

March 26, 2003

Ms. B. Marie Moore, Vice President
Safety and Regulatory
Nuclear Fuel Services, Inc.
P.O. Box 337, MS 123
Erwin, TN 37650

SUBJECT: NUCLEAR FUEL SERVICES, INC., REQUEST FOR ADDITIONAL
INFORMATION (TAC NO L31739) REVISED LICENSE AMENDMENT
REQUEST REGARDING MANAGEMENT MEASURES FOR IROFS

Dear Ms. Moore:

This refers to your application dated March 6, 2003, (NFS No. 21G-03-0053) requesting an amendment to Materials License SNM-124 regarding management measures for items relied on for safety (IROFS).

Our review of your application has identified additional information that is needed before final action can be taken on your request. The additional information, specified in the enclosure, should be provided as soon as possible, as the information is necessary for us to complete our review of the BLEU Uranyl Nitrate Building amendment application. Please reference the above TAC No. in future correspondence related to this request.

If you have any questions regarding this matter, I can be reached on (301) 415-7249 or by e-mail at mta@nrc.gov.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter 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).

Sincerely,

/RA/

Mary T. Adams, Senior Project Manager
Fuel Cycle Facilities Branch
Division of Fuel Cycle Safety and Safeguards
Office of Nuclear Material Safety and Safeguards

Docket 70-143
License SNM-124

Enclosure: Request for Additional Information

March 26, 2003

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Division of Fuel Cycle Safety and Safeguards
Office of Nuclear Material Safety and Safeguards

Docket 70-143
License SNM-124

Enclosure: Request for Additional Information

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OFC	FCLB	E	FCLB	E	FCLB	E	FCLB	
NAME	F. Burrows		MAdams		JMuszkiewicz		LRoché	
DATE	3/26/03		3/26/03		3/26/03		3/26/03	

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**REQUEST FOR ADDITIONAL INFORMATION
NUCLEAR FUEL SERVICES, INC.
LICENSE AMENDMENT APPLICATION
REGARDING MANAGEMENT MEASURES FOR IROFS**

BACKGROUND

On January 24, 2003 (NFS No. 21G-03-0019), Nuclear Fuel Services, Inc., (NFS) requested an amendment to their license SNM-124 to reflect commitments needed to implement management measures to fulfill the requirements of 10 CFR 70.62. On March 5, 2003, the staff determined that the application did not incorporate all essential elements to enable an adequate safety review and thus did not accept that amendment request for formal review. On March 6, 2003 (NFS No. 21G-03-0053), NFS submitted a revision to the January 24, 2003, request regarding commitments for a management measures program. This request for additional information identifies questions and comments resulting from the NRC staff review of the revised amendment request.

The NRC staff reviewed the license amendment request for compliance with the requirements of 10 CFR 70, Domestic Licensing of Special Nuclear Material, and specifically for compliance with the requirements of Subpart H thereto, Additional Requirements for Certain Licensees Authorized to Possess a Critical Mass of Special Nuclear Material. The NRC staff used the guidance contained in NUREG-1520, Standard Review Plan for the Review of a License Application for a Fuel Cycle Facility (SRP), to ensure quality and completeness of the technical review.

REVIEW QUESTIONS AND COMMENTS

NFS Section 2.12.1 Configuration Management

1. Revise Section 2.12.1.3 to include a commitment that the configuration management (CM) function will maintain strict consistency among the design requirements, the physical configuration, and the facility documentation as listed under the acceptance criteria in SRP Section 11.4.3.1 Item 4.
2. Per the acceptance criteria of SRP Section 11.4.3.1 Item 1, revise Section 2.12.1 to include a subsection that describes the configuration management organization, including design requirements staff, design staff (engineering), safety analysts, safety discipline manager(s), safety review committee, procurement staff, construction supervision staff, construction and installation verification staff, pre-operational auditors, periodic auditors, and others in the CM function. Describe how they interface with each other. A CM function flow chart may be useful to illustrate decision points and CM function chronologies and sequences. Also include the objectives of each CM activity.
3. Per the acceptance criteria of SRP Section 11.4.3.1 Item 3, revise Section 2.12.1 to include a description of an acceptable method to create and control documents within the CM function. In addition to the list of records to be maintained, describe how the document database is catalogued, how documents are maintained and distributed, and how

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documents are retrieved. Describe how the document control function tracks document changes and avoids access by facility personnel to outdated design and specification documents for IROFS.

