

[REDACTED]

November 7, 2006

EA-06-279

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

SUBJECT: RESPONSE TO NOTICE OF VIOLATION 70-143/2006-205-01

Dear Mr. Ferguson:

This letter refers to your correspondence dated August 14, 2006, in reply to our July 21, 2006, Inspection Report and Notice of Violation (Notice). The violation in the Notice concerned failure to have dual criticality accident alarm system (CAAS) coverage of an area in accordance with 10 CFR 70.24(a)(1). Specifically the Notice was issued because Nuclear Fuel Services, Inc. (NFS), CAAS for [REDACTED] which covers [REDACTED] of the Waste Water Treatment Facility, had only one operable detector in service for the period May 31, 2006, to July 15, 2006.

In your reply to our Notice, you denied that a violation occurred, and your rationale for denial is based on your view that: (1) the two-detector coverage requirement in 10 CFR 70.24(a)(1) is to minimize false evacuation alarms in the event one detector fails and to ensure that detector coverage is maintained in the event one detector fails; (2) the regulation only requires two detectors for initial installation in each area of the facility; and (3) a violation does not occur any time a detector fails.

The U.S. Nuclear Regulatory Commission's (NRC's) position that follows addresses each of your reasons for denial of the violation as discussed above.

Two-detector coverage minimizes false evacuation alarms in the event one detector fails and ensures that detector coverage is maintained in the event one detector fails:

10 CFR 70.24(a)(1) requires that coverage of all areas shall be provided by two detectors. The intent of the regulation is to minimize false evacuation alarms and provide for continued coverage in the event of single detector failure. Placing a detector in alarm status for an extended period of time increases the risk of loss of coverage over the area due to failure of the remaining operable detector. One operable detector covering an area for an extended period of time does not meet the intent of the regulation to ensure that reliable detector coverage for that area is maintained.

Two detectors are required only for initial installation in each area of the facility:

This is an incorrect interpretation of 10 CFR 70.24(a)(1). The regulation states that areas that contain quantities of special nuclear material exceeding the values stated require at least dual detector coverage and does not differentiate between initial installation and continued facility operation. By placing a detector in an "alarm" state for continued operation over an extended

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period of time does not meet the intent of the regulation to maintain two-detector coverage of the area.

A violation does not occur any time a detector fails:

This statement is not fully reflective of what constitutes a violation of 10 CFR 70.24(a)(1). A violation occurs when one of the two detectors fails without timely implementation of compensatory measures.

The basis for the Notice is your decision to place a detector in an "alarm" state for continued operation over an extended period of time without taking compensatory measures or replacing the inoperable detector. As specified in Section 3.2.4.3 of your license (SNM-124), "Criticality Detection and Evacuation Alarm System," the evacuation alarm system will meet the guidance established in ANSI/ANS 8.3-1986, "Criticality Accident Alarm System." Section 6.5, "Corrective Action," of the standard states that when tests reveal inadequate performance, corrective action shall be taken without unnecessary delay. Placing the detector in alarm status on May 31, 2006, after resetting it without success and not completing repairs on the detector until July 15, 2006, without implementing compensatory measures, neither met the requirement of 10 CFR 70.24(a)(1) nor your commitment to the ANSI/ANS standard.

Upon reconsideration and consultation with the Office of Enforcement, we have determined that the cited violation is valid and requires corrective action to prevent recurrence. You must take the necessary corrective measures to resolve this violation in accordance with applicable regulatory requirements. You are also required to respond to this letter within 30 days and should follow the instructions specified in our July 21, 2006, Inspection Report and Notice of Violation when preparing your response. In particular, you should include the reason for the violation and the corrective steps you have taken to avoid future violations. After reviewing your response to the Notice, the NRC will determine whether further enforcement action is necessary to ensure compliance with the regulatory requirements.

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The violation was evaluated in accordance with the NRC Enforcement Policy. The current Enforcement policy is included on the NRC's Web site at www.nrc.gov; Select What We Do, Enforcement, then Enforcement Policy. [REDACTED]

If you have any questions concerning this letter, please contact Tom Marenchin, of my staff, at (301) 415-5148.

Sincerely,

/RA/

Joseph G. Giitter, Chief
Special Projects and Technical
Support Directorate
Division of Fuel Cycle Safety
and Safeguards, NMSS

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Division of Fuel Cycle Safety
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