

[REDACTED]

December 21, 2005

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 68 - APPROVAL OF
CHANGES TO FUNDAMENTAL NUCLEAR MATERIAL CONTROL PLAN FOR
HIGH-ENRICHED URANIUM (TAC L31909) AND REPLACEMENT OF
TABLE 5.1 IN PART I OF LICENSE (TAC L31916)

Dear Ms. Moore:

In accordance with your applications dated September 13 and December 19, 2005, and pursuant to Part 70 to Title 10 of the Code of Federal Regulations (CFR), Materials License SNM-124 is hereby amended to approve the proposed changes. The September 13, 2005, application proposed changes to the Fundamental Nuclear Material Control (FNMC) Plan for high-enriched uranium concerning holiday shutdown and abnormal process conditions. The December 19, 2005, application proposed a replacement page to correct an error in Table 5.1 in Part I of your license. Accordingly, Safety Condition S-1 has been revised to include the dates of September 13 and December 19, 2005.

All other conditions of this license shall remain the same. Based on this action, NFS may proceed to incorporate the approved changes into its FNMC Plan. NFS should furnish a copy of the changes to the FNMC Plan within 60 days of issuance.

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

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.

[REDACTED]

[REDACTED]

B. Moore

2

This letter and its enclosures contain sensitive, unclassified information, and are therefore deemed Official Use Only. They will not be placed in the Public Document Room nor will they be publicly available in the NRC Agencywide Documents Access and Management System (ADAMS).

Sincerely,

\RA\

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 68

Enclosures:

1. Materials License SNM-124
 2. Safety Evaluation Report
- [REDACTED]

B. Moore

2

This letter and its enclosures contain sensitive, unclassified information, and are therefore deemed Official Use Only. They will not be placed in the Public Document Room nor will they be publicly available in the NRC Agencywide Documents Access and Management System (ADAMS).

Sincerely,

IRA

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 68

Enclosures:

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

Closes TAC L31909 and TAC L31916

DISTRIBUTION:

FCFB r/f	DRich, SRI/NFS	SBurris, RI/NFS	WGloerson, RII
DAYres, RII	MLamastra	SCaudill, RII	TPham, NSIR

ML0535530161-Package

OFC	FCFB	FCFB	FCFB	FCFB
NAME	KRamsey	VCheney	JLubinski	GJanosko
DATE	12/20/05	12/19/05	12/21/05	12/21/05

OFFICIAL RECORD COPY

[REDACTED]

DOCKET: 70-143

LICENSEE: Nuclear Fuel Services, Inc.
Erwin, Tennessee

SUBJECT: SAFETY EVALUATION REPORT: REVISION TO THE HIGH-ENRICHED
URANIUM FUNDAMENTAL NUCLEAR MATERIAL CONTROL PLAN
(TAC L31909) AND REPLACEMENT OF TABLE 5.1 IN PART I OF LICENSE
(TAC L31916)

1.0 BACKGROUND:

By cover letter dated September 13, 2005, Nuclear Fuel Services (NFS) submitted proposed revisions to one section of its high-enriched uranium Fundamental Nuclear Material Control (FNMC) Plan. This submittal was made in response to 10 CFR 70.32 changes previously proposed by NFS that were deemed unacceptable as documented in the letter to NFS dated May 16, 2005. The proposed revisions were resubmitted under the provisions of 10 CFR 70.34, which requires the NRC approval before implementation to ensure there is no decrease in the effectiveness of the licensee's security program. The submittal did not include page changes to the FNMC Plan. NFS plans to incorporate the language into the plan after it receives NRC approval.

By cover letter dated December 13, 2005, NFS submitted a replacement page to correct an editorial error in Table 5.1 in Part I of the license.

2.0 DISCUSSION:

2.1 The September 2005 submittal affects two subsections of Section 1 with regard to the facility's process monitoring program. This revision includes revised texts to specifically address the changes rejected by the NRC under the provisions of 10 CFR 70.32 in the May 2005 letter. The licensee also provides supporting justification for the two proposed changes.

Enclosure 2

[REDACTED]

[REDACTED]

The FNMC Plan changes are summarized as follows:

2.1.1 Section 1.1.4.3 - Test Frequency

This section of the FNMC Plan describes the frequency of the material control tests for the facility's process monitoring program. Title 10 CFR 74.53(b)(1) requires that the licensee establishes a program capable of monitoring the status of material in process. This program includes the material control tests for each unit process subject to a determined 3-day or 7-day time frame depending on the form of the material. NUREG-1280, Rev.1, "Standard Format and Content Acceptance Criteria for the Material Control and Accounting (MC&A) Reform Amendment," indicates that when the detection time frames are interrupted by idle time caused by such situations as weekends, holidays, or vacations, the licensee must have provisions for completing the material tests before the idle time or for conducting additional tests to cover any tests that will not be completed. The main criterion is whether or not nuclear material handling and processing are involved when considering the test time frames.

