



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
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ATLANTA, GEORGIA 30303-8931

January 13, 2004

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

SUBJECT: MEETING SUMMARY - CATEGORY 1 MEETING,
NUCLEAR FUEL SERVICES, INC. - DOCKET NO. 70-143

Dear Mr. Ferguson:

This letter refers to the public meeting at the NRC Office in Rockville, Maryland on December 19, 2003, during which we discussed the applicability of license conditions S-11 and S-46 to temporary operations in the 200 complex (Scrap Building). The operations involved processing both low enriched and high enriched liquid waste from favorable to unfavorable geometry tanks. As documented in NRC Inspection Reports 70-143/2002-11 and 2003-05, the NRC required additional information pertaining to your staff's interpretation that these license conditions did not apply. The meeting afforded you the opportunity to explain the operation in detail, to explain the basis for your staff's interpretations of these license conditions, and to respond to the NRC's letter of October 6, 2003, which stated the NRC's understanding of the operation and the applicability of the license conditions. The meeting also provided the opportunity for NRC to express concerns with your procedures and controls for the operation. The meeting was beneficial and provided the NRC with a better understanding of the operation and your staff's position.

The names of participating attendees at the meeting and a copy of the presentation used by NFS are enclosed.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading_rm/adams.html (the Public Electronic Reading Room).

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

Sincerely,

/RA/

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

Enclosures: (See Page 2)

- Enclosures: 1. List of Participating Attendees
 2. Meeting Summary
 3. NFS Presentation

cc w/encls:

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LIST OF PARTICIPATING ATTENDEES

December 19, 2003

U.S. NUCLEAR REGULATORY COMMISSION

Fuel Cycle Safety and Safeguards

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M. Chatterton
J. Lubinski
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NUCLEAR FUEL SERVICES

R. Droke
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INSTITUTE FOR ENERGY AND ENVIRONMENTAL RESEARCH

A. Makhijani

PUBLIC MEETING SUMMARY

DECEMBER 19, 2003

NRC OPENING REMARKS

- NRC (Collins) stated the purpose of the meeting was to allow NFS an opportunity to brief the NRC on the applicability of license conditions S-11 and S-46 to the transfer operation. NRC pointed out that the application of these license conditions depends on interpretation of the terms credible, incredible, and not unlikely.

NFS PRESENTATION

- NFS gave a detailed description of the process, which involved transfer of containers of solutions containing high enriched uranium, and also containers of low enriched uranium, into the favorable geometry columns for dilution and sampling. After analysis of dual independent samples and confirmation that the solutions met nuclear criticality safety (NCS) limits, the diluted solutions were discharged to unfavorable geometry tanks for further processing. NFS described in detail the amount of HEU and LEU available and present in the building during each phase of the operation.
- NFS outlined the rationale behind the decision that a detailed nuclear criticality safety evaluation was not necessary. NFS contended that an evaluation of the operation was performed, but did not claim it met the criteria of S-46. The NRC questioned various procedures which were not documented in the evaluation of the operation, including: verification that no holdup of uranium was present prior to the operation being started; independent verification of tanks being empty before commencing the operation.
- NFS described the various controls in place which would prevent the accumulation of greater than a safe mass of uranium in the process. NFS further described that, due to control by NCS engineering, the total quantity of uranium in the building during any phase of the operation was less than a safe mass. NFS stated the applicability of license condition S-46 depended on the following criteria: less than a safe mass exists; and there is no possibility of double batching material. NFS stated that more than a safe mass never existed in the building during the operation, and that there was no possibility of double batching, and therefore S-46 did not apply. The NRC questioned the formality of some of the controls stated, and noted that some of the controls were not described in relevant procedures and were not required by an NCS evaluation.
- NFS stated license condition S-11 would only apply if accumulation of a critical mass or concentration were both credible and not unlikely. NFS stated that not unlikely means likely and that, given the controls in place, an unsafe condition was certainly not likely. Therefore license condition S-11 did not apply. However, the licensee contended that the controls specified in S-11 section 3 were, in fact, met by procedural requirements for independent actions by operators.

Closing Remarks

- NRC acknowledged the presentation.