

From: <dggreen01@mchsi.com>  
To: <tcj@nrc.gov>  
Date: 9/1/04 3:26PM  
Subject: NRC Clarification Request - Vehicle Fires

Tim,

I have attached a copy of the LES response to the NRC clarification request regarding vehicle fires. Please provide a copy to Rex Wescott for his use during the teleconference.

Thanks,  
Dan Green.

CC: <[rod.krich@exeloncorp.com](mailto:rod.krich@exeloncorp.com)>

## **NRC Clarification Request**

Provide clarification on why the National Enrichment Facility (NEF) Integrated Safety Analysis (ISA) fire scenarios in the Cylinder Receipt and Dispatch Building (CRDB) did not include cylinder(s) present on delivery vehicle (semi-tractor trailer flatbed)?

## **LES Response**

As discussed in a June 30, 2004, conference call between NRC and LES representatives, this issue had been identified by LES, but had not yet undergone evaluation. LES has subsequently become aware of significant changes to UF<sub>6</sub> cylinder transportation regulations that have been promulgated by the U.S. Department of Transportation (DOT) [69 FR 3632] and by NRC [69 FR 3698].

Transportation regulations in 49 CFR 173.420 have been modified such that, effective October 1, 2004, each package designed to contain 0.1 kg or more of fissile, fissile excepted, or non-fissile uranium hexafluoride offered for transportation must be designed to withstand the thermal test specified in 10 CFR 71.73(c)(4) without rupture of the containment system.

This change will impact the handling of cylinders at the NEF. Since the DOT rule change will now require thermal protection (e.g., overpack or other protective assembly) for all off-site UF<sub>6</sub> shipments, the vehicle fire scenario of concern (i.e., a vehicle fire with a cylinder containing UF<sub>6</sub> on the vehicle) no longer poses a threat. The handling practice for incoming cylinders containing UF<sub>6</sub> (e.g., 48Y feed) will be to offload the integral cylinder/protective assembly to the loading dock area prior to opening or removal of the protective assembly. Similarly, outgoing cylinders containing UF<sub>6</sub> (i.e., 30B product and in the future, potentially 48Y uranium byproduct cylinders) will be individually loaded into an overpack or protective assembly, as applicable, prior to placement on the trailers. As a result, cylinders containing UF<sub>6</sub> on a truck will be protected from a theoretical truck fire by the associated overpack or protective assembly. In a future revision to the NEF ISA and ISA Summary, these scenarios will be added and the overpack/protective assemblies will be designated as IROFS.

A theoretical truck fire in the CRDB loading bay was previously analyzed and shown to not pose a threat of rupturing cylinders in the building or on the loading dock. Additionally, the on-site movement of feed, product, and uranium byproduct cylinders will not utilize semi-tractor trailers. Fires involving other movement vehicles were evaluated in the current NEF ISA.

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