



UNITED STATES
NUCLEAR REGULATORY COMMISSION

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

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April 18, 2006

NRC Event Nos. 42393, 42411

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

SUBJECT: CORRECTED NRC INSPECTION REPORT NO. 70-143/2006-002 AND
NOTICE OF VIOLATION

Dear Mr. Schutt:

This refers to the inspection conducted from February 5, 2006, through March 18, 2006, at your Erwin, Tennessee, facility. The purpose of the inspection was to determine whether activities authorized by the license were conducted safely and in accordance with NRC requirements. The results of the inspection are documented in the enclosed NRC Form 591, Parts 1 and 2, and Executive Summary.

Areas examined during the inspection included the following: Plant Operations, Fire Protection, Radiation Protection, Physical Protection and event review. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observation of activities in progress.

Based on the results of this inspection, the NRC has determined that two Severity Level IV violations of NRC requirements occurred. These violations were evaluated in accordance with the NRC Enforcement Policy. The current Enforcement Policy is available on the NRC's Web site at www.nrc.gov. Two violations are cited in the enclosed Notice of Violation (Notice). Violation A is being cited in the Notice because the violation was identified as a result of a contamination event. Violation B is being cited because specific corrective actions to prevent recurrence of the event were not identified as of the date of the exit meeting for this report.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. For your consideration, NRC Information Notice 96-28, "SUGGESTED GUIDANCE RELATING TO DEVELOPMENT AND

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IMPLEMENTATION OF CORRECTIVE ACTION," is available on the NRC's Web site. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

[REDACTED]

Should you have any questions concerning this letter, please contact us.

Sincerely,

/RA/ D. Collins for

David A. Ayres, Chief
Fuel Facility Inspection Branch 1
Division of Fuel Facility Inspection

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

Enclosures: 1. Form 591 Inspection Report, Parts 1 and 2
2. Notice of Violation
3. Executive Summary

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

Distribution w/encls: (See page 3)

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Distribution w/encls:

- D. Ayres, RII
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- K. Ramsey, NMSS
- M. Lamastra, NMSS
- M. Galloway, NMSS

ADAMS: X Yes ACCESSION NUMBER: _____

OFFICE	RII:DFFI	RII:DFFI	RII:DFFI	RII:DFFI	RII:DFFI	RII:DFFI	RII:DFFI
SIGNATURE	DR via e-mail						
NAME	DRich	SBurris	RGibson	NRivera	CTaylor	JJimenez	WGloersen
DATE	04/18/2006	03//2006	03//2006	03//2006	03//2006	03//2006	03//2006
E-MAIL COPY?	YES	YES	YES NO				

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NRC FORM 591FF PART 1

(11-2005)
10 CFR 2.201

U.S. NUCLEAR REGULATORY COMMISSION

**SAFETY INSPECTION REPORT
AND COMPLIANCE INSPECTION**

1. LICENSEE/LOCATION INSPECTED: Nuclear Fuel Services, Inc. P. O. Box 337, MS 123 Erwin, TN 37650	2. NRC/REGIONAL OFFICE: U.S. Nuclear Regulatory Commission Region II, Division of Fuel Facilities Inspection 61 Forsyth Street, Suite 23T85 Atlanta, GA 30303
REPORT 70-143/2006-002	

3. DOCKET NUMBER(S): 70-143	4. LICENSEE NUMBER(S): SNM-124	5. DATE(S) OF INSPECTION: February 5 - March 18, 2006
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LICENSEE:

The inspection was an examination of the activities conducted under your license as they relate to radiation safety and to compliance with the Nuclear Regulatory Commission (NRC) rules and regulations and the conditions of your license. The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector. The inspection findings are as follows:

- 1. Based on the inspection findings, no violations were identified.
- 2. Previous violation(s) closed.
 - (Closed) VIO 70-143/2003-010-01, Failure to comply with storage requirements and maintain station limit postings. This item is closed.
 - (Closed) VIO 70-143/2005-002-04, Failure to control work by an operating or RWP procedure in a posted contaminated area [REDACTED]. This item is closed.
 - (Closed) VIO 70-143/2005-007-02, Failure to submit bioassay. This item is closed.
 - (Closed) VIO 70-143/2005-007-03, Failure of individuals to utilize respirators [REDACTED] when process ventilation was lost. This item is closed.

