



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

December 14, 2009

EN 45491 (NMED 090829)

Mr. Sean Fuller
Chief Operating Officer and Facility Manager
Global Nuclear Fuel - Americas, L.L.C.
P.O. Box 780, Mail Code J20
Wilmington, NC 28402

SUBJECT: NUCLEAR REGULATORY COMMISSION INSPECTION REPORT
NO. 70-1113/2009-009

Dear Mr. Fuller:

This refers to the inspection conducted from November 9-12 and November 16-19, 2009, at the Global Nuclear Fuels – Americas, L.L.C. (GNF-A) facility in Wilmington, North Carolina. The purpose of the inspection was to determine whether activities authorized by the license were conducted safely and in accordance with NRC requirements. At the conclusion of the inspection on November 12 and 19, 2009, the inspectors discussed the findings with you and members of your staff.

The results of the inspection are documented on the enclosed NRC Form 591FF, "SAFETY INSPECTION REPORT." No violations were identified during the inspection of your licensed activities. Please retain the original form for your files.

In accordance with Title 10 of the Code of Federal Regulations (CFR) 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure 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>.

If you have any questions, please call me at (404) 562-4721.

Sincerely,

/RA by MThomas for/

Daniel W. Rich, Chief
Fuel Facility Inspection Branch 3
Division of Fuel Facility Inspection

Docket No. 70-1113
License No. SNM-1097

Enclosure: (See page 2)

Enclosure: NRC Form 591FF Parts 1 and 3

cc w/encl:

Scott Murray, Manager
Facility Licensing
Global Nuclear Fuels – Americas, L.L.C.
Electronic Mail Distribution

Beverly Hall, Chief
Radiation Protection Section
N.C. Department of Environmental Commerce & Natural Resources
Electronic Mail Distribution

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*see previous concurrence

☒ PUBLICLY AVAILABLE ☐ NON-PUBLICLY AVAILABLE ☐ SENSITIVE ☒ NON-SENSITIVE

ADAMS: ☒ Yes ACCESSION NUMBER: _____

OFFICE	RII:DFFI	RII:DFFI	RII:DFFI			
SIGNATURE	/RA/	/RA/	/RA/			
NAME	MCrespo*/	RPrince*	RGibson*			
DATE	12/02/2009	12/02/2009	12/03/2009	12/ /2009	12/ /2009	12/ /2009
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY DOCUMENT NAME: G:\FFBI\REPORTS\DRAFT INSPECTION REPORT
FOLDER\GNF-A\2009-008 Cover ltr.DOC

SAFETY AND COMPLIANCE INSPECTION REPORT

1. LICENSEE OR CERTIFICATEE/LOCATION INSPECTED: Global Nuclear Fuels - Americas, L.L.C. P.O. Box 780 Wilmington, NC 28402 REPORT NO: 2009-009		2. NRC/REGIONAL OFFICE: U.S. Nuclear Regulatory Commission Region II 61 Forsyth Street, Suite 23T85 Atlanta, GA 30303	
3. DOCKET NUMBER(S): 70-1113	4. LICENSE OR CERTIFICATEE NUMBER: SNM-1097	5. DATE(S) OF INSPECTION: November 9 - 12 & 16 - 19, 2009	

6. INSPECTION PROCEDURE(S) COMPLETED: 88020 and 88045

LICENSEE OR CERTIFICATEE: Global Nuclear Fuels – Americas, L.L.C.

The inspection was an examination of the activities conducted under your license or certificate as they related to safety and/or safeguards and to compliance with the Nuclear Regulatory Commission (NRC) rules and regulations and the conditions of your license or certificate. The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observation by the inspector. The inspection findings are as follows:

- ☒ 1. Based on the inspection findings, no violations were identified.
- ☐ 2. Previous violation(s) closed.
- ☐ 3. Reported events reviewed
- ☐ 4. The violation(s), specifically described to you by the inspector as non-cited violations, are not being cited because they were non-repetitive, licensee-identified, and corrective action was being taken, and the remaining criteria in the NRC Enforcement Policy to exercise discretion were satisfied.

Non-Cited Violation(s) was/were discussed involving the following requirement(s) and Corrective Action(s):

- ☐ 5. During this inspection certain of your activities, as described below and/or attached, were in violation of NRC requirements and are being cited. This form is a NOTICE OF VIOLATION, which may be subject to posting in accordance with 10 CFR 19.11.
(Violations and Corrective Actions)

Statement of Corrective Actions

I hereby state that, within 30 days, the actions described by me to the inspector will be taken to correct the violations identified. This statement of corrective actions is made in accordance with the requirements of 10 CFR 2.201 (corrective steps already taken, corrective steps which will be taken, date when full compliance will be achieved). I understand that no further written response to NRC will be required, unless specifically requested.

Title	Printed Name	Signature	Date
LICENSEE/CERTIFICATEE			
NRC INSPECTOR	Manuel Crespo and Robert Prince	/RA/	12/03/2009

DOCKET FILE INFORMATION
SAFETY AND COMPLIANCE INSPECTION REPORT

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3. DOCKET NUMBER(S): 70-1113	4. LICENSE OR CERTIFICATEE NUMBER: SNM-1097	5. DATE(S) OF INSPECTION: November 9 - 12 & 16 - 19, 2009

6. INSPECTOR(S): Manuel Crespo, Robert Prince, Marilyn Diaz (In-training) and Patricia Glenn (In-training)

7. INSPECTION PROCEDURES USED: 88020 and 88045

SUPPLEMENTAL INSPECTION INFORMATION

EXECUTIVE SUMMARY

Summary of Plant Status

The Global Nuclear Fuels facility converts uranium hexafluoride into uranium dioxide and fabricates fuel assemblies for use in commercial nuclear power reactors. This routine, announced inspection included evaluations of operational safety and the effluent control and environmental protection programs. The inspections involved field observations, review of selected records, and interviews with plant personnel. During most of the inspection period, operations were normal. However, on November 12, 2009, the licensee reported event number 45491 to the NRC. The event involved the failure to identify safety controls present in the pellet and rod loading production areas as items relied on for safety (IROFS). Operations in these areas were shutdown on November 11, 2009 until the licensee had identified sufficient IROFS to meet the performance requirements of 10 CFR 70 Subpart H.

