



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

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

June 4, 2007

Mr. D. B. Ferguson, Jr.  
President & CEO  
Nuclear Fuel Services, Inc.  
P. O. Box 337, MS 123  
Erwin, TN 37650

SUBJECT: NRC INSPECTION REPORT NO. 70-143/2007-003 AND NOTICE OF VIOLATION

Dear Mr. Ferguson:

This refers to the inspection conducted from March 25, through May 5, 2007, at the Nuclear Fuel Services facility. The purpose of the inspection was to determine whether activities authorized by the license were conducted safely and in accordance with NRC requirements. At the conclusion of the inspection, the findings were discussed with those members of your staff identified in the enclosed report.

Areas examined during the inspection included: safety operations, facility support, and radiological controls. 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 a violation of NRC requirements occurred. The violation was evaluated in accordance with the NRC Enforcement Policy. The current Enforcement Policy is available on the NRC's Web site at [www.nrc.gov](http://www.nrc.gov). The violation is cited in the enclosed Notice of Violation (Notice) and is being cited in the Notice because it was identified by the NRC.

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 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]

If you contest the violation, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001, with copies to the Regional Administrator, Region II, and the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001, and the NRC Resident Inspector at your facility.

This letter and the enclosed report contain sensitive unclassified information and will not be available for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS).

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

Sincerely,

*/RA/*

David J. Hartland, Acting Chief  
Fuel Facility Inspection Branch 1  
Division of Fuel Facility Inspection

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

Enclosures:

1. Notice of Violation
2. NRC Inspection Report

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

L. Edward Nanney, Director  
Division of Radiological Health  
Tennessee Dept. of Environment & Conservation  
L&C Annex, Third Floor  
401 Church Street  
Nashville, TN 37243-1532

Distribution w/encls: (See page 3)

[REDACTED]

Distribution w/encls:

D. Ayres, RII  
D. Hartland, RII  
M. Crespo, RII  
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[REDACTED]

NOTICE OF VIOLATION

Nuclear Fuel Services, Inc.  
Erwin, Tennessee

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

During an NRC inspection conducted from March 25, through May 5, 2007, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

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," requires SNM operations and safety function activities to be conducted in accordance with written procedures.

- A. Section 6.2 of Procedure NFS-GH-36, "Lockout/Tagout," Revision 5, requires that the lockout/tagout sheet be filled out as the work progresses and then be posted at the work site.
- B. Section 9.0 of Procedure NFS-GH-36, "Lockout/Tagout," Revision 5, "Lockout/Tagout Training" requires that individuals performing lockout/tagout activities be trained in accordance with NFS Lockout/Tagout Program.
- C. Section 6.6 of Procedure NFS-SOP-205, "Procedure for Maintenance, Operations and Testing of UPS/Generator Building 306," Revision 11, requires that Attachment IV be completed as the test is performed.

Contrary to the above, on March 10, 2007, while performing required annual maintenance on the 306 diesel generator and associated equipment, licensee staff failed to conduct safety function activities in accordance with written procedures as follows:

- A. The system engineer did not fill out lockout/tagout sheets as the work progressed and did not post them at the work site as required by Section 6.0 of Procedure NFS-GH-36.
- B. Individuals performing lockout/tagout activities were not trained in accordance with the NFS Lockout/tagout Program as required by Section 9.0 of Procedure NFS-GH-36.

Enclosure 1

[REDACTED]

- C. The system engineer did not complete Attachment IV of Procedure NFS-SOP-205 as the test was being performed.

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

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 previously 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.

Your response will be considered sensitive information and will not be made available for public inspection in the NRC Public Document Room or in the NRC's document system (ADAMS).

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

Dated this 4<sup>th</sup> day of June, 2007.



U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.: 70-143

License No.: SNM-124

Report No.: 70-143/2007-003

Licensee: Nuclear Fuel Services, Inc.

Facility: Erwin Facility


Location: Erwin, TN 37650

Dates: March 25, - May 5, 2007

Inspectors: S. Burris, Senior Resident Inspector  
G. Smith, Resident Inspector

Approved by: D. Hartland, Acting Chief  
Fuel Facility Inspection Branch 1  
Division of Fuel Facility Inspection

Enclosure 2





## EXECUTIVE SUMMARY

Nuclear Fuel Services, Inc.  
NRC Inspection Report 70-143/2007-003

This inspection included observations conducted by the resident inspectors during normal and off-normal shifts in the area of safety operations, facility support, and radiological controls.

