

**NUCLEAR REGULATORY COMMISSION**

**[NRC-2009-0435]**

**Final Environmental Assessment and Finding of No Significant Impact  
for the Proposed License Renewal for  
Nuclear Fuel Services, Inc. in Erwin, Tennessee**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Notice of Availability of Final Environmental Assessment and Finding of No Significant Impact.

**SUMMARY:** Notice is hereby given that the U.S. Nuclear Regulatory Commission (NRC) is issuing a final environmental assessment (EA) regarding the proposed renewal of NRC special nuclear material license SNM-124 (License SNM-124), which authorizes operations at the Nuclear Fuel Services, Inc. (NFS) fuel fabrication facility in Erwin, Tennessee. On June 30, 2009, NFS submitted to the NRC an application requesting that License SNM-124 be renewed for a 40-year period. The EA makes a finding of no significant impact (FONSI) regarding the proposed action.

**ADDRESSES:** You can access publicly available documents related to this document using the following methods:

- **NRC's Public Document Room (PDR):** The public may examine and have copied, for a fee, publicly available documents related to the NFS facility and license renewal at the NRC's PDR, located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland 20852. Members of the public can contact the NRC's PDR reference staff by calling 1-800-397-4209, by faxing a request to 301-415-3548, or by e-mail to [pdr.resource@nrc.gov](mailto:pdr.resource@nrc.gov). Hard copies of the documents are available from the PDR for a fee.

- **NRC's Agencywide Documents Access and Management System (ADAMS):**

Publicly available documents created or received at the NRC are available online in the NRC Library at <http://www.nrc.gov/reading-rm/adams.html>. From this page, the public can gain entry into ADAMS, which provides text and image files of the NRC's public documents. From this Web site, the following documents related to the NRC's environmental review can be obtained by entering the accession numbers provided:

The NFS license renewal application (ADAMS Accession Number: ML091880040) and the accompanying environmental report (ADAMS Accession Number: ML091900072);

The NRC request for additional information (ADAMS Accession Number: ML100680426);

The NFS response providing additional information (ADAMS Accession Number: ML101590160); and

The NRC Final EA (ADAMS Accession Number: ML112560265).

Additionally, copies of the EA will be available at the following public libraries:

Unicoi County Public Library  
201 Nolichucky Avenue  
Erwin, Tennessee 37650-1239  
423-743-6533

Jonesborough Branch  
Washington County Library  
200 Sabin Drive  
Jonesborough, Tennessee 37659-1306  
423-753-1800

Greeneville / Green County Public Library  
210 North Main Street  
Greeneville, Tennessee 37745-3816  
423-638-5034

**FOR FURTHER INFORMATION CONTACT:** For information about the EA or the environmental review process, please contact James Park, telephone: 301-415-6935; e-mail: [James.Park@nrc.gov](mailto:James.Park@nrc.gov). For general or technical information associated with the ongoing safety review of the NFS license renewal application, please contact Kevin Ramsey, telephone: 301-492-3123; e-mail: [Kevin.Ramsey@nrc.gov](mailto:Kevin.Ramsey@nrc.gov).

**SUPPLEMENTARY INFORMATION:**

On June 30, 2009, NFS submitted its license renewal application and accompanying environmental report (ER) to the NRC. On October 6, 2009, the NRC provided notice in the *Federal Register* (74 FR 51323) of its receipt of the license renewal application and also noticed an opportunity to request a hearing on the application. No requests for a hearing were received. Under the conditions of License SNM-124, NFS operates a nuclear fuel fabrication facility located in Erwin, Tennessee. If granted as requested, the renewed license would allow NFS to continue operations and activities at the site for a 40-year period that would begin with issuance of the renewed license.

The NRC staff's environmental review of the proposed 40-year license renewal is documented in the EA, in accordance with NRC regulations at Title 10 of the *Code of Federal Regulations* (10 CFR) Part 51, which implement the National Environmental Policy Act of 1969, as amended (NEPA). The EA also follows NRC staff guidance in NUREG-1748, "Environmental Review Guidance for Licensing Actions Associated with NMSS Programs." The EA identifies and evaluates the potential environmental impacts of the proposed action, and reasonable alternatives. The NRC staff has determined that renewal of License SNM-124 for a 40-year

period would not significantly affect the quality of the human environment, and the EA thus makes a FONSI. The NRC staff further finds that preparation of an environmental impact statement (EIS) for the proposed action is not warranted.

The NRC staff published for public comment a draft EA for the proposed action on October 15, 2010 (75 FR 63519). The NRC staff accepted comments on the draft EA until December 31, 2010, and hosted a meeting in Erwin, Tennessee on October 26, 2010, to accept oral and written public comments. Comments were identified from the transcript of statements made at the public meeting, and from letters and emails submitted by members of the public. Appendix B of the Final EA includes summaries of the approximately 375 individual comments identified, and the NRC staff's responses to those comments. The NRC staff revised the draft EA in response to some of the comments.

Preparation of the EA is part of the NRC's process to decide whether to renew the NFS license, pursuant to 10 CFR Parts 20 and 70, and thus authorize continued operations at the NFS facility. In accordance with the provisions of 10 CFR Part 70, the current license authorizes NFS to receive, possess, store, use, and ship special nuclear material enriched up to 100 percent. Under the proposed action, NFS would continue production of reactor fuel for the U.S. Navy, and for commercial domestic operations.

