



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET SW SUITE 23T85
ATLANTA, GEORGIA 30303-8931

March 29, 2004

EA-03-178

Nuclear Fuel Services, Inc.
ATTN: Mr. Kerry Schutt
President
P. O. Box 337, MS 123
Erwin, TN 37650

SUBJECT: NOTICE OF VIOLATION (NRC OFFICE OF INVESTIGATIONS REPORT
NO. 2-2003-024 AND NRC INSPECTION REPORT NO. 70-143/2002-011)

Dear Mr. Schutt:

This refers to the Nuclear Regulatory Commission's (NRC) inspection conducted from November 24, 2002, to January 18, 2003, at your facility located in Erwin, Tennessee. The purpose of the inspection was to determine whether activities authorized by the license were conducted safely and in accordance with NRC requirements. This letter also refers to an investigation completed by the NRC's Office of Investigations (OI) on July 25, 2003. The results of the investigation and additional information regarding the identification of an apparent violation were forwarded to Nuclear Fuel Services, Inc., (NFS) by NRC letter dated January 16, 2004. The letter transmitting the investigation and inspection findings also provided you the opportunity to either respond to the apparent violation in writing or request a predecisional enforcement conference. The NRC confirmed your desire for a predecisional enforcement conference, and on February 5, 2004, a closed conference was conducted at the NFS facility with you and members of your staff to discuss the apparent violation, its significance, root causes, and your corrective actions. A listing of conference attendees and material presented by the NRC are included as Enclosures 2 and 3, respectively. [REDACTED]

[REDACTED]

Based on the information developed during the inspection and investigation and the information presented at the conference, the NRC has determined that a violation of NRC requirements occurred. The violation is cited in the enclosed Notice of Violation (Notice), and the circumstances surrounding it are described in detail in the subject inspection report. The violation involved the transfer of low enriched uranium (LEU) solution without the required verifications and reviews being conducted prior to and/or during the transfer. NFS's root cause investigation concluded that the cause of the incident was a failure to follow procedural requirements.

Actual safety consequences did not occur as a result of the violation, and in this case, the potential consequences of the procedural non-compliance were not significant because of the

additional checks and controls that NFS has established and implemented in the LEU transfer process. However, the NRC determined that the supervisor involved in this incident willfully authorized the transfer of LEU solution without conducting required verifications prior to and during the transfer. Willful violations are of particular concern to the NRC because our regulatory framework is based, in part, on the integrity and willingness of licensees and their employees to comply with requirements. Based on the above and in consideration of the willful aspects of this issue, this violation has been characterized at Severity Level III in accordance with the "General Statement of Policy and Procedures for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600.

In accordance with the Enforcement Policy, a base civil penalty in the amount of \$30,000 is considered for a Severity Level III violation. Because the violation was willful and because your facility has been the subject of escalated enforcement actions within the last 2 years,¹ the NRC considered whether credit was warranted for the factors of *Identification* and *Corrective Action* in accordance with the civil penalty assessment process described in Section VI.C.2 of the Enforcement Policy.

The NRC concluded that the violation was promptly identified by NFS personnel. Based on this, the NRC concluded that credit was warranted for the factor of *Identification*.

NFS's corrective actions were discussed extensively at the conference and, in summary, included an immediate shutdown of solution transfer operations upon discovery of the incident, the initiation of a taproot investigation into the incident, a review of previous solution batches to confirm that similar problems did not exist, having significant discussions on the circumstances and lessons learned from the event with all Decommissioning Supervisors and other project staff, conducting a review of all job assignments and assessing qualifications of all Project Supervision to reinforce personal accountability and individual responsibility, developing a lessons-learned presentation for Lab Personnel regarding the importance of correctly analyzing samples and reporting results, drafting and approving new procedures to add additional management oversight to solution transfers, placing the supervisor involved into NFS's disciplinary tract, and coaching and re-instructing the supervisor. Based on these and the other corrective actions discussed at the conference, the NRC concluded that NFS's corrective actions were prompt and comprehensive, and credit was warranted for the factor of *Corrective Action*.

Therefore, to emphasize the importance of self-identification and correction of violations, I have been authorized, after consultation with the Director, Office of Enforcement, to propose that a civil penalty not be assessed in this case. In addition, issuance of this Notice constitutes escalated enforcement action that may subject you to increased inspection effort.

The NRC has concluded that information regarding the reason for the violation, the corrective actions taken and planned to correct the violation and prevent recurrence, and the date when full compliance was achieved is adequately addressed on the docket in the information presented at the conference by NFS and in this letter. Therefore, you are not required to respond to this letter unless the description herein does not accurately reflect your corrective

¹A Severity Level III violation was issued on September 24, 2001 (EA-01-098), and a Severity Level III problem with a \$60,000 civil penalty was issued on October 17, 2003 (EA-03-124).

actions or your position. In that case, or if you choose to provide additional information, you should follow the instructions specified in the enclosed Notice.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure(s), and your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. The NRC also includes significant enforcement actions on its Web site at www.nrc.gov; select **What We Do, Enforcement**, then **Significant Enforcement Actions**.