The licensee's proposed addition to Section 1.1.4.3 of the FNMC Plan is the suspension of all process monitoring tests during the facility's routinely scheduled Christmas holiday/vacation shutdown period. During this shutdown time, all processing equipment is completely idle and nuclear materials within the material access area are under constant physical security controls and oversight. It is unnecessary (in fact impossible) for MC&A and laboratory staff to conduct material control tests and perform measurements during the plant shutdown. The licensee also states that the process monitoring tests will resume upon returning to normal operations after the holiday/vacation shutdown period.

2.1.2 Section 1.1.4.6 (B) - Abnormal Process Conditions - Unplanned Process Downtime

This section of the FNMC Plan describes the provisions for abnormal process conditions (i.e., equipment failure) with regard to the conduct of process monitoring tests during those occurrences. The same requirements of 10 CFR 74.53(b)(1) apply to the licensee's process monitoring program. The guidelines of NUREG-1280 indicate that such abnormal process conditions would not be considered in the required process monitoring test time frames unless nuclear material handling was involved and whether or not the activities would afford the opportunity for material diversions.

The licensee's proposed addition to Section 1.1.4.6 (B) of the FNMC Plan is the delay of completion of affected process monitoring tests when abnormal process conditions occur. There is no practical means to perform a process monitoring test due to the inability to obtain necessary input and output measurements resulted from an equipment failure. The licensee also states that required process monitoring tests will be expeditiously completed upon restoration of the equipment measurement capability and returning to normal operations.

[REDACTED]

2.2 The December 2005 submittal provides a replacement page to correct an editorial error in Table 5.1 in Part I of the license. In a previous amendment request, NFS proposed deleting certain sampling requirements for Banner Spring Branch. The stream had been relocated and sampling at certain locations was no longer necessary. NRC approved the change in Amendment 52 dated September 13, 2004. The sampling requirements were deleted from Table 5.1 except for one line concerning a monthly composite sample. This former Banner Spring Branch requirement now appears to apply to a Nolichucky River sampling requirement. The staff has reviewed the previous amendment and agrees that the line should have been removed when the other Banner Spring Branch requirements were deleted.

3.0 ENVIRONMENTAL REVIEW

The staff has determined that the changes requested to the FNMC Plan are related to safeguards matters which are categorically excluded from the requirements to prepare a site-specific environmental assessment. Therefore, in accordance with 10 CFR 51.22(c)(12), neither an environmental assessment nor an environmental impact statement is warranted for this action.

The staff has determined that the replacement page for Table 5.1 is considered administrative and procedural and does not affect the scope or nature of the licensed activity. 10 CFR 51.22(c)(11) allows for a categorical exclusion if the following requirements have been satisfied:

- 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 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.

The replacement page is considered administrative in nature. There are no changes in the types of effluents nor are there any increases in the amounts of effluents. Occupational exposure is expected to remain the same. These changes involve no additional construction activity. Therefore, there will be no construction impact.

The staff has determined that the proposed changes do not adversely affect public health and safety or the environment and are categorically excluded from the requirement to prepare a site-specific environmental assessment. Therefore, in accordance with 10 CFR 51.22(c)(11) and (c)(12), neither an environmental assessment nor an environmental impact statement is warranted for this action.

[REDACTED]



4.0 CONCLUSION:

Upon review of the FNMC Plan changes, the staff found that the changes are consistent with the regulatory requirements in Subpart E of 10 CFR Part 74, and the guidelines given in NUREG-1280. The staff has determined that the proposed additions to the facility's high-enriched uranium FNMC Plan are adequate and continue to provide an effective MC&A program at NFS. Approval of the FNMC Plan changes is recommended. In addition, the staff recommends allowing NFS to incorporate the changes into its FNMC Plan after the approval is issued. Although this action is approved under the provisions of 10 CFR 70.34, NFS should furnish a copy of the changes to the FNMC Plan within 60 days of issuance.

Upon review of the replacement page submitted for Table 5.1, the staff concludes that the line concerning a monthly composite sample should have been deleted with the other sampling requirements removed in Amendment 52. Approval of the replacement page is recommended.

Therefore, License Condition S-1 should be revised to add the dates of the two submittals.

PRINCIPAL CONTRIBUTORS

Thomas N. Pham

Kevin M. Ramsey