4. Revise Section 2.12.1.3 to describe how the CM function will address the acceptance criteria in SRP Section 11.4.3.1 Item 4.
5. Revise Section 2.12.5.2 to describe the scope of the biennial CM function audit. The audit should include both documents assessments and physical assessments (system walkdowns) as discussed in SRP Section 11.4.3.1 Item 5.

NFS Section 2.12.2 Maintenance of IROFS

1. Revise Section 2.12.2 to describe the surveillance /monitoring of IROFS as discussed in the acceptance criteria of SRP Section 11.4.3.2 Item 1.
2. Revise Section 2.12.2.1 to describe preventive maintenance, corrective maintenance and functional testing as discussed in the acceptance criteria of SRP Section 11.4.3.2, Items 2, 3, and 4. Also describe how a maintenance function is identified as not being applicable. Discuss whether a technical evaluation is performed and if such an evaluation is reviewed by a multi-disciplinary team of experts with review and approval by the safety review committee.
3. Revise Section 2.12.2.2 to discuss in detail management measures applied to administrative controls. The words "as applicable" in the footnote to Table 2.2 should be described in detail, including when, who, and what are involved in a decision to apply or not apply management measures to an administrative control. Also discuss when a management measure is applicable and what analysis (which should be part of the safety analysis) is made to determine that a management measure is not applicable. The ISA Summary should be revised to identify any IROFS that has less management measures applied than that fully specified for its corresponding risk reduction level. Section 2.12.2.2 should also be revised to include a description of maintenance for administrative (especially when the administrative control includes an active component) and enhanced administrative controls.
4. The first sentence in Section 2.12.2.3 includes the words "as applicable." Revise Section 2.12.2.3 to specify or define "as applicable." List who is notified before repairs/maintenance are conducted and why are they notified. Also explain why the phrase "to ensure compliance with 10 CFR Part 21" was not included in the requirements for replacement of like-kind parts and control of new or replacement parts.

NFS Section 2.12.3 Training and Qualification

1. Revise Section 2.12.3 to clearly make commitments regarding organization and management of training as discussed in the acceptance criteria of SRP Section 11.4.3.3 Items 1.a-g.

NFS Section 2.12.4 Procedures

1. Revise Section 2.12.4 to describe the management measures controlled by procedures: design, configuration management, procurement, construction, radiation safety,

maintenance, quality assurance, training and qualification, audits and assessments, incident investigations, records management, criticality safety, fire safety, chemical process safety, and reporting requirements as discussed in the acceptance criteria of SRP Section 11.4.3.4.

2. Revise Section 2.12.4 to add a commitment that procedures are required for operator actions that are necessary to prevent or mitigate accidents defined in the ISA summary as discussed in the acceptance criteria of SRP Section 11.4.3.4 Item 6.
3. Revise Section 2.12.4 to add a commitment that procedures are reviewed after unusual incidents as discussed in the acceptance criteria of SRP Section 11.4.3.4 Item 7.
4. Revise Section 2.12.4 to add a commitment that temporary procedures are controlled by a formal procedure, do not involve a change to the ISA, and have a documented review and approval process as discussed in the acceptance criteria of SRP Section 11.4.3.4 Item 10.
5. Revise Section 2.12.4 to add a commitment to perform periodic reviews of procedures to ensure their continued accuracy and usefulness including assurance that, as a minimum, all operating procedures are reviewed every 5 years, and emergency procedures are reviewed every year as discussed in the acceptance criteria of SRP Section 11.4.3.4 Item 12.

