



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION II  
245 PEACHTREE CENTER AVENUE NE, SUITE 1200  
ATLANTA, GEORGIA 30303-1257

March 12, 2013

Mr. Amir Vexler  
FMO Facility Manager  
Global Nuclear Fuel – Americas, L.L.C.  
P.O. Box 780  
Wilmington, NC 28402

SUBJECT: GLOBAL NUCLEAR FUEL-AMERICAS LICENSEE PERFORMANCE REVIEW  
(NUCLEAR REGULATORY COMMISSION INSPECTION REPORT 70-  
1113/2013-001)

Dear Mr. Vexler:

The Nuclear Regulatory Commission (NRC) Region II and Headquarters staff completed a review of the Global Nuclear Fuel - Americas (GNF-A) fabrication facility inspection results and performance in conducting NRC licensed activities. The review covered the period beginning January 1, 2011, and ending December 31, 2012. The performance of GNF-A was evaluated in the following areas: Safety Operations, Radiological Controls, Facility Support, and Other Areas. This letter and enclosure provide the results of our review and constitutes Inspection Report 70-1113/2013-001. This report will be used as a basis for establishing the NRC oversight program for your facility. The details regarding the Safeguards portion of the review are documented in a separate letter marked "Official Use Only" due to the sensitive nature of the information.

Overall, the staff determined that GNF-A has continued to conduct its activities safely and securely, while protecting public health and the environment. Based on our current review of activities covering the period January 1, 2011 through December 31, 2012, one previously identified Area Needing Improvement remains open in the area of Safety Operations. Accordingly, the NRC plans to augment the core inspection program for a Category III Fuel Facility as described in NRC Inspection Manual Chapter 2600, "Fuel Cycle Facility Operational Safety and Safeguards Inspection Program," for the period of January 1, 2013 to December 31, 2014.

The previously identified Area Needing Improvement involved a breakdown of the Integrated Safety Analysis (ISA) program which was initially identified in calendar year 2009. The associated corrective actions were appropriately prioritized in accordance with their risk significance. Although a number of new plant issues were identified during the early part of the current review period, noteworthy progress was observed during the latter portion of the review period. Once the identified corrective actions are completed, the NRC will conduct focused inspections to assess the effectiveness of your corrective actions and determine whether the Area Needing Improvement has been appropriately addressed.

The results of this performance review will be discussed during a meeting open to the public on April 17, 2013. The Area Needing Improvement is summarized in the Enclosure 1 to this letter. During the meeting, we expect you to discuss your view of your performance in the same major areas that the NRC evaluated and describe your plans to improve performance in identification and implementation of safety controls.

Unresolved items (URIs) were identified during the conduct of Temporary Instruction 2600/015, "Evaluation of Licensee Strategies for the Prevention and/or Mitigation of Emergencies at Fuel Facilities." The NRC intends to issue guidance on how fuel facility licensees should address the URIs in the form of a generic (or licensee specific) letter. Once addressed by the licensees, additional NRC inspection hours beyond the designated core inspection program hours may be implemented in 2013 or 2014 to address the URIs.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and enclosure will be 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). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Please refer questions and comments regarding your performance review to Mr. Marvin Sykes, Chief, Fuel Facility Inspection Branch 3, by telephone at 404-997-4629.

Sincerely,

**/RA/**

Anthony T. Gody, Director  
Division of Fuel Facility Inspection

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

Enclosure:  
Licensee Performance Review

cc w/encl: (See page 3)

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Enclosure 2 to this letter details the inspections, less those related to physical protection, scheduled through December 31, 2013. The inspection plans are provided to allow for the resolution of any scheduling conflicts and personnel availability issues well in advance of inspector arrival onsite. These inspection plans are tentative and may be revised as circumstances warrant.

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X PUBLICLY AVAILABLE      ☐ NON-PUBLICLY AVAILABLE      ☐ SENSITIVE      X NON-SENSITIVE  
ADAMS: X Yes      ACCESSION NUMBER: ML13071A277      X SUNSI REVIEW COMPLETE X FORM 665 ATTACHED

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DATE	3/1/2013	3/1/2013	3/5/2013	3/5/2013	3/ /2013	3/ /2013	3/ /2013
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A. Vexler

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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

Letter to Mr. Amir Vexler from Anthony T. Gody dated

SUBJECT: GLOBAL NUCLEAR FUEL-AMERICAS LICENSEE PERFORMANCE REVIEW  
(NUCLEAR REGULATORY COMMISSION INSPECTION REPORT 70-  
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Distribution w/encl:

M. Sykes, RII  
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**LICENSEE PERFORMANCE REVIEW FOR GLOBAL NUCLEAR FUEL-AMERICAS (GNF-A)**  
**ASSESSMENT PERIOD: January 1, 2011 TO DECEMBER 31, 2012**

The following is a summary of the performance of GNF-A in the conduct of NRC licensed activities.

