NUCLEAR FUEL SERVICES, INC.
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21G-09-0041
GOV-01-55-04
ACF-09-0070
February 25, 2009

Director
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

References:
1) Docket No. 70-143; SNM License 124

2) NRC letter from D. Charles Payne to Mr. David Kudsin, dated February 3, 2009, Nuclear Fuel Services, Inc., NRC Inspection Report No. 70-143/ 2008-004 and Notice of Violation

3) NFS letter from B. Marie Moore to Director, NMSS NRC, dated February 18, 2009, Submittal of Additional Information Regarding NFS' Building 310 Warehouse, 21G-09-0039

Subject: **Supplemental Information Regarding NFS' Building 310 Warehouse**

Dear Sir:

Nuclear Fuel Services, Inc. (NFS) hereby submits supplemental information to clarify information previously submitted on February 18, 2009, (Reference 3). The Attachment includes a revalidation analysis of the accident sequences 310W (1.4) and 310W (1.6) for the Building 310 Warehouse.

If you or your staff have any questions, require additional information, or wish to discuss this, please contact me, or Mr. Rik Droke, Licensing and Compliance Director, at (423) 743-1741. Please reference our unique document identification number (21G-09-0041) in any correspondence concerning this letter.

Sincerely,

NUCLEAR FUEL SERVICES, INC.

B. Marie Moore
Director of Safety and Regulatory

EAS/pdj
Attachment

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COPY:

Regional Administrator
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Senior Resident Inspector
U.S. Nuclear Regulatory Commission

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Attachment
Supplemental Information Concerning
310 Warehouse Analysis Revalidation Effort

1 page to follow

ATTACHMENT
Supplemental Information Concerning
310 Warehouse Analysis Revalidation Effort

Supplemental information regarding the revalidation of the 310 Warehouse High environmental consequence events due to chemical releases that could occur as a result of a fire is presented below.

Environmental Chemical Exposure

Table 4-2 of the Building 310 Warehouse ISA Summary addresses chemical environmental consequences due to fires. Accident sequences 310W (1.4) and 310W (1.6) that are listed in Table 4-2 as High consequences and supplemental information for the reasons for their re-categorization to Low consequences are discussed below:

Accident sequence 310W (1.4) Ignition of TBP in center section of warehouse

The previous chemical evaluation assumed that TBP/Norpar was involved in a moderate fire. However, re-examination of the chemical evaluation showed that the dispersion coefficient used in the reference document that contained the calculations for the 300 Complex was not applicable to the 310 Warehouse. The size and intensity of the fires modeled for the 310 Warehouse versus the 300 Complex result in different dispersion coefficients. Also, the fire evaluation previously assumed that TBP/Norpar was routinely received at the 310 Warehouse and was frequently moved around inside the building. Review of the warehouse operation indicates that these are legacy materials that are not routinely received at Building 310 (the inventory is static), and they are stored in the flammable storage building. Therefore, it is not expected that TBP/Norpar would be involved in a small or moderate fire. The chemical evaluation was revised to indicate that TBP/Norpar would be involved in a large fire using a dispersion coefficient that is consistent with other analyses and applicable to the 310 warehouse, and the resulting consequences are now Low. The chemical evaluation conservatively assumes that 12 drums were filled with liquid TBP/Norpar, with corresponding release of combustion products of concern.

Accident sequence 310W (1.6) Combustible material exposure fire to PCBs in steel drums

The previous chemical evaluation assumed that liquids containing PCBs involved in a moderate fire resulted in High consequences. However, re-examination of the chemical evaluation showed that the dispersion coefficient used in the reference document that contained the calculations for the 300 Complex was not applicable to the 310 Warehouse. The size and intensity of the fires modeled for the 310 Warehouse versus the 300 Complex result in different dispersion coefficients. The chemical evaluation for this sequence has now been split into two parts. The first sequence analyzes one drum of PCBs as part of a small fire, and the resulting consequences are now Low. The second sequence analyzes 20 drums of PCBs using the dispersion coefficient applicable for a 310 Warehouse pool fire that results from a large fire, and the resulting consequences are also now Low. The re-analysis is conservative because it assumes 100% of the contents of the drums spill and assumes that all the PCBs are converted to the combustion product of concern.