



NUCLEAR FUEL SERVICES, INC.

a subsidiary of The Babcock & Wilcox Company

■ 1205 banner hill road ■ erwin, tn 37650 ■ phone 423.743.9141
■ www.nuclearfuelservices.com

21G-12-0103
GOV-01-55-04
ACF-12-0152

June 8, 2012

Director, Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

References: 1) Docket No. 70-143; SNM License 124
2) NRC Inspection Report No. 70-143/2012-002, and Notice of Violation, dated April 30, 2012

Subject: Reply to Notice of Violation (VIO 70-143/2012-002-01 and VIO 70-143/2012-002-02)

Dear Sir:

Pursuant to the requirements of 10 CFR 2.201, Nuclear Fuel Services, Inc. (NFS) hereby submits the attached responses to the violations identified in the referenced NRC inspection report. In a telephone conversation with Alan Blamey, Fuel Facility Branch 1 Chief, on May 30, 2012, NFS requested and was granted an extension to the due date for the responses to June 8, 2012.

If you or your staff have any questions, require additional information, or wish to discuss this matter further, please contact me, or Ms. Jennifer Wheeler, Licensing and ISA Manager, at (423) 735-5429. Please reference our unique document identification number (21G-12-0103) in any correspondence concerning this letter.

Sincerely,

NUCLEAR FUEL SERVICES, INC.

Joseph G. Henry
President

JKW/pdj

Attachment 1: Reply to Notice of Violation (VIO 70-143/2012-002-01)
Attachment 2: Reply to Notice of Violation (VIO 70-143/2012-002-02)

nuclear fuel services, inc., a subsidiary of The Babcock & Wilcox Company

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Copy:

Regional Administrator
U.S. Nuclear Regulatory Commission
Region II
245 Peachtree Center Ave., NE, Suite 1200
Atlanta, GA 30303-1257

Mr. Manuel Crespo
Project Inspector
U.S. Nuclear Regulatory Commission
Region II
245 Peachtree Center Ave., NE, Suite 1200
Atlanta, GA 30303

Mr. Kevin Ramsey
Project Manager
Fuel Manufacturing Branch
Fuel Facility Licensing Directorate
Division of Fuel Cycle Safety and Safeguards
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Mr. Galen Smith
Senior Resident Inspector
U.S. Nuclear Regulatory Commission

Attachment 1

**NFS Reply to Notice of Violation
VIO 70-143/2012-002-01**

3 pages to follow

Reply to Notice of Violation (70-143/2012-002-01)

Restatement of Violation

During an NRC inspection conducted from January 1 to March 31, 2012, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

10 CFR 70.62 requires, in part, that each licensee shall establish a safety program that demonstrates compliance with the performance requirements. One of the elements of the safety program is management measures.

10 CFR 70.62(d) requires, in part, that each licensee shall establish management measures to ensure compliance with the performance requirements. These measures shall ensure that an item relied on for safety (IROFS) will be available and reliable to perform its intended function when needed, to comply with the performance requirements.

Contrary to the above, prior to March 6, 2012, the licensee's safety program did not ensure that IROFS FIRE-18 would perform its intended function when needed to comply with the performance requirements. Specifically, the inspectors noted a penetration in this fire wall carrying communication cables that contained no sealing compound within the fire seal. Thus, the penetration seal no longer met the two hour National Fire Protection Association fire rating as required by the Nuclear Fuel Services Integrated Safety Analysis. The lack of adequate management measures pertaining to the maintenance of a fire wall and its associated penetrations adversely affected its two hour fire rating and thus the function and reliability of an IROFS.

This is a Severity Level IV Violation (Section 6.2).

Background

The fire wall is an IROFS, and the sealing material was missing from one of the penetrations in the wall. Fire detection and a CO₂ fire suppression system were also in place to prevent or mitigate the consequences of a fire in the area where the fire wall is located. The penetration opening is roughly 3 inches in diameter, and the fire wall is at least 1500 square feet. Considering these additional factors, and as indicated in the inspection report, the issue is of low safety significance.