Effluent Control and Environmental Protection (88045)

- The inspectors reviewed procedures relating to the conduct and administration of the effluent and environmental control programs. The inspectors interviewed personnel regarding processes utilized by the licensee to evaluate, review, and track and trend data associated with effluent and environmental monitoring programs. The inspectors found that adequate controls were in place to identify adverse trends and that appropriate action levels have been established to provide early indication of adverse trends. The inspectors reviewed and discussed with licensee personnel the most recent semi-annual effluent report issued in 2009. Effluent releases were noted to be below regulatory limits. No issues of significance were identified.
- The inspectors observed the performance of personnel during the change out of environmental air samples and stack effluent samples at various monitoring stations. Licensee personnel demonstrated and explained various aspects of their functions that confirm the proper operational status of monitoring equipment. Licensee personnel were knowledgeable of their responsibilities and activities were performed in accordance with approved procedures.

- The inspectors reviewed records associated with the calibration and operation of selected gaseous and liquid effluent monitors. The inspectors found that calibration work orders were current and that effluent monitors were calibrated in accordance with approved procedures. The inspectors observed the physical condition and operational status of selected liquid effluent monitors in the field. The inspectors reviewed the Functional Test Instruction for the liquid effluent monitors and noted that the instruction included steps to confirm that isolation valves closed automatically upon receipt of an alarm signal. No issues of significance were identified.
- The inspectors reviewed procedures and established processes for controlling the release of liquid and gaseous effluents. Environmental and effluent sampling records were reviewed for completeness and accuracy and identification of any adverse trends. The inspectors interviewed control room operators and found that personnel were knowledgeable of their responsibilities and required actions in the event of an effluent monitor alarm.
- The inspectors reviewed the most recent internal audits of the Environmental Protection Program. The inspectors noted that several observations were identified in the audits. The inspectors reviewed the observations and noted a low threshold for the identification of issues. Audit findings were entered into the licensee's audit tracking system for tracking and closure. No findings of significance were noted.

Operational Safety (88020)

- The inspectors reviewed portions of the integrated safety analysis (ISA) for the ceramics and gadolinium (Gad) production areas. The inspectors determined that the associated IROFS were properly implemented to meet performance criteria in accordance with the licensee's ISA document. The inspectors reviewed activities in the incinerator building and noted adequate implementation of off-gas filtration systems.
- The inspectors reviewed the safety audits conducted in the ceramics and gadolinium areas over the last six months. No issues of safety significance were identified. In addition, the inspectors observed the licensee conduct a safety audit of the dry scrap recycle area, which represented the management measure to ensure reliability and availability for passive engineered IROFS. The inspectors noted that the audit did not explicitly identify passive engineered IROFS that were to be verified. After informing the licensee of this observation, the licensee agreed to review the auditing system for passive engineered and Fuel Business System related IROFS to more explicitly incorporate the required periodic verifications of reliability. The licensee's conclusion and implementation of explicit verifications will be tracked as inspector follow-up item (IFI) 2009-009-01.
- Licensee personnel demonstrated adequate knowledge of process operations, safety controls, and applicable procedures for the ceramics and the Gad production areas.
- The inspectors observed multiple operations in the ceramics and the Gad production areas and determined that they were performed in accordance with applicable operations procedures. The inspectors questioned the operators regarding powder spills and found operators knowledgeable of required response actions. No issues of significance were identified.
- The inspectors reviewed the unusual incident reports for the last three months in the ceramic, Gad, and radiological waste areas. No issues of significance were identified.

- In response to event number 45491, the licensee had begun reclassifying existing safety controls as IROFS. IFI 2009-009-02 was opened to track the licensee's verification that the newly identified IROFS are properly documented in procedures and the ISA summary.

Exit Meeting Summary

The inspection scope and results were summarized on November 12 and November 19, 2009, with members of your staff. No dissenting comments were received.

Key Points of Contact

<u>Name</u>	<u>Title</u>
P. Mathur	Environmental Engineer
B. Keenan	Radiation Protection Program Manager
K. McGowan	Dry Conversion Process Engineer
S. O'Connor	Environmental, Health, and Safety Specialist
P. D. Ollis	Licensing Engineer, Licensing & Liabilities
J. Zino	Criticality Safety Manager
C. Bough	Powder Production Manager

List of Items Opened, Closed, Discussed

<u>Item Number</u>	<u>Status</u>	<u>Description</u>
IFI 2009-009-01	OPEN	Review licensee's method to explicitly verify reliability of passive engineered and Fuel Business System related IROFS.
IFI 2009-009-02	OPEN	Verify licensee's verification of newly identified administrative IROFS due to event number 45491.
URI 2005-005-02	CLOSED	Item was closed in Inspection Report 70-1113/2006-202. Documented in this report for administrative tracking purposes.
EN 43897	CLOSED	Item was closed in Inspection Report 70-1113/2008-201. Documented in this report for administrative tracking purposes.