



## Global Nuclear Fuel

A Joint Venture of GE, Toshiba, & Hitachi

### Global Nuclear Fuel

**Scott P. Murray**  
Manager, Facility Licensing

3901 Castle Hayne Road  
P.O. Box 780  
Wilmington, NC 28402  
USA

T (910) 819-5950  
scott.murray@ge.com

SPM 16-013

March 11, 2016

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D.C. 20555-0001

Subject: GNF-A Written Follow-up Report – DSR Off-Gas System Material Accumulation

References: 1) NRC License SNM-1097, Docket 70-1113  
2) GNF-A Event Report 51662, 1/19/2016

Dear Sir or Madam:

In accordance with 10 CFR 70.74(b), Global Nuclear Fuel–Americas, LLC (GNF-A) hereby submits a written follow-up report for Event Notification 51662 that was provided to NRC on January 19, 2016 (Reference 2). As discussed in the initial event report, GNF-A reported the discovery of a uranium oxide accumulation in the Dry Scrap Recycle (DSR) furnace off-gas system in the Fuel Manufacturing Operations (FMO) building. Consistent with 10 CFR 70.74(a) and 70.50(c)(1), a facsimile was submitted on January 19, 2016 providing additional information and is included as an attachment to this letter.

Additional information is provided as follows:

### **Event Details and Safety Significance**

It was discovered at 2100 on January 18, 2016 that an accumulation of uranium oxide powder existed that indicated a degradation of an IROFS in the dry scrap recycle furnace off-gas system. Approximately 42 kg of uranium oxide powder was removed from the favorable geometry off-gas dropout. The degraded IROFS resulted in a failure to meet performance requirements in the event of a fire. The dry scrap recycle operation had been shut down on 1/14/16 and was not in operation at the time.

Additional controls on combustibles, geometry and moderation remained intact and at no time was an unsafe condition present.

### **Immediate Corrective Actions Taken**

On January 19, 2016 the uranium oxide powder was removed from the affected equipment and transferred to other favorable geometry containers. Other similar off-gas systems were inspected and no similar conditions were identified.

**Probable Cause of Event**

An investigation determined that the current administrative controls used to limit and detect material accumulations in the off-gas system were inadequate. The investigation team found it most probable that a combination of factors including work practices, component conditions and administrative controls resulted in a degradation of the IROFS.

**Short Term Corrective Action**

- 1) A temporary operating procedure was issued to provide a more robust material accumulation inspection of the off-gas system and isolate the off gas dropout container when unattended to remove concern in event of a fire.

Complete: January 28, 2016

**Longer Term Corrective Action**

- 1) Evaluate the options and benefit of modifying the DSR Recycle Off-Gas system design to remove the need for the current administrative controls used to limit and detect material accumulations in a potential fire accident scenario.

Scheduled completion: May 13, 2016

If you have any questions regarding this matter, please contact me at (910) 819-5950.

Sincerely,



Scott Murray, Manager  
Facility Licensing

Attachment: Event Description

Commitments: As shown above

cc: NRC Region II Administrator, Atlanta, GA  
E. Michel, NRC RII Atlanta. GA  
S. Subosits, NRC RII Atlanta. GA  
T. Naquin, NRC NMSS, Washington, DC

Attachment 1

Event Notification Description

It was discovered on 1/18/16 that an accumulation of uranium oxide existed that indicated a degradation of an IROFS in the dry scrap recycle furnace off-gas system. Approximately 42 kg of uranium oxide powder was removed from the favorable geometry off-gas dropout. The degraded IROFS resulted in a failure to meet performance requirements in the event of a fire. The dry scrap recycle operation had been shut down on 1/14/16 and was not in operation at the time.

Additional controls on combustibles, geometry and moderation remained intact and at no time was an unsafe condition present.

Additional corrective actions, extent of condition, and extent of cause are being investigated.

This event is being communicated to meet the reporting requirements of 10CFR70, Appendix A (b)(2).

Scott Murray,  
Manager, Facility Licensing  
1555 1/19/2016