The Reason For The Violation, Or, If Contested, The Basis For Disputing The Violation Or Severity Level

NFS concurs that the violation happened as stated. Sometime in the past, physical work occurred at the location of the fire wall penetration in question. The sealing material has either fallen out since the physical work occurred, or was not reinstalled at the completion of the physical work. Lack of adequate follow-up on fire barrier inspection findings and/or lack of adequate control of the maintenance activity contributed to this issue.

The Corrective Steps That Have Been Taken And The Results Achieved

Work Request 157872 was issued to replace the missing sealing material in order to restore the fire resistance rating of the penetration opening identified by the inspectors. The work was performed on May 19, 2012, and the work was accepted on May 23, 2012.

Revision 3 of NFS-WM-001, "Control and Execution of Work," became effective on March 30, 2012. Attachment 1, "Work Request Form," was updated to include a block in the "Other Permits" section at the top of page 2 to indicate that the proposed work affects an existing or requires a new "Fire Wall Penetration." Checking this block requires ISA Fire Protection staff to review and approve the changes proposed for the affected fire barrier. The purpose of the approval is to review the penetration location, what is being penetrated (fire wall, fire door or door frame, etc.), and what sealing materials need to be used to restore the required fire rating of the component. Upon completion of the work, the "Work Acceptance" process is used to document the field verification that the fire barrier rating has been restored properly. The additional tools and checks implemented in Revision 3 are now in place to avoid further violations of this nature.

Finally, a plant-wide communication was issued on May 22, 2012, in order to remind personnel that all new fire barrier penetrations, as well as changes to existing fire barrier penetrations, must be approved before the physical work begins. As discussed above, the purpose of the approval is to ensure that the required fire rating of the component is properly restored.

The Corrective Steps That Will Be Taken To Avoid Further Violations

To further prevent recurrence of this event, Revision 3 of NFS-WM-001, "Control and Execution of Work," became effective on March 30, 2012. As discussed above, the additional tools and checks implemented in Revision 3 are now in place to avoid further violations of this nature.

Additionally, an Extent of Condition review is in progress to conduct field walk-downs to identify other fire wall penetrations where the sealing material is missing. This additional corrective action will ensure that the issue is properly bounded, and additional work requests will be initiated as necessary. The planned completion date for the Extent of Condition review is July 31, 2012. If areas are identified that need repair, the work will be scheduled through the Work Management process and tracked to completion.

The Date When Full Compliance Will Be Achieved

Full compliance was achieved when NFS-WM-001, Revision 3, became effective on March 30, 2012, and when the repair of the fire wall penetration identified by the inspectors was completed on May 23, 2012.

Additional Information

With regards to the results of the Extent of Condition review, the date for completing these repairs cannot be estimated until the full scope of work is known and the required resources to complete the work are scheduled. The Senior Resident Inspector will be kept informed of NFS' progress toward completion of these long term corrective actions.

Attachment 2

**NFS Reply to Notice of Violation
VIO 70-143/2012-002-02**

3 pages to follow

Reply to Notice of Violation (70-143/2012-002-02)

Restatement of Violation

During an NRC inspection conducted from January 1 to March 31, 2012, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

10 CFR 70.62 requires, in part, that each licensee shall establish a safety program that demonstrates compliance with the performance requirements. One of the elements of the safety program is management measures.

10 CFR 70.62(d) requires, in part, that each licensee shall establish management measures to ensure compliance with the performance requirements. These measures shall ensure that an IROFS will be available and reliable to perform its intended function when needed, to comply with the performance requirements.