**PERFORMANCE AREA: SAFETY OPERATIONS**

This area is comprised of plant operations, nuclear criticality safety, and fire protection.

During the Licensee Performance Review (LPR) assessment period, the following enforcement actions were issued in the area of Safety Operations:

- The NRC identified a failure to maintain the double contingency principle. Double contingency was compromised during the operation of the sinter test grinder and the potential risk of a high consequence event (criticality accident) increased. This finding was tracked as a Severity Level (SL) III violation with a \$17,500 Civil Penalty, EA 11-095/VIO 2011-010-01.
- The licensee identified a failure of the Criticality Warning System (CWS). Because of equipment deficiencies, the CWS was not capable of initiating an immediate evacuation of the facility, had an evacuation been required while special nuclear material operations were being conducted. This was a violation of Safety Condition S-1 of the GNF-A license. Specifically, between May 3 and July 17, 2011, the CWS exhibited a three minute delay before the alarm horns sounded. No actual consequences resulted from this violation because there were no incidents requiring an evacuation during this time period. This finding was tracked as a SL III violation, EA 2012-013/2012-007-01.
- The NRC identified a failure to analyze for furnace geometry. This finding was tracked as a SL IV non-cited violation 70-1113/2011-002-03.
- The licensee identified that a potential accident sequence involving a buildup of hydrogen from hydrogen piping near uranium storage areas had not been properly analyzed in their ISA. This finding was tracked as a SL IV non-cited violation 70-1113/2011-005-02.
- The licensee identified a failure to demonstrate that the double contingency principle was maintained for the scrap accumulation hoods. This finding was tracked as a SL IV non-cited violation 70-1113/2011-203-01.
- The NRC identified a failure to implement management measures for SOLE IROFS 503-16. This finding was tracked as a SL IV violation 70-1113/2012-002-03.
- The NRC identified a failure to complete a one-hour report after identifying the loss of a sole IROFS for a high consequence accident sequence. This finding was tracked as a SL IV violation 70-1113/2012-002-04.
- The licensee identified a failure to maintain double contingency control for 3-gallon can storage. This finding was tracked as a SL IV violation 70-1113/2012-201-02.

Enclosure

- The NRC identified a failure to maintain double contingency control for the Gadolinia Rotary Press Valve. This finding was tracked as a SL IV violation 70-1113/2012-201-01.
- The NRC identified a failure to submit a report to the NRC, when the one leg of double contingency was lost which resulted in an unanticipated accumulation of SNM within a ventilation system filter enclosure. This finding was tracked as a SL IV violation 70-1113/2011-006-07.
- The NRC identified a failure to follow procedure for vacuuming out the transition piece of the sinter test grinder ventilation system as required. This finding was tracked as a SL IV violation 70-1113/2011-006-06.

#### Program Areas Needing Improvement

An Area Needing Improvement remains open in the area of Safety Operations. The licensee has had deficiencies in the performance area of Safety Operations as illustrated by the two escalated enforcement items and violations in this area. The ANI in the area of Safety Operations was initially identified during calendar year 2009 and corrective actions included implementation of an ISA Summary upgrade project. Although the licensee has made significant strides in the area of Safety Operations, additional oversight is warranted. The NRC will augment inspection in the performance area of Safety Operations with an emphasis on Plant Operations and Nuclear Criticality Safety for the next performance period. Licensee anticipates that specific ISA upgrades will be completed by April 1, 2013. Staff will conduct additional inspections to validate completion of the ISA project as specified in their corrective action plan and amendments.

#### NRC Inspection Effort

The core inspection program will continue to be augmented with additional emphasis on operational safety and nuclear criticality safety inspections to evaluate the effectiveness of the new ISA and ensure that GNF-A management is evaluating any common causes that underlie the regulatory violations.

### **PERFORMANCE AREA: RADIOLOGICAL CONTROLS**

This area is comprised of radiation protection, environmental protection, waste management, and transportation.

#### Program Areas Needing Improvement

None

#### NRC Inspection Effort

Conduct the core inspection effort in Radiological Controls.

**PERFORMANCE AREA: FACILITY SUPPORT**

This area is comprised of maintenance and surveillance of safety controls, management organization and controls, operator training, emergency preparedness, emergency exercise evaluation, and permanent plant modifications.

- The NRC identified a failure to implement a management measures for IROFS. This finding was tracked as a SL IV violation 70-1113/2011-004-01.

Program Areas Needing Improvement

None

NRC Inspection Effort

Conduct the core inspection effort in Facility Support.

**PERFORMANCE AREA: OTHER AREAS**

This area is comprised of significant special issues, which may involve quality of licensing submittals, deviations from commitments, licensing of new processes at an existing facility, and labor difficulties.

Program Areas Needing Improvement

None.

NRC Response

None