December 21, 2010

Mr. Mark P. Elliott, Director
Quality, Safety and Safeguards
Nuclear Fuel Services, Inc.
P.O. Box 337, MS 123
Erwin, TN 37650

SUBJECT: NUCLEAR FUEL SERVICES, INC., AMENDMENT 92, APPROVAL OF CHANGES TO CHAPTER 3 REGARDING VENTILATION REQUIREMENTS (TAC NO. L33008)

Dear Mr. Elliott:

In accordance with your application dated July 19, 2010, as supplemented by letters dated October 28 and December 6, 2010, and pursuant to Parts 20 and 70 to Title 10 of the *Code of Federal Regulations* (10 CFR), Materials License SNM-124 is hereby amended to approve the changes to Chapter 3. Accordingly, Safety Condition S-1 has been revised to add the dates of July 19, October 28, and December 6, 2010.

All other conditions of this license shall remain the same.

Enclosed are copies of the revised Materials License SNM-124 (Enclosure 1), and the Safety Evaluation Report (Enclosure 2).

Upon issuance of this document, TAC Number L33008 is considered **closed**.

In accordance with 10 CFR 2.390 of the U.S. Nuclear Regulatory Commission's (NRC) "Rules of Practice," a copy of this letter, the safety evaluation report and the non-sensitive portion of the license will be available electronically for public inspection in the NRC Public Document Room and the Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible through the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room). The sensitive conditions to the license will be withheld from the public.

Documents transmitted herewith contain OFFICIAL USE ONLY information. When separated from the sensitive conditions in Enclosure 1, this document is DECONTROLLED

If you have any questions regarding this matter, please contact Kevin Ramsey of my staff at (301) 492-3123 or by e-mail to kevin.ramsey@nrc.gov.

Sincerely,

/RA/

Brian W. Smith, Acting Deputy Director
Fuel Facility Licensing Directorate
Division of Fuel Cycle Safety
and Safeguards
Office of Nuclear Material Safety
and Safeguards

Enclosures:
As stated

Docket No. 70-143
License No. SNM-124
Amendment 92

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DOCKET: 70-143

LICENSEE: Nuclear Fuel Services, Inc.
Erwin, Tennessee

SUBJECT: SAFETY EVALUATION REPORT – CHANGES TO CHAPTER 3 REGARDING VENTILATION REQUIREMENTS

1.0 BACKGROUND

By letter dated July 19, 2010, as supplemented by letters dated October 28 and December 6, 2010, Nuclear Fuel Services (NFS) requested approval of changes to Chapter 3 of its license commitments regarding ventilation requirements. The purpose of the changes is to more clearly describe the standards and guidance used to design ventilation systems. Title 10 of the *Code of Federal Regulations* (10 CFR) Part 20, Section 1701, "Use of process or other engineering controls," requires licensees to use, to the extent practical, processes or other engineering controls (e.g., containment, decontamination, or ventilation) to control the concentration of radioactive material in air. In addition, 10 CFR Part 20, Section 1101(b) requires licensees to use, to the extent practical, procedures and engineering controls based upon sound radiation protection principles to achieve occupational doses and doses to the members of the public that are as low as reasonably achievable (ALARA).

2.0 DISCUSSION

In its license amendment request, NFS proposes to revise the design requirements for laboratory ventilation through the open face of a hood or similar enclosure from 125 linear feet per minute (LFM) to being in accordance with ANSI/AIHA Standard Z9.5-2003, "Laboratory Ventilation," recommendations. The design requirements for air flow through containment enclosures in process areas will remain essentially unchanged at 125 +/- 25 LFM with a minimum of 100 +/- 20 LFM air flow during operations. It is initially expected that NFS will design laboratory hoods and other laboratory containments to have an air flow in the range of 80-100 LFM through openings.

The NFS is differentiating between ventilation requirements for the laboratory facilities onsite and the process facilities. The NFS stated that, while ANSI/AIHA Standard Z9.5-2003 specifically excludes its applicability for radioisotope laboratories (other than general ventilation requirements), the primary hazards identified through the facility's integrated safety analyses are chemical in nature; and a flow rate range discussed in the standard (80-100 LFM) is consistent with guidance in DOE-HDBK-1169-2003, "DOE Nuclear Air Cleaning Handbook," for highly hazardous (including radioactive) materials. The U.S. Nuclear Regulatory Commission's (NRC) staff concurs that it is unlikely radiological exposures resulting from inhalation of uranium would significantly increase if laboratory ventilation guidance is followed for controlling exposures to the chemical hazard.

In addition, NFS specifically states in the amendment that "ventilation for occupied areas shall be designed and installed to meet the intent of the company's ALARA program." The NRC staff understands that NFS will be monitoring airborne concentrations and exposures to personnel in the laboratory area and would be expected to make changes, as practical, to ensure the ALARA

program is implemented in the laboratory. This was verbally acknowledged by NFS personnel during discussion of this proposed amendment.

The modifications for the design and operating requirements for the process areas are consistent with guidance and other uranium facility's commitments and are not expected to result in increased exposures.

The staff finds that the changes, in conjunction with continued occupational monitoring and application of the ALARA principle, will not lead to radiological exposures that are inconsistent with past exposures at the facility. In addition, the staff finds that there is reasonable assurance that the proposed changes will not have a significant impact on public health and safety, security, or the protection of the environment and, therefore, are acceptable.

3.0 ENVIRONMENTAL REVIEW

A proposed action is excluded from an environmental review under 10 CFR 51.22(c)(11) if it is procedural in nature and satisfies the following requirements:

i. There is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite.
ii. There is no significant increase in the individual or cumulative occupational radiation exposure.
iii. There is no significant construction impact.
iv. There is no significant increase in the potential for or no consequences from radiological accidents.

Changing the design standard for ventilation systems is a procedural change that meets the requirements listed above. No significant change in effluents is expected. The proposed action makes no changes to the existing environmental monitoring program. No significant change in exposures is expected because worker exposures will continue to be monitored, and the exposures will continue to be evaluated by the ALARA program. There is no construction associated with the action and no change to operating equipment which would increase the potential for or consequences from an accident.

The staff determined that the proposed action does not adversely impact public health and safety or the environment, and is categorically excluded from the requirement to prepare a site specific environmental assessment. Therefore, in accordance with 10 CFR 51.22(c)(11), neither an environmental assessment nor an environmental impact statement is warranted for this action.

4.0 CONCLUSION

Based on the review and evaluation of the information provided by NFS in its license amendment request dated July 19, 2010, as supplemented by letters dated October 28 and December 6, 2010, the staff finds that the proposed changes contained in the request would continue to provide adequate protection of occupational and public health, safety, and safeguards. Therefore, the staff concludes that the proposed changes are acceptable and consistent with the requirements of 10 CFR 20.1701 and 10 CFR 20.1101(b).

PRINCIPAL CONTRIBUTOR

Gregory Chapman