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

January 11, 2008

Mr. J. D. Fuller
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. 70-1113/2007-005

Dear Mr. Fuller:

This refers to the results of the above-referenced Nuclear Regulatory Commission (NRC) inspection conducted at your Wilmington, North Carolina facility on the weeks of December 3-7, 2007; and December 10-14, 2007.

As a result of the inspection, the enclosed NRC Form 591FF, SAFETY INSPECTION, is being issued. The enclosed form indicates that a non-cited violation was identified during the above described inspection of your licensed activities. Please retain the form in your files. No acknowledgment of this letter is required. However, should you have any questions, we shall be pleased to discuss them with you.

In accordance with 10 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.

Thank you for your cooperation. If you have any questions, please call me at (404) 562-4731.

Sincerely,

/RA/

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

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

Enclosure: NRC Form 591FF Parts 1 and 3

cc w/encl: (See page 2)

cc w/encl:
Scott Murray, Manager
Facility Licensing
Global Nuclear Fuel - Americas, L.L.C.
P. O. Box 780, Mail Code J26
Wilmington, NC 28402

Beverly Hall, Chief
Division of Radiation Section
Division of Environmental Health
Department of Environment and
Natural Resources
3825 Barrett Drive
Raleigh, NC 27609-7221

Distribution w/encl:
J. Henson, RII
R. Gibson, RII
P. Habighorst, NMSS
N. Baker, NMSS
B. Reilly, NMSS
PUBLIC

X PUBLICLY AVAILABLE ☐ NON-PUBLICLY AVAILABLE ☐ SENSITIVE X NON-SENSITIVE
ADAMS: X Yes ACCESSION NUMBER:_____

OFFICE	RII:DFFI	RII:DFFI	RII:DFFI	RII:DFFI			
SIGNATURE	***/RA/***	***/RA/***	***/RA/***	***/RA/***			
NAME	SSubosits	JJimenez	RGibson	JPelchat			
DATE	01/07/2008	01/07/2007	01/07/2008	01/07/2007			
E-MAIL COPY?	NO	YES NO	YES	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY DOCUMENT NAME: C:\FileNet\ML080140206.wpd

U.S. NUCLEAR REGULATORY COMMISSION

NRC FORM 591FF PART 1
(11-2005)
10 CFR 2.201

SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION

1. LICENSEE/LOCATION INSPECTED:	2. NRC/REGIONAL OFFICE
Global Nuclear Fuels - Americas, L.L.C. P. O. Box 780 Wilmington, NC 28402 REPORT 70-1113/2007-005	U.S. Nuclear Regulatory Commission Region II, Division of Fuel Facilities Inspection 61 Forsyth Street, Suite 23T85 Atlanta, GA 30303

3. DOCKET NUMBER(S)	4. LICENSEE NUMBER(S)	5. DATE(S) OF INSPECTION
70-1113	SNM-1097	December 3-7 and 10-14, 2007

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

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

☐ 1. Based on the inspection findings, no violations were identified.

☐ 2. Previous violation(s) closed. See list of items opened and closed on NRC Form 591FF Part 3.

☒ 3. The violation(s), specifically described to you by the inspector as non-cited violations, are not being cited because they were self-identified, non-repetitive, and corrective action was or is being taken, and the remaining criteria in the NRC Enforcement Policy to exercise discretion were satisfied.

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

On December 6 and 10, 2007, the Gad grinder blow back cycle activated while the grinder wheel hood was in the raised position. The system should not have entered the blow back cycle and the proximity switch for the hood should have prevented the cycle from starting. A maintenance person and an engineer installed a redundant wire (switch), and changed the logic code without Configuration Management Center review and approval. This is in violation of the licensee's Configuration Management Program - Fuel Manufacturing Policy Procedure P/P 10 - 10 and Change Procedure CP 23-01, and is being treated as a non-cited violation (NCV) 70-1113/2007-05-01.

During the licensee's followup activities for this event, it was determined that a faulty magnetic read switch was the cause of the failure. The wire connecting the switch to the PLC had a much higher inductance than the other wires (i.e., a higher magnetic field was created around the wire due to the current). This changed the electrical properties of the circuit thus interferring with the signal.

Corrective actions included tagging out the gad grinder until completion of a Higher Level Critique. Establish an effective communication method so that changes to equipment are clearly documented. Reinforce the need to have all changes to equipment documented per P/P 10 - 10 (for facility and document changes) and CP 23-01 for software changes.

☐ 4. 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)

Licensee's Statement of Corrective Actions for Item 4, above.