- 3. The violation(s), specifically described to you by the inspector as non-cited violations, are not being cited because they were self-identified, non-repetitive, and corrective action was or is being taken, and the remaining criteria in the NRC Enforcement Policy to exercise discretion were satisfied.

_____ Non-Cited Violation(s) was/were discussed involving the following requirement(s) and Corrective

[REDACTED]

- 4. During this inspection certain of your activities, as described below and/or attached, were in violation of NRC requirements and are being cited. This form is a NOTICE OF VIOLATION, which may be subject to posting in accordance with 10 CFR 19.11.

See Notice of Violation (Enclosure 2).

Licensee's Statement of Corrective Actions for Item 4, above.

I hereby state that, within 30 days, the actions described by me to the inspector will be taken to correct the violations identified. This statement of corrective actions is made in accordance with the requirements of 10 CFR 2.201 (corrective steps already taken, corrective steps which will be taken, date when full compliance will be achieved). I understand that no further written response to NRC will be required, unless specifically requested.

Title	Printed Name	Signature	Date
LICENSEE'S REPRESENTATIVE			
NRC INSPECTOR	See Item 7	/RA/	4/18/06

NRC FORM 591FF PART 2
(11-2005)
10 CFR 2.201

U.S. NUCLEAR REGULATORY COMMISSION

**SAFETY INSPECTION REPORT
AND COMPLIANCE INSPECTION**

1. LICENSEE

**Nuclear Fuel Services, Inc.
P. O. Box 337, MS 123
Erwin, TN 37650**

2. NRC/REGIONAL OFFICE

**U.S. Nuclear Regulatory Commission
Region II, Division of Fuel Facilities Inspection
61 Forsyth Street, Suite 23T85
Atlanta, GA 30303**

REPORT NUMBER(S): **2006-002**

3. DOCKET NUMBER(S)

70-143

4. LICENSE NUMBER(S)

SNM-124

5. DATE(S) OF INSPECTION

February 5 - March 18, 2006

SUPPLEMENTAL INSPECTION INFORMATION

Item #5 Reported events reviewed

- NRC Event #42393 involved an unintentional transfer of SNM from [REDACTED] to an area not authorized to receive special nuclear material, with a subsequent overflow to the floor. NRC event #42411 involved discovery of an unsafe geometry accumulation point which was a pit under an elevator. These events were reviewed by an NRC Special Inspection Team and will be reported under NRC Report 70-143/2006-006.

Item #6 Management Visits

D. Ayres, Branch Chief, Region II, DFFI, Branch 1
D. Collins, Division Director, Region II, DFFI
H. Christensen, Deputy Director, Region II, DRS

Item #7 NRC Inspectors

S. Burris, Resident Inspector
R. Gibson, Health Physicist
J. Jiminez, Fuel Facility Inspector
E. Otomosh, NSTDP Participant
D. Rich, Senior Resident Inspector
N. Rivera, Fuel Facility Inspector
C. Taylor, Health Physicist

Item #8 Inspection Procedures Used

TI 2600/006 Safety Operations, Safeguards, Radiological Controls and Facility Support
IP 88020 Regional Criticality Safety Inspection Program
IP 88055 Fire Safety
IP 83822 Radiation Protection
TI 2600/012 Institutionalizing Concern Regarding Safety Issues Identified in Selected Past Generic Communications

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NOTICE OF VIOLATION

Nuclear Fuel Services, Inc.
Erwin, Tennessee

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

During an NRC inspection conducted from February 5, 2006 through March 18, 2006, violations of NRC requirements were identified. In accordance with the NRC Enforcement Policy the violations are listed below:

- A. Safety Condition S-1 of Special Nuclear Materials License No. SNM-124 authorized 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," stated that, "SNM operations and safety function activities are conducted in accordance with written procedures as defined in Section 1.7.4 and 1.7.5."