### Safety Operations

- The plant operation activities observed during the inspection period were performed safely and in accordance with approved procedures (Paragraph 2.a).

### Facility Support

- All of the maintenance activities observed were performed safely and in accordance with approved procedures. The operational readiness review process ensured a safe return to service of the U-Metal System (Paragraph 3.a).
- Training activities were conducted in accordance with plant procedures (Paragraph 3.b).
- The emergency response organization demonstrated a prompt and effective response to a simulated emergency condition (Paragraph 3.c).

### Radiological Controls

- Licensee personnel utilized as low as reasonably achievable practices and complied with radiation protection procedures to minimize the spread of contamination (Paragraph 4.a).

### Followup to Previously Identified Items


- During followup to an unresolved item identified during a previous inspection, the inspectors identified three examples of the licensee's failure to follow procedural requirements (Paragraph 5).

### Attachment:

Partial List of Persons Contacted

Inspection Procedures Used

List of Items Opened, Closed, and Discussed





## REPORT DETAILS

### 1. Summary of Plant Status

Returning striking workers continued to be assimilated into the workforce, with the last group expected in June 2007. Fuel manufacturing, scrap recovery processes, blended low-enriched uranium (BLEU) oxide conversion, BLEU Preparation Facility (BPF), and decommissioning activities were conducted safely throughout the inspection period.

### 2. Safety Operations

#### a. Plant Operations (Inspection Procedure (IP) 88135)

##### (1) Inspection Scope and Observations

The inspectors performed numerous walkdowns of the fuel process areas and the BPF facility. The inspectors verified adequate staffing and evaluated attentiveness of operators in carrying out their assigned duties. Communications were monitored between supervision and line operators. Adequate oversight was provided by supervision. The inspectors verified procedural compliance within the operating areas.

##### (2) Conclusions


All of the operations activities observed were performed safely and in accordance with approved procedures.

### 3. Facility Support

#### a. Maintenance/Surveillance (IP 88135)

##### (1) Inspection Scope and Observations

The inspectors observed licensee personnel performing various maintenance activities in fuel manufacturing, the BLEU preparation facility, and the waste water treatment facility. All of the reviews and documentation associated with the work requests (WR), special work permits, and lockout/tagouts were performed in accordance with procedural requirements and site administrative controls. The inspectors observed the licensee's successful completion of these activities. The following activities were observed:

- Work Request # 113721, Perform annual PM on Automatic Transfer Switch ATS-2
- 



- Work Request # 113722, Perform annual PM, install repaired circuit breaker, and test alarm circuits for ATS-1
- Work Request # 108326, Inspect MCC wiring, remove damaged breaker, and check for proper operation

The inspectors reviewed operational readiness review (ORR) activities regarding the startup of the U-Metal System following the U-Oxide campaign. The ORR was conducted in accordance with NFS-GH-902, "Operational Readiness Review Program," Revision 4. The inspectors verified that the status of the U-Metal System was adequately assessed and documented prior to restart. All testing and maintenance was completed prior to system restart. The inspectors noted a minor issue regarding the availability of updated system drawings in the field and brought this to the attention of licensee management. This issue was immediately rectified and current drawings were provided to the operators.

On May 5, 2007, the inspectors observed the annual testing and preventative maintenance on an the Building 480 emergency generator, uninterruptible power supply, and associated transfer switches. This activity was described in LOA-MISC-07-022, "Auxiliary Actions - Building 480 Preventative Maintenance," Revision 0. A portable diesel generator was utilized to supply in-house loads while maintenance was performed on the installed emergency generator.

(2) Conclusions

All of the maintenance activities observed were performed safely and in accordance with approved procedures. Restart of the U-Metal System was conducted in a safe and efficient manner.

b. Training (IP 88135)

(1) Inspection Scope and Observations

On March 28, the inspectors attended maintenance toolbox training. This training was conducted in accordance with NFS-TN-008, "NFS Training Procedure," Revision 5. This training covered recent issues regarding requirements for radiation work permits, WRs, and lockout/tagouts. The training provided workers a review of existing job requirements, information on changes, and covered items of current concern.