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'S REPRESENTATIVE	Not Applicable	Not Applicable	Not Applicable
NRC INSPECTOR	Richard Gibson, Jose Jimenez	***/RA***	1/11/2008

NRC FORM 591FF PART 3
(11-2005)
10 CFR 2.201

U.S. NUCLEAR REGULATORY COMMISSION

SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION

1. LICENSEE	2. NRC/REGIONAL OFFICE
Global Nuclear Fuels - Americas, L.L.C. **P. O. Box 780** **Wilmington, NC 28402**	**U.S. Nuclear Regulatory Commission** **Region II, Division of Fuel Facilities Inspection** **61 Forsyth Street, Suite 23T85** **Atlanta, GA 30303**

REPORT NUMBER(S): **70-1113/2007-005**

3. DOCKET NUMBER(S):	4. LICENSE NUMBER(S):	5. DATE(S) OF INSPECTION:
70-1113	**SNM-1097**	**December 3-7 and 10-14, 2007**

6. INSPECTOR(S): Stephen Subosits, Jose Jimenez, Richard Gibson, John Pelchat

7. INSPECTION PROCEDURES USED: 88020; 88010; 88005; 88030; 88050

SUPPLEMENTAL INSPECTION INFORMATION

Executive Summary

The Global Nuclear Fuels Facility fabricates low-enriched uranium fuel for use in commercial reactors. During the period of the inspection, all operations were normal.

This routine, announced inspection included evaluation of plant routine operations; and evaluation of the training, emergency preparedness, management organization and control and radiation protection programs. The inspection involved observations of work activities, reviews of selected records, and interviews with plant personnel. The inspection identified the following aspects of the licensee programs as outlined below :

Operational Safety (88020)

- During discussions with the inspectors, control room operations personnel demonstrated adequate knowledge of safety significant controls, and applicable operations procedures for the conversion processing area.

- The inspectors reviewed a random sampling of plant change request packages to verify the licensee was evaluating impacts from plant modifications on regulatory requirements, operator training and plant operating procedures. The inspectors determined packages received adequate review from affected safety disciplines, such as nuclear criticality safety, radiation protection, and environmental protection.

- The inspectors verified that select Items Relied on for Safety (IROFS) controls in the Integrated Safety Analysis Summary for the dry conversion process were properly implemented in the field.

- The inspectors performed field walkdowns of select portions of piping and instrumentation (P&ID) drawings for the vaporization and conversion processes. The inspectors verified the as-built configuration of plant equipment matched the current revision of the P&ID drawings.

Management Organization and Controls (88005)

- Personnel changes did not appear to impact the responsibilities and functions specified in the license. The licensee's system to review and issue procedures adequately ensured that safety procedures were properly controlled and approved.

- The internal safety audits covered a wide range of safety concerns. The inspector concluded that the internal reviews and audits were adequate for detecting potential safety concerns. Management meetings adequately reviewed facility information in order to address actual or potential safety issues and the addition of new processes.

- The Safety Committee's minutes and memorandums were reviewed. The licensee had adequately assessed the issues presented at the meetings. Actions described from the meetings were reviewed to ensure implementation was performed accordingly.

- The inspector verified that managers for the different safety areas specified in the license knew well their roles and responsibilities. Interview with operators and first line managers demonstrated the licensee is adequately implementing the management measures specified in their licensee and plant policies.

Operator Training (88010)

- The training program for initial and refresher training in nuclear criticality safety, radiation protection, specific process area skills and general emergency areas was in compliance with the regulatory requirements. Training material and examinations were adequate to measure the knowledge level of the workers, and were current. Lessons learned from past facility events were appropriately communicated during shift change meetings to improve worker safety.

- Operating procedure and facility change control training was effective. Operators were knowledgeable of their operating processes and pending changes. Changes to a procedure or changes to a process were readily identified by operators through the computerized system used by the licensee to control these activities. Key safety actions required operators to acknowledge their qualifications were current before nuclear material transactions could continue.

- Each new operator's on-the-job training was tracked by his/her immediate supervisor or front line manager. The inspector observed a couple of these activities going on during the week. These observations showed front line managers were following the requirements to properly qualify an operator before they work on their own.

Radiation Protection (IP 88030)

- The radiation protection program was being implemented in accordance with regulations and license commitments. Self-assessments by the licensee and implementation of the ALARA (as low as reasonably achievable) program was adequate. Since the last inspection, the licensee replaced the supervisor for radiation protection, and certified two radiation protection technicians.

- The observed equipment used for detecting the presence of radiation and contamination was properly maintained, and performed the intended safety function in a reliable manner. The survey instruments were calibrated by an approved outside vendor and in accordance with the licensee's procedures.

- The external exposure monitoring program was implemented in a manner to maintain doses ALARA. The exposures were less than the occupational limits in 10 CFR 20.1201.

- Internal exposures were significantly less than the limits of 10 CFR Part 20.1201.

- Respiratory protection equipment issuance and training assured that equipment was obtained by certified users only. The licensee maintained adequate records to demonstrate adequate implementation of the respiratory protection program.

