



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

July 30, 2004

Ms. B. Marie Moore, Vice President  
Safety and Regulatory  
Nuclear Fuel Services, Inc.  
P.O. Box 337, MS 123  
Erwin, TN 37650

**SUBJECT: NUCLEAR FUEL SERVICES, INC., AMENDMENT 51 - TO AUTHORIZE OPERATIONS IN THE BLENDED LOW-ENRICHED URANIUM OXIDE CONVERSION BUILDING AND EFFLUENT PROCESSING BUILDING (TAC L31791)**

Dear Ms. Moore:

In accordance with your application transmitted as Attachment 1 to your letter dated October 23, 2003, and supplemental letters dated February 6, February 11, February 25, March 12, March 15, March 16, March 17, March 18, March 19, April 30, and May 21, 2004, and pursuant to Part 70 to Title 10 of the Code of Federal Regulations, Materials License SNM-124 is hereby amended to authorize the possession and use of special nuclear material in the blended low-enriched uranium oxide conversion building (OCB) and effluent processing building (EPB). Accordingly, Safety Condition S-1 has been revised to include the dates of the application and supplemental letters.

In accordance with your Emergency Plan application dated October 24, 2003, Safety Condition S-24 has been revised to reflect the current Emergency Plan and reads as follows:

**S-24** The licensee shall maintain and execute the response measures in the Emergency Plan, Revision 7, transmitted by letter dated June 3, 2003, and the proposed revisions to the Nuclear Fuel Services, Inc. (NFS) Emergency Plan to support the Blended Low-Enriched Uranium (BLEU) Oxide Conversion Building (OCB) and Effluent Process Building (EPB) dated October 24, 2003, or as further revised by the licensee consistent with 10 CFR 70.32(i).

A new safety condition S-51 has been added, to require an update to the OCB/EPB integrated safety analysis summary (ISA), and reads as follows:

**S-51** The licensee shall submit a revised OCB/EPB Integrated Safety Analysis Summary that incorporates all changes to date, at least fifteen (15) days prior to the NRC's Operational Readiness Review.

In accordance with your safeguards application dated October 24, 2003, Safeguards Condition SG-5.2 has been revised to reflect the current Fundamental Nuclear Material Control Plan (The Plan) and reads as follows:

SG-5.2 In order to achieve the performance objectives of 10 CFR 74.31(a) and maintain the system capabilities identified in 10 CFR 74.31(c), the licensee shall follow its "Fundamental Nuclear Material Control Plan for SNM of Low Enriched Uranium" with respect to all activities involving SNM of low strategic significance. The Plan, as currently revised and approved, consists of:

Section 1 -----	Rev. 5 (dated October 2003)
Section 2 -----	Rev. 3 (dated January 2002)
Section 3 -----	Rev. 4 (dated January 2002)
Section 4, 5 and 6 -----	Rev. 3 (dated January 2002)
Section 7 and 8 -----	Rev. 2 (dated January 2002)
Section 9 -----	Rev. 1 (dated February 1993)
Annex -----	Rev. 4 (dated January 2002)

Revisions to this Plan shall be made only in accordance with, and pursuant to, either 10 CFR 70.32(c) or 70.34.

In accordance with your safeguards application dated November 3, 2003, and supplemental letters dated April 28, and May 26, 2004, Safeguards Condition SG-6.4 has been revised to reflect the current Physical Security Plan for Special Nuclear Material of Low Strategic Significance and reads as follows:

SG-6.4 Notwithstanding the above Safeguards License Conditions (SG-6.1, SG-6.2, SG-6.3), upon possession of less than Category I levels of special nuclear material, the licensee shall follow the measures described in the physical protection plans titled "Physical Security Plan for the Protection of Special Nuclear Material of Moderate Strategic Significance", Revision 5, dated June 23, 1994 (letter dated June 22, 1994), and Revision 6, dated February 6, 1996; and in the "Physical Security Plan for Special Nuclear Material of Low Strategic Significance," Revision 2, dated May 26, 2004; and as they may be further revised in accordance with the provisions of 10 CFR 70.32(e).

Also, the ISA summary transmitted as Attachment 2 to your letter dated October 23, 2003, and supplement to the ISA summary dated March 12, 2004, for the OCB/EPB is hereby approved.

We have also reviewed and docketed the Nuclear Criticality Safety Evaluations for the OCB/EPB operations, provided by letters dated December 9, and December 11, 2003, and January 23, 2004.

Enclosed are copies of the revised Materials License SNM-124 and the Safety Evaluation Report.

B. M. Moore

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This letter contains sensitive, unclassified information, and is therefore deemed Official Use Only and will not be placed in the Public Document Room nor the Publicly Available Records component of the NRC's ADAMS document system.

Sincerely,

A handwritten signature in black ink, appearing to read 'G. Janosko', with a stylized flourish at the end.

Gary S. Janosko, Chief  
Fuel Cycle Facilities Branch  
Division of Fuel Cycle Safety  
and Safeguards  
Office of Nuclear Material Safety  
and Safeguards

Docket No. 70-143  
License No. SNM-124  
Amendment 51

Enclosure: 1. Materials License SNM-124  
2. Safety Evaluation Report