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November 23, 2007

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 79 - APPROVAL OF
INCREASE IN POSSESSION LIMIT (TAC L32637)

Dear Ms. Moore:

In accordance with your application dated May 15, 2007, and the additional information dated September 28, 2007, and pursuant to Part 70 to Title 10 of the Code of Federal Regulations (CFR), Materials License SNM-124 is hereby amended to approve an increase in the possession limit for uranium enriched up to 100 percent in the uranium-235 isotope. Accordingly, Condition 8.A has been revised to reflect the new possession limit, and Safety Condition S-1 has been revised to include the dates of May 15 and September 28, 2007.

All other conditions of this license shall remain the same. Please note that we have moved the license conditions containing sensitive information to the end of the license to facilitate redaction and release of the license.

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

If you have any questions regarding this matter, please contact Kevin Ramsey of my staff at (301) 415-7887, or via e-mail to kmr@nrc.gov.

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B. Moore

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Sincerely,

/RA/

Michael D. Tschiltz, Acting Deputy Director
Fuel Facility Licensing Directorate
Division of Fuel Cycle Safety
and Safeguards
Office of Nuclear Material Safety
and Safeguards

Docket No.: 70-143
License No.: SNM-124
Amendment 79

Enclosures:

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

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Sincerely,

/RA/

Michael D. Tschiltz, Acting Deputy Director
Fuel Facility Licensing Directorate
Division of Fuel Cycle Safety
and Safeguards
Office of Nuclear Material Safety
and Safeguards

Docket No.: 70-143
License No.: SNM-124
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Enclosures:

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

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DOCKET: 70-143

LICENSEE: Nuclear Fuel Services, Inc.
Erwin, Tennessee

SUBJECT: SAFETY EVALUATION REPORT FOR NUCLEAR FUEL SERVICES, INC.,
AMENDMENT 79 - APPROVAL OF POSSESSION LIMIT INCREASE
(TAC L32637)

BACKGROUND

By cover letter dated May 15, 2007, as supplemented by letter dated September 28, 2007, Nuclear Fuel Services (NFS), Inc., requested an increase in the possession limit for uranium enriched up to 100 percent in the uranium-235 isotope.

DISCUSSION

NFS' request to increase the possession limit is attributable to lower than planned processing rates, accelerated schedules for incoming shipments, and a desire to utilize all existing storage locations. In its submittals, NFS indicated the following:

- There will be no associated new construction or changes to process equipment or facilities;
- There will be no change in the types, or increase in the amounts, of radioactive material that may be released off-site as represented in NFS' current Environmental Report;
- There will be no significant increase in individual or cumulative occupational radiation exposures; and
- There will be no significant increase in the potential for or consequences from radiological accidents.

NFS provided the following additional items to clarify the nature of the request:

- There will be no new or modified accident sequences in the Integrated Safety Analysis;
- There will be no changes to the nuclear criticality safety, industrial safety, fire safety, radiation safety, or environmental safety programs;
- There will be no changes in the emergency preparedness program;
- There will be no changes in process throughput;

Enclosure 2

- There will be no expansion of process area storage (non-vault storage); and the storage will continue to be subject to Process Control Limits;
- There will be no changes in the physical security program;
- There will be no changes in the material control and accountability (MC&A) program; and
- There will be no changes in the MC&A receipt check weighing beyond what is currently authorized.

Nuclear Criticality Safety

The request states that the nuclear criticality safety (NCS) evaluations for the storage areas consider the areas filled to maximum capacity with uranium-235. The NRC staff reviewed the request and concluded that the requested possession limit is bounded by the NCS evaluations of the existing storage areas.

Radiation Protection

The request states that authorizing NFS to receive and store more material could cause the average dose to the workers in the Shipping and Receiving area to increase from 95 millirem/year to 126 millirem/year. This is well below the occupational dose limit of 5000 millirem/year. The existing radiation protection program is adequate to monitor and control the radiation dose to workers in this area. With regard to non-criticality accidents, the NRC staff concluded that the current analysis of accidents involving spills and releases from shipping containers is adequate.

Material Control and Accountability (MC&A)

Programmatic changes to the material control and accounting (MC&A) program were approved in 2004 to accommodate an increase in material receipts at the facility. The NRC staff confirmed that the proposed change does not decrease the effectiveness of the MC&A program or the measurement control program implemented, pursuant to 10 CFR Part 74, Subpart E.

Physical Protection

The NRC staff evaluated the impact of the proposed change to the physical protection requirements in NRC regulations and security orders. NFS confirmed its commitment to security measures in its physical protection plan including surveillance requirements and process control limits.

ENVIRONMENTAL REVIEW

Although this amendment request may have qualified for a Categorical Exclusion under 10 CFR Part 51.22(c)(11), NRC staff used its discretion and elected to perform an environmental assessment (EA), since NFS requested a large quantity of high enriched uranium. The EA and Finding of No Significant Impact was published in the Federal Register on November 7, 2007 (72 FR 62880).

CONCLUSION

Based on the information in the submittals, the NRC determined with reasonable assurance, that the requested possession limit increase will not decrease public health and safety, security, or the protection of the environment.

The inspection staff has no objection to this proposed action.

PRINCIPAL CONTRIBUTORS

Kevin Ramsey
Tamara Powell
Tom Pham
Oleg Bukharin