



Global Nuclear Fuel

A Joint Venture of GE, Toshiba, & Hitachi

Global Nuclear Fuel

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M170069

March 20, 2017

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

Subject: GNF-A Written Report – Contaminated Material in Unrestricted Area

References: 1) NRC License SNM-1097, Docket 70-1113
2) NRC Regulation 10 CFR 20.2203

Dear Sir or Madam:

In accordance with 10 CFR 20.2203(a)(3)(ii), the Global Nuclear Fuel–Americas, LLC (GNF-A) facility in Wilmington, N.C. hereby submits a written report for the discovery of contaminated material in an unrestricted area greater than ten times the limit in a license requirement.

Additional information is provided as follows:

Event Details and Safety Significance

A shipment of contaminated stainless steel metal piping containing low enriched uranium associated with the Fuel Manufacturing Operation (FMO) waste treatment facility was not properly surveyed and thus inadvertently transported to a local metal recycle center on September 29, 2016. The material set off the portal monitor radiation alarm(s) at the recycling facility and was immediately returned to the GNF-A facility.

Initial assessments of the material, after it had been returned to the GNF-A facility, were based upon SNM 1097, Section 1.3.2, “Authorized Guidelines for Contamination-Free Articles”. Under those Section 1.3.2 guidelines, the material did not appear to meet the reporting requirements of 10 CFR 20.2203. On or about March 13, 2017, based on additional survey results and volumetric determinations, GNF-A determined the uranium concentration in the material exceeded ten times the volumetric license release limit of 30 pCi/gram authorized for the disposal of industrial waste treatment products in SNM 1097, Section 1.3.6.1 and met the reporting requirement of 10 CFR 20.2203.

The shipment of uranium contaminated piping was not delivered, unloaded or placed in temporary storage at the recycle center or any other offsite location and remained in control of the driver at all times during transit. Although a possibility exists that some material could have been lost during shipment given the loose nature of some of the contaminated material being transported, the uranium concentration in the material is low enough to not present a significant exposure hazard to the public.

Immediate Corrective Actions Taken

The shipment of contaminated piping was immediately returned to the controlled access area of the GNF-A facility.

Probable Cause of Event

An investigation (completed in February 2017) determined there were some missed opportunities and multiple breakdowns in existing radioactive material control processes, including but not limited to:

- (1) the use of a Radiation Work Permit (RWP) that did not include specific survey requirements to assure that the material was not contaminated;
- (2) the performance of radiation surveys that were not adequate to detect the presence of uranium contamination entrained in the material on the inside surfaces of the piping;
- (3) a lack of training and/or knowledge on the part of the Radiation Protection Monitor (RPM) who conducted the surveys regarding GNF-A procedural requirements pertaining to the unconditional release of material from the site.

Notwithstanding the multiple breakdowns that led to this incident, the investigation determined that this incident does not represent a systemic breakdown at the facility. More pointedly, the investigation determined that had the procedures in place been followed, personnel would have identified the material as contaminated, which would have prevented this event from occurring.

Short Term Corrective Actions

1. A Stop Work notice was issued on September 30, 2016, for the release of potentially contaminated material without explicit management approval.

Lifted on March 3, 2017

2. Training on historical knowledge of facility operations was provided to GNF-A RPMs, to ensure adequate material release surveys are performed.

Completed by January 25, 2017.

3. The GNF-A radioactive material control procedure was revised, to clarify the process for unconditional material release from the site.

Completed by February 13, 2017.

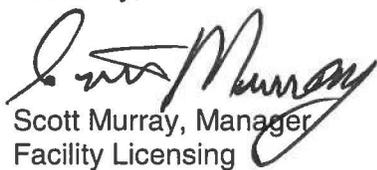
Longer Term Corrective Actions

None

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

Sincerely,



Scott Murray, Manager
Facility Licensing

Attachment: None

cc: NRC Region II Administrator, Atlanta, GA
E. Michel, NRC RII Atlanta. GA
T. Vukovinsky, NRC RII Atlanta. GA
T. Naquin, NRC NMSS, Washington, DC
SPM 17-011