NFS Section 2.12.5 Audits and Assessments/Inspections

1. SRP Section 11.4.3.5 item 1 states that the application should describe the guidance for conducting an audit or assessment. SRP Section 11.3.5 states that the reviewer should examine the application for the general structure of typical audits and assessments. Revise Section 2.12.5 to describe the general structure of typical audits and assessments specified in written procedures.
2. SRP Section 11.4.3.5 states that the application should describe the assigned responsibilities for each phase of the work. The staff positions and committees responsible for audits and assessments should be specified. Revise Section 2.12.5 to specify, by title, the staff positions and committees responsible for each phase of the audit and assessment function.
3. SRP Section 11.4.3.5 states that the application should describe the procedures for recording the audit/assessment results and recommending the actions to be taken. The levels of management to which results are reported, and the systems to provide corrective actions should be described. Revise Section 2.12.5 to specify the levels of management to which the audit/assessment results are reported and describe the features of the corrective action program (i.e., assign actions, prioritize work, track progress, etc.).
4. SRP Section 11.4.3.5 states that audits and assessments should be conducted for several areas, including maintenance and procedures. Revise Section 2.12.5 to specify that audits and assessments will be performed in the areas of maintenance and procedures, including management measures.
5. SRP Section 11.4.3.5 states that qualified personnel without direct responsibility for the function or area being audited or assessed will be used. In addition, independent assessments (i.e., external audits) will be conducted by offsite groups or individuals not involved in the licensed activity. Proposed Section 2.12.5 specifies these requirements with respect to quarterly audits, but fails to specify these requirements with respect to monthly

assessments and external audits. Revise Section 2.12.5 to clarify that personnel performing any of the audits or assessments shall be qualified and without direct responsibility for the function or area being reviewed.

NFS Section 2.12.6 Incident Investigations and Corrective Actions

1. SRP Section 11.4.3.6 states that a process shall be established to investigate abnormal events. The investigations should begin within 48 hours, or sooner, depending on the safety significance of the event. Also details of the event sequence will be compared with the accident sequences considered in the ISA with modifications made to the ISA and ISA Summary as needed to evaluate the risk associated with the event. Revise Section 2.12.6 to address these acceptance criteria in SRP Section 11.4.3.6.
2. SRP Section 11.4.3.6 states that incident investigation policy or procedures should describe the functions, qualifications, and responsibilities of the team manager and team members along with the scope of the team's authority and responsibilities and assurance of cooperation from management. Also procedures should require documentation relating to abnormal events be maintained for 2 years or for the life of the operation, if longer, and a system for monitoring completion of appropriate corrective actions. Guidance should also be provided on how to apply a reasonable, systematic, structured approach to determine the specific or generic root cause(s) and generic implications of the event. Revise Section 2.12.6 to describe incident policy or procedures in terms of these acceptance criteria from SRP Section 11.4.3.6.
3. SRP Section 11.4.3.6 states that a documented plan for abnormal incident investigation should be an element of the incident investigation policy or procedures and should be separate from any required emergency plan. Revise Section 2.12.6 to describe the contents of that plan in terms of the acceptance criteria listed as the last items in SRP Section 11.4.3.6.

NFS Section 2.12.7 Records Management

1. SRP Section 11.4.3.7 states that records should be verified, legible, identifiable, and retrievable for their designated lifetimes. Records should be protected against tampering, theft, loss, unauthorized access, damage, and deterioration. Procedures should be established to specify the requirements and responsibilities for record selection, verification, protection, transmittal, distribution, retention, maintenance, and disposition. Also an organization and procedures should be in place to promptly detect and correct deficiencies in the records management system. Revise Section 2.12.7 to describe the records management system capabilities in terms of these acceptance criteria in SRP Section 11.4.3.7.
2. SRP Section 11.4.3.7 states that records management procedures should categorize records by the safety importance; assign responsibilities for records management; specify the authority needed for records retention or disposal; specify which records need access control and provide the needed controls; protect records from loss, damage, tampering, theft, or during an emergency; and ensure the records management system remains effective. Revise Section 2.12.7 to describe the records management system procedures in terms of these acceptance criteria in SRP Section 11.4.3.7

3. SRP Section 11.4.3.7 states that for computer codes and data used for safety related activities, procedures should be developed for maintaining the usefulness of older computer codes and data as technology changes. Also records of IROFS failures must be kept up to date in accordance with 10 CFR 70.62(a)(3). Revise Section 2.12.7 to address these acceptance criteria from SRP Section 11.4.3.7.

NFS Section 2.12.8 Quality Assurance Elements

1. Proposed Section 2.12.8 states that individual elements of American Society of Mechanical Engineers (ASME) NQA-1, "Quality Assurance Requirements for Nuclear Facility Applications" will be applied "as deemed appropriate on individual projects." Revise Section 2.12.8 to add a stronger commitment to ASME NQA-1-1994 or to address the itemized acceptance criteria of SRP Section 11.4.3.8.