Contrary to the above, prior to February 8, 2012, the licensee's safety program failed to ensure an IROFS would perform its intended function when needed to comply with the performance requirements. Specifically, the safety program failed to ensure that some configuration controlled equipment in Building 302, each classified as IROFS, remained reliable to perform its intended safety function. The NRC inspectors discovered multiple examples of failed structural fittings that supported storage columns designated as IROFS. The lack of adequate management measures enabled the degradation of the structural supports that adversely affected the stability and reliability of the storage columns designated as IROFS.

This is a Severity Level IV Violation (Section 6.2).

Background

The column support structures in Building 302 and Building 306 West are credited as Configuration Controlled Equipment (CCE) and are also designated as IROFS. The support structures, which were installed in the 1997 – 1998 timeframe, consist of stainless steel tubing with cast aluminum Hollaender-type fittings. Over time, the aluminum fittings began to physically crack, leaving the structural integrity of the column support structure in question. Structural analysis was performed and documented that a crack in a single, load-bearing fitting does not adversely affect the integrity of the supporting column base plates. Only when multiple fittings supporting a column base plate failed was it considered a structural failure.

The failure of a column containing HEU solution has been analyzed to remain subcritical on the favorable geometry building floor. The building floor is also controlled as CCE, and is designated as an IROFS. Other administrative IROFS are implemented to prevent unfavorable geometry containers from being located in the building. Due to the remaining IROFS and the factors indicated in the inspection report, this issue is of low safety significance.

The Reason for the Violation, or, if Contested, the Basis for Disputing the Violation or Severity Level

NFS concurs that the violation happened as stated. Weaknesses associated with timely and consistent reporting of trends, especially in the utilization of the information for development of corrective actions, in addition to a lack of awareness that CCE is generically credited as IROFS, led to less than adequate management measures.

The Corrective Steps That Have Been Taken And The Results Achieved

Refer to the following corrective steps that have been completed:

1. An Extent of Condition review of column support structures in the 300 Manufacturing Complex was conducted to determine which areas are susceptible to cracking of Hollaender-type fittings (Investigation 14304). The review identified that only the support structures in the Buildings 302 and 306 West manufacturing facilities are constructed using the Hollaender-type fittings.
2. The drawings for the susceptible areas were reviewed and marked up to identify the load-bearing Hollaender-type fittings in each area that required inspection.
3. Maintenance executed the inspections of the specified fittings and identified additional cracked fittings that needed repair.
4. Columns identified with more than a single cracked load-bearing fitting per column support plate were taken out of service and the fittings were repaired. All columns that had multiple failed support fittings have been repaired, and the column supports have been restored to a structurally sound status.

The Corrective Steps That Will Be Taken To Avoid Further Violations

In order to prevent future Hollaender-type fitting failures that could affect structural support integrity, work requests have been approved to address single, load-bearing, cracked fittings as well as intact load-bearing fittings. Corrective actions to track scheduling and completion of these repairs have been included in the NFS Problem

Identification, Resolution, and Correction System (Reference corrective actions C17472, C17473, and C17474).

To address the causal factors that led to the management measure weaknesses that subsequently enabled the degradation of the structural supports, additional corrective actions have been included in the NFS Problem Identification, Resolution, and Correction System (Reference corrective actions C17717 and C17728). One action is associated with the timely and consistent reporting of trends to the Corrective Action Review Board (CARB), including establishment of protocol for Department Performance Improvement Coordinators (DPICs) and their management to conduct trend analysis and take appropriate action(s). The other action includes use of the formal lessons learned program to increase awareness that CCE are globally designated as IROFS, and to re-emphasize the importance of conservative decision-making regarding response to repeat issues for safety significant equipment.

The Senior Resident Inspector will be kept informed of NFS' progress toward completion of the additional corrective actions noted above.

The Date When Full Compliance Will Be Achieved

Full compliance was achieved on April 26, 2012, when all columns that had multiple failed support fittings were repaired, restoring the column supports to a structurally sound status, and the Extent of Condition review was completed (Reference Investigation 14304).