(2) Conclusions

The training was conducted in an organized and professional manner.

c. Emergency Preparedness (IP 88135)

(1) Inspection Scope and Observations

On March 30, the residents observed an emergency preparedness drill. The drill was a simulated fire in the process area. The licensee activated its emergency response organization in accordance with Procedure NFS-HS-E-03, "Emergency Response Organization," Revision 20. The emergency control center (ECC) was promptly staffed following indications of an Alert condition. The Emergency Control Director (ECD) appropriately classified the event in accordance with the site Emergency Plan and Procedure NFS-HS-E-03.

The inspectors verified the establishment of the on-scene Incident Commander and activation of the fire brigade. Adequate communications were noted between the scene and the ECC. The ECD maintained sufficient command and control to ensure a safe and effective emergency response to the event. The inspectors verified clear and concise communications between the Incident Commander and the ECC. The inspectors attended the post-drill critique and noted that all significant deficiencies were addressed by the licensee.

(2) Conclusions

The emergency response organization demonstrated a prompt and effective response to a simulated emergency condition.

4. Radiological Controls (IP 88135)

a. Radiation Protection

(1) Inspection Scope and Observations

During various plant tours, the inspectors verified the proper use of dosimetry and protective clothing by licensee personnel. The inspectors evaluated frisking techniques and placement of radiation postings in the process areas. The inspectors also verified that plant personnel complied with the licensee's health physics procedures.

(2) Conclusions

Licensee personnel utilized as low as reasonably achievable practices and complied with radiation protection procedures to minimize the spread of contamination.

## 5. Followup on Previously Identified Issues

The inspectors followed up on Unresolved Item 70-143/2007-002-01 regarding evaluation of deficiencies identified during maintenance activities. On March 10, 2007, the licensee performed annual maintenance activities on the 306 diesel generator, uninterruptible power supply (UPS), and the automatic bus transfer (ABT). During the review of the work requests (WO 113702, 113703, and 113704) and supporting documents (Lockout/Tagout #'s P-3351 and P-3352), the inspectors noted that the system engineer did not have any of the approved work documents associated with this activity at the job site as required by NFS safety procedures. Specific examples were:

- the system engineer did not fill out lockout/tagout sheets as the work progressed to ensure that the locks and tags were properly hung and controlled, and did not post them at the work site as required by Section 6.0 of Procedure NFS-GH-36, "Lockout/Tagout."
- the individuals performing the lockout/tagout activities were not trained in accordance with the NFS Lockout/tagout Program as required by Section 9.0 of Procedure NFS-GH-36.
- the system engineer did not complete Attachment IV of NFS-SOP-205, "Procedure for Maintenance, Operations, and Testing of UPS/Generator Building 306," as the test was being performed. Instead, the system engineer used an informal check-sheet that had not been approved for use to document the completion of the different phases of the test.

The three examples of failure to conduct safety function activities in accordance with written procedures is a violation of NRC requirements (VIO 70-143/2007-003-01). URI 70-143/2007-002-01 is closed.

## 6. 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 May 7, 2007. No dissenting comments were received from the licensee.

**ATTACHMENT**

**1. PERSONS CONTACTED**

Partial List of Licensee's Persons Contacted

S. Barron, Emergency Management  
T. Coates, Engineering Section Manager  
R. Crowe, Corrective Actions Program Manager  
R. Droke, Licensing/Acting Safety Director  
G. Hazelwood, Engineering Director  
R. Holley, Environmental Safety Manager  
T. Lindstrom, Executive Vice President, HEU Operations  
M. Moore, Vice President, Safety & Regulatory  
J. Parker, Industrial Safety Manager  
K. Schutt, Executive Vice President, Site Services  
R. Shackelford, Nuclear Criticality Safety Manager  
T. Sheehan, HEU Operations Director  
M. Shope, Quality Assurance Manager  
K. Weir, Deputy Security Director  
D. Wise, Vice President, Fuel Manufacturing

**2. INSPECTION PROCEDURES USED**

IP 88135      Resident Inspector Program for Category 1 Fuel Cycle Facilities

**3. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED**

70-143/2007-003-01    Open    VIO    Failure to implement NFS safety procedures during 306 diesel generator/UPS/ABT maintenance activities.

70-143/2007-002-01    Closed    URI    Evaluate deficiencies identified during 302 equipment and 306 diesel generator/UPS/ABT maintenance activities for enforcement.