NFS-GH-01, "Contamination Control," Section 5.3 states "The step-off procedure must be followed whenever proceeding directly from a Controlled Area bounded by solid yellow lines. Section 5.4.3 "Exit procedure," states in Section 5.4.3.1 that at the controlled area boundary remove shoe covers as follows:

NOTE: Contaminated shoe covers should be removed in a manner that minimizes the potential for spreading contamination across the step off barrier.

- One foot is raised and the shoe cover is removed (in the direction of the controlled area).
- The uncovered shoe is then placed on the opposite side of the line/barrier. Place used shoe cover in the receptacle provided or bag for return to the laundry (if no receptacle is provided).
- The other foot is then raised, the shoe cover removed (in the direction of the controlled area) and the worker steps completely across the line/barrier. Place used shoe cover in the receptacle provided or bag for return to the laundry (if no receptacle is provided).

Section 5.4.3.2 states "Remove smock if worn and place on the rack."

Section 5.4.3.3 states "Perform a preliminary hand scan at the hand monitors if available at this location."

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Enclosure 2

Contrary to the above, on February 13, 2006, visiting personnel and licensee escorts failed to remove shoe covers and step across the line/barrier as required, in that they removed anti-contamination clothing inside the controlled area of the Blue Preparation Facility with no step-off barrier established.

This is a Severity Level IV violation (Supplement VI)

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

License Application section 2.12.1.4, Change Control, requires a change control process to be established, as part of configuration management. NFS procedure GH - 901, Configuration Control, Section 5.2, requires changes to the as built condition of affected structures, systems and components (SSC) shall only be implemented by the work request process that ensures that the changes do not impact the safety of the SSC. The process shall include reviews of changes and safety controls to ensure safety of the affected SSC is maintained.

Procedure NFS-GH-43, "Safety-Related Equipment (SRE) Control Program", Rev. 11, Section 4.0 Standard Practices, Subsection 4.1.1 states, "Active engineered controls identified as SRE are required to be verified as being properly installed upon initial installation and upon completion of maintenance."

Procedure SOP 392, Work Request Procedure, section 5.25.2, requires, for Minor 2 and Major Work Requests, documentation of acceptance prior to use of equipment. Documentation of acceptance, Attachment II, includes review and approval of changes.

Contrary to the above, on January 3rd, 2006, the licensee failed to comply with the change control process during modifications to the [REDACTED] detection system, in that:

1. The licensee failed to ensure that changes to the as built condition did not impact the safety of the SSC, in that a fail safe feature of the system was defeated by a change in system components.
2. The licensee failed to verify that an active engineered control identified as SRE was properly installed upon completion of maintenance, in that the functional test did not identify the non-availability of a system fail safe feature.
3. The licensee failed to obtain work acceptance approval and failed to obtain review and approval for changes, for work completed under a Minor 2 work request prior to use of equipment.

This is a Severity Level IV violation (Supplement VI).

[REDACTED]

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Pursuant to the provisions of 10 CFR 2.201, Nuclear Fuel Services, Inc. is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555 with a copy to the Regional Administrator, Region II, and a copy to the NRC Senior Resident Inspector at the facility that is the subject of this Notice, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation or severity level, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, D.C. 20555-0001.

[REDACTED]

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days.

Dated this 18th day of April, 2006

[REDACTED]

[REDACTED]

[REDACTED]

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EXECUTIVE SUMMARY

**Nuclear Fuel Services, Inc.
NRC Inspection Report No. 70-143/2006-002**

This inspection included activities conducted by the resident inspectors and regional inspectors during normal and off normal shifts in the areas of facility operations, fire protection, radiation protection, and physical protection [REDACTED], the Oxide Conversion Building (OCB), and decommissioning processes were in operation. The Blended Low Enriched Uranium (BLEU) Preparation Facility (BPF) was shutdown after an event which occurred on March 6, 2006.