If you have any questions regarding this matter, please contact Douglas M. Collins, Director, Division of Fuel Facility Inspection, at 404-562-4700.

Sincerely,

/RA/

Luis A. Reyes
Regional Administrator

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

Enclosures:

1. Notice of Violation
2. List of Attendees
3. Information Presented by NRC

cc w/encls:

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

Debra Shults, Manager
Technical Services
Division of Radiological Health
Electronic Mail Distribution

Distribution w/ encls:

W. Travers, EDO
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 D. Cool, NMSS
 F. Congel, OE
 E. Julian, SECY
 B. Keeling, OCA
 Enforcement Coordinators
 RI, RIII, and RIV
 E. Hayden, OPA
 G. Caputo, OI
 H. Bell, OIG
 D. Ayres, RII
 L. Trocine, OE
 L. Psyk-Gersey, NMSS
 B. Westreich, NSIR
 R. Way, NSIR
 C. Evans, RII
 S. Sparks, RII
 K. Clark, RII
 R. Trojanowski, RII
 PUBLIC
 OEMAIL
 OEWEB
 RII Docket File, DFFI

OFFICE	RII:DNMS	RII:ORA	RII:ORA	OGC
SIGNATURE		/RA/		ACoggins for
NAME	DCOLLINS	CEVANS		DDambly
DATE	02/17/04	03/02/04		02/18/04 and 02/25/04
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO
OFFICE	NMSS	NSIR	OE	
SIGNATURE	MBurgess for	Ralph Way	JLuehman for	
NAME	CMiller		FCongel	
DATE	02/25/04	03/25/04	02/27/04 and 03/ /04	
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO

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NOTICE OF VIOLATION

Nuclear Fuel Services, Inc.
Erwin, Tennessee

Docket No. 70-143
License No. SNM-124
EA-03-178

During an NRC inspection conducted from November 24, 2002, to January 18, 2003, and an investigation completed by the NRC's Office of Investigations (OI) on July 25, 2003, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedures for NRC Enforcement Actions," NUREG-1600, the violation is listed below:

- A. Safety Condition S-1 of Special Nuclear Materials License No. SNM-124 authorizes the use of licensed materials in accordance with the statements, representations, and conditions in the license application and supplements.

Section 2.7 of the License Application, Procedures, states "SNM operations and safety function activities are conducted in accordance with written procedures as defined in Sections 1.7.4 and 1.7.5." Sections 1.7.4 and 1.7.5 describe operating procedures and safety procedures.

Nuclear Fuel Services Letter Of Authorization (LOA) - 8828-036, Handling Miscellaneous Solutions During [REDACTED] D&D Projects, section 6.1.1.2, requires supervision to verify that uranium concentration of the batch meets discard limits by review of sample results A, B, and AESAS (At-Site Environmental Sample Assay System). Section 6.1.1.2 further states that the supervisor authorizes moving the batch from the favorable geometry storage [REDACTED] to the unfavorable geometry waste measurement tanks by signing the top portion of the Supervisor Discard Authorization Form. Addendum to LOA-8828-036, [REDACTED], section 5.1.4, specifies that sample results must be less than [REDACTED] and that building supervision or the project chemist must be contacted if the calculated sample results do not agree within [REDACTED]. Section 5.1.5 of the same addendum to LOA-8828-036 states, "if the uranium concentration of [REDACTED] batch to be discarded is greater than the above limits [REDACTED], contact the Nuclear Criticality Engineer." LOA-8828-036, section 6.1.4, requires building supervision to perform verifications during the transfer and requires the process chemist or building supervision to observe the transfer.

Contrary to the above, on January 12, 2003, the licensee did not verify by review of the AESAS sample result that discard limits were met, did not verify that calculated sample results agreed within [REDACTED], did not notify the nuclear criticality engineer that the sample results were above the limits required verifications of valve positions and tank indications, and did not observe the transfer of low enriched uranium solution as required by licensee procedures. Furthermore, the NRC determined that the supervisor willfully authorized the transfer of low enriched uranium solution without conducting the required verifications prior to and during the transfer.

This is a Severity Level III Violation (Supplement IV).