- Radiological safety postings and Radiation Work Permits (RWPs) were properly used to communicate potential hazards and protective equipment requirements to workers.

- The radiation and contamination survey programs were appropriately implemented to protect workers, and to identify potential work areas posing an internal or external radiation hazard to workers. The inspectors observed some poor work practices by the workers removing their rubber gloves in a controlled contaminated area and not properly doffing Personnel Protective Equipment (PPE). This practice was discussed with the licensee to determine if it was acceptable and in accordance with procedures. The licensee agreed to review and revise the procedure to incorporate clear instructions for the donning and doffing of PPEs in a controlled contaminated area. A review of the licensee's Problem Tracking Report indicated that radiation and contamination problems and events were entered into the tracking system plant wide and were appropriately resolved.

- The licensee's ALARA program was properly implemented.

Emergency Preparedness (88050)

- A staffing change in the facility's Emergency Preparedness (EP) program was identified since the last inspection as a new staff member was functioning as the Manager for Site Security and Emergency Preparedness. The staffing change did not impact the effectiveness of the EP program.

- The effectiveness of the Emergency Coordination Center (ECC) was discussed with the Manager for Site Security and Emergency Preparedness and the various roles played by the team. The inspectors found a weakness in the reliability of the telephones in the ECC as the operability of the telephones was inconsistent.

- Several self assessments and audits were reviewed. Past emergency response efforts and practice drills were evaluated by the self assessments. Problems and suggestions were entered into the facility's corrective action program, Reg. Track. Audits were conducted on the EP program annually.

- The facility's emergency call list was tested and proved to be current. The inspectors visited the sheriff's department, Wilmington's emergency response center, and the outside supporting fire department. The mutual agreements with the offsite supporting agencies were up-to-date and the facility periodically invited the agencies to participate in drills or tour the facility. The inspectors conducted a phone interview with the hospital possessing the mutual agreement with the facility. The point-of-contact at the hospital had changed and the Manager for Site Security and Emergency Preparedness was aware of the staff change. Current copies of the EP were maintained at the sheriff's department and the emergency response center. The copy of the EP located at the off-site fire station was outdated and was not on the facility's distribution list for new revisions. The outdated Emergency Plan was identified as a URI [70-1113/ 2007-05-02].

- The number of volunteers on the Emergency Response Team (ERT) and the respective training was discussed with the Emergency Response Commander. Volunteers from the ERT and Emergency Medical Team (EMT) were interviewed. The volunteers discussed their respective roles in emergency response and the training they received.

- Several security guards stationed at the ECC were interviewed regarding their familiarity with the accountability reports and the Fireworks System, a computer program designed as the central control for the facility's alarm systems. The guards appeared to be competent in the programs and had recently completed the respective training.

- The emergency alarms outlined in the Emergency Plan and Employee Handbook were compared to those detailed in the Blue Dot video, site specific training. The instructions detailed in the video were inconsistent to the EP and general practice at the facility. Upon hearing the emergency pull box alarm, the video instructed the general worker to evacuate the immediate area. The general worker only evacuates during the evacuation alarm and the criticality alarm. The general worker should not evacuate during the emergency pull box alarm unless the worker senses immediate danger. The EP does not specify that the worker should evacuate in the presence of danger. The licensee indicated that the Blue Dot training would be reviewed and revised as appropriate. The training was identified as an inspector follow up item (IFI) 70-1113/2007-05-03.

- An event involving a fire in the 559X HVAC exhaust unit in the Fuel Manufacturing Building occurred on December 11, 2007. The alarm initiating the ECC was activated. The Emergency Response Team responded to the site of the emergency. The immediate area was cleared while the entire building was not evacuated. The situation was mitigated by the Emergency Response Team. There were no worker injuries and radioactive materials were not released.

- The inventory of Emergency Response equipment was examined. The equipment used by the ERT is detailed in a checklist and is periodically checked and sent for calibration. Several Type A suits were not examined on an annual basis. The manufacturer of the suits specifies that the suits should be reviewed annually. However, neither OSHA nor NRC specifies the frequency at which Type A suits should be examined. The radiation detectors located in the ECC appeared to be of adequate number and maintained current calibrations. The calcium gluconate was located in the proper location, was unopened, and had not expired.

Items Opened, Closed, And Discussed

Item Number	Status	Type	Description
2007-05-001	Open/Closed	NCV	A maintenance person and an engineer installed a redundant wire (switch), and changed the logic code at the Gad grinder without Configuration Management Center review and approval which is not IAW procedures.
2007-05-002	Open	URI	The copy of the EP located at the off-site fire station was outdated and was not on the facility's distribution list for new revisions.
2007-05-003	Open	IFI	Information in “Blue Dot” site specific training not consistent with licensee procedures and operator aids with regard to proper response to alarms activated by local fire alarm pull boxes.