Plant Operations

- With the exception of the violations noted and the event of March 6 (see Form 591, item 5, NRC events reviewed), the plant was generally operated safely and in accordance with the license. Fuel manufacturing operations and testing were conducted in accordance with approved procedures. Housekeeping was adequate and no adverse effect on radiological safety or facility emergency egress was noted.
- A violation was noted for failure to correctly implement the configuration control program during modification of an active engineered control, in that a fail-safe feature of the [REDACTED] detection system was defeated. The issue was documented as PIRCS item 6983. Several configuration control program elements failed or were bypassed, including design validation of changes, functional testing, and work request approval. Although the issue was licensee identified, the violation is cited because specific corrective actions to prevent recurrence of the violation were not identified as of the date of the exit meeting for this report (VIO 70-143/2006-002-01).
- Inspectors identified that electrical schematics diagrams were not being controlled under the licensee's configuration management program. Pending additional NRC review, this issue will be tracked as an Unresolved Item (URI) 70-143/2006-002-02, Electrical Schematics Configuration Control.
- The following Temporary Instruction 2600/012 item was reviewed:

Information Notice (IN) 95-051, RECENT INCIDENTS INVOLVING POTENTIAL LOSS OF CONTROL OF LICENSED MATERIAL. Based on interviews, documentation, and physical inspection of equipment, the inspector determined that where appropriate, the licensee had taken actions to address the issues identified in response to the IN.

Fire Protection

- [REDACTED] BLEU project operational areas were operated in accordance with fire safety requirements. Inspections of fire protection systems and items relied on for safety and reviews of training and pre-fire plans revealed no significant deficiencies.

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[REDACTED]

Enclosure 3

- Inspectors identified that operators were not consistently trained on when to sound the fire alarm in the [REDACTED] area. The licensee planned to review the issue, attempt to upgrade equipment performance, and clarify management expectations of operator actions in this area.

Radiation Protection

- With the exception of the violation noted, the radiation protection program was implemented in accordance with regulations and license commitments. Self-assessments by the licensee and implementation of the ALARA (as low as reasonably achievable) program were adequate. However, the number of RWP noncompliances in the last six months highlights a need for improvement in implementation of corrective actions.
- The licensee identified a failure to comply with the Entry/Exit procedure requirements from a [REDACTED] which resulted in contamination of four individuals on shoes and hands. The issue is documented as PIRCS item 7287. This issue was cited as a violation because identification occurred due to the contamination event. (VIO 70-143/2006-002-03)
- The external exposure monitoring program was implemented in a manner to maintain doses ALARA. However, the licensee's external exposure had almost reached the ALARA goal set for the year 2005, due to handling of higher radiation level material in the down blending areas. Internal and external exposures were less than the occupational limits in 10 CFR 20.1201.
- The licensee identified that scaffolding, which was used by the licensee and a contractor, became contaminated during repair of a waste water treatment tank. Through an ongoing investigation, the licensee was able to determine that the contamination came from the site, and that it was either technetium 99 or uranium. Pending further review, this issue will be tracked as URI 070-143/2006-02-04.

Physical Protection

[REDACTED]

List of Items Opened, Closed, and Discussed

<u>Item Number</u>	<u>Status</u>	<u>Type</u>	<u>Description</u>
70-143/2006-002-01	Open	VIO	Failure to comply with configuration control program requirements
70-143/2006-002-02	Open	URI	Electrical Schematic Configuration Control

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70-143/2006-002-03	Open	VIO	Failure to comply with [REDACTED] requirements from a controlled area
70-143/2006-002-04	Open	URI	Review of Contaminated Scaffolding
70-143/2003-010-01	Closed	VIO	Failure to comply with storage requirements and maintain station limit postings
70-143/2005-002-04	Closed	VIO	Failure to control work by an operating or RWP procedure in a posted contaminated area [REDACTED]
70-143/2005-007-02	Closed	VIO	Failure to submit bioassay.
70-143/2005-007-03	Closed	VIO	Failure of individuals to utilize respirators [REDACTED] when process ventilation was lost.

Exit Meeting

The inspection scope and results were presented to members of the licensee management at various meetings throughout the inspection period and were summarized on March 17, 2006. Executive management in attendance is noted below. No dissenting comments were received from the licensee.

R. Booth, Vice President, Corporate Services
P. Johnson, Vice President, Applied Technology
M. Moore, Vice President, Safety & Regulatory
K. Schutt, President & General Manager

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[REDACTED]