The NRC has concluded that information regarding the reason for the violation, the corrective actions taken and planned to correct the violation and prevent recurrence, and the date when full compliance was achieved is already adequately addressed on the docket in the information presented at the conference by NFS and in this letter. However, you are required to submit a written statement or explanation pursuant to 10 CFR 2.201 if the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to respond, clearly mark your response as a "Reply to a Notice of Violation: EA-03-178" and send it to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with a copy to the Regional Administrator, Region II, within 30 days of the date of the letter transmitting this Notice. If you contest this enforcement action, you should also provide a copy of your response with the basis for your denial to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

If you choose to respond, your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. Therefore, to the extent possible, the response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

Dated this 29th day of March 2004

LIST OF ATTENDEES

Nuclear Regulatory Commission:

L. Reyes, Regional Administrator, Region II (RII)
C. Evans, Enforcement Officer and Regional Counsel, RII
D. Collins, Director, Division of Fuel Facilities Inspection (DFFI), RII
D. Rich, Senior Resident Inspector, DFFI, RII
L. Trocine, Enforcement Specialist, Office of Enforcement
K. Ramsey, Office of Nuclear Materials Safety and Safeguards (NMSS)
R. Pierson, NMSS

Nuclear Fuel Services, Inc.:

D. Ferguson, Chief Executive Officer, NFS
K. Schutt, President and General Manager, NFS
N. Newman, Vice President and General Counsel, NFS
D. Shapiro, Attorney, Shaw Pittman
M. Moore, Vice President, Safety and Regulatory, NFS
K. Guinn, Vice President and Principal Scientist, NFS
V. Johnson, Facilities Decommissioning, NFS
D. Buck, Vice President of Human Resources, NFS
A. Ward, Assistant General Counsel, NFS
J. Nagy, Assistant to the Vice President, Safety and Regulatory, NFS
R. Shackelford, NCS Manager, NFS
T. Sheehan, Senior Project Manager, NFS
S. Kirk, Licensing, NFS
E. Setes, Licensing, NFS

PREDECISIONAL ENFORCEMENT CONFERENCE AGENDA

NUCLEAR FUEL SERVICES, INC.

FEBRUARY 5, 2004, 1:00 P.M.

ERWIN, TENNESSEE

- I. **OPENING REMARKS AND INTRODUCTIONS**
L. Reyes, Regional Administrator

- II. **SUMMARY OF THE ISSUES**
L. Reyes, Regional Administrator

- III. **NRC ENFORCEMENT POLICY**
C. Evans, Enforcement Officer

- IV. **STATEMENTS OF CONCERNS / APPARENT VIOLATIONS**
D. Collins, Director
Division of Fuel Facility Inspection

- V. **LICENSEE PRESENTATION**
NFS, Inc. Management

- VI. **BREAK/NRC CAUCUS**

- VII. **NRC FOLLOW-UP QUESTIONS**

- VIII. **CLOSING REMARKS**
L. Reyes, Regional Administrator

APPARENT VIOLATION

Safety Condition S-1 of Special Nuclear Materials License No. SNM-124 authorizes the use of licensed materials in accordance with the statements, representations, and conditions in the license Application and Supplements.

Section 2.7 of the License Application, Procedures, states "SNM operations and safety function activities are conducted in accordance with written procedures as defined in Section 1.7.4 and 1.7.5." Sections 1.7.4 and 1.7.5 describe operating procedures and safety procedures.

Nuclear Fuel Services Letter Of Authorization (LOA) - 8828-036, Handling Miscellaneous Solutions During [REDACTED] D&D Projects, section 6.1.1.2, required supervision to verify that uranium concentration of the batch meets discard limits by review of sample results A, B, and AESAS (At-Site Environmental Sample Assay System). Section 6.1.1.2 further states that the supervisor authorizes moving the batch from the favorable geometry storage [REDACTED] to the unfavorable geometry waste measurement tanks by signing the top portion of the Supervisor Discard Authorization Form. Addendum to LOA-8828-036, [REDACTED], section 5.1.4, specifies that sample results must be less than [REDACTED], and that building supervision or the project chemist must be contacted if the calculated sample results do not agree within [REDACTED]. Section 5.1.5 of the same addendum to LOA-8828-036 stated, "if the uranium concentration of [REDACTED] batch to be discarded is greater than the above limits [REDACTED] contact the Nuclear Criticality Engineer."

The apparent violations discussed at this conference are pre-decisional and are subject to change.

Enclosure 3

APPARENT VIOLATION (Cont'd.)

LOA-8828-036, section 6.1.4 requires building supervision to perform verifications during the transfer and requires the process chemist or building supervision to observe the transfer.

On January 12, 2003, an NFS supervisor did not verify by review of the AESAS sample result that discard limits were met; the supervisor did not verify that calculated sample results agreed within [REDACTED] the supervisor did not notify the nuclear criticality engineer that the sample results were above the limits; and the supervisor did not perform required verifications and did not observe the transfer. Furthermore, the NRC determined that the supervisor willfully authorized the transfer of low enriched uranium solution without conducting required verifications prior to and during the transfer. Additionally, the decommissioning supervisor's documentation of the transfer resulted in the recording of inaccurate information pertaining to the transfer.

The apparent violations discussed at this conference are pre-decisional and are subject to change.

Enclosure 3