PROCEDURES USED

IP 88020, Operational Safety
IP 88010, Operator Training
IP 88005, Management Organization and Controls

3. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

<u>Item Number</u>	<u>Status</u>	<u>Description</u>
EN 44724	Closed	Criticality Warning System Disabled
AV 70-1113/2009-001-01	Opened	Failure to monitor criticality warning system while the alarm was silenced