In addition to the NFS proposed action to renew its license for 40 years, the NRC staff analyzed two alternatives: (1) the no-action alternative; and (2) renewing the NFS license for 10 years. Under the no-action alternative, NRC would not renew License SNM-124, and operations at the NFS site would no longer be authorized. NFS then would be required under 10 CFR 70.38 to submit a detailed site-wide decommissioning plan, and facility decommissioning would begin upon NRC approval of that plan.

Regarding the 10-year license renewal alternative, the potential transportation and waste management impacts of this alternative to the proposed action are addressed in the EA. The magnitude of these expected impacts are one-fourth of those projected over the proposed 40-year license renewal period. As shown in the first table below, the local transportation impacts are rated as moderate and the overall transportation impacts are rated as small for both the 10-year and the 40-year proposed license renewal periods. The potential waste management impacts are rated as small for both the 10-year and the 40-year proposed license renewal periods.

The NRC staff did not separately address the 10-year alternative for the other resource areas evaluated in the EA, because the staff determined that the types of potential environmental impacts associated with site operations during the proposed 40-year license renewal period would be the same as those during a 10-year license renewal period.

Additionally, for the 10-year alternative, the NRC staff does not consider the potential impacts from NFS discharges of effluents that are in compliance with 10 CFR Part 20 annual regulatory limits (and discharges that are in compliance with the permit conditions issued by other Federal, State, or local agencies) to differ either in type or in magnitude with the potential impacts for the requested 40-year period. The annual regulatory limits in 10 CFR Part 20 and the respective permit conditions are protective of public health and safety and the environment. Discharges in compliance with those limits and conditions would thus not be expected to pose undue cumulative risks to human health and the environment.

In response to comments on the draft EA, impacts from site decommissioning are evaluated in the final EA for the proposed action and the 10-year alternative, in addition to the no-action alternative. In doing so, the NRC staff recognizes that site decommissioning will be a

reasonably foreseeable future action for the NFS facility and site. In conducting its evaluation, the staff also recognized that continued operations over 40 years or 10 years has the potential for increased site contamination that would need to be addressed in the detailed site decommissioning plan that NFS will be required to submit for NRC review when NFS decides to permanently cease its licensed operations. In further response to comments, the issue of cancer risk is discussed in the final EA's section on potential public health impacts.

The tables below list the resource areas evaluated in the EA, and provide the findings regarding the potential environmental impacts for each of the three alternatives. In accordance with Council of Environmental Quality regulations (40 CFR 1508.27), the significance of potential impacts of the proposed action have been determined by examining their context and intensity. Context is related to the affected region, the affected interests, and the locality, while intensity refers to the severity of the impact, which is based on a number of considerations. In evaluating the significance of potential impacts, the NRC staff in the EA used the following significance levels identified in NUREG-1748, which account for context and intensity:

- SMALL—environmental effects are not detectable or are so minor that they will neither destabilize nor noticeably alter any important attribute of the resource;
- MODERATE—environmental effects are sufficient to alter noticeably, but not to destabilize, important attributes of the resource; or
- LARGE—environmental effects are clearly noticeable and are sufficient to destabilize important attributes of the resource.

<b>Summary of Potential Environmental Impacts from Operations</b>			
<b>Resource Area</b>	<b>Proposed Action</b>	<b>10-Year Renewal</b>	<b>No-Action</b>
Land Use	SMALL to MODERATE	SMALL to MODERATE	SMALL
Transportation	SMALL (overall) MODERATE (local)	SMALL (overall) MODERATE (local)	SMALL
Socioeconomics	SMALL	SMALL	SMALL to MODERATE
Air Quality	SMALL	SMALL	SMALL
Water Resources – Surface Water	SMALL	SMALL	SMALL
Water Resources – Groundwater	SMALL to MODERATE	SMALL to MODERATE	SMALL
Geology & Soils	SMALL (geology) SMALL to MODERATE (soils)	SMALL (geology) SMALL to MODERATE (soils)	SMALL (geology) SMALL to MODERATE (soils)
Ecology	SMALL	SMALL	SMALL
Noise	SMALL	SMALL	SMALL
Historic & Cultural	SMALL	SMALL	SMALL
Scenic & Visual	SMALL	SMALL	SMALL
Public & Occupational Health	SMALL	SMALL	SMALL
Public & Occupational Health – Accidents	MODERATE	MODERATE	SMALL
Waste Management	SMALL	SMALL	SMALL

<b>Summary of Potential Environmental Impacts from Decommissioning</b>			
<b>Resource Area</b>	<b>Proposed Action</b>	<b>10-Year Renewal</b>	<b>No-Action</b>
Land Use	MODERATE	MODERATE	MODERATE
Transportation	SMALL (overall) MODERATE (local)	SMALL (overall) MODERATE (local)	SMALL (overall) MODERATE (local)
Socioeconomics	SMALL to MODERATE	SMALL to MODERATE	SMALL to MODERATE
Air Quality	SMALL	SMALL	SMALL
Water Resources – Surface Water	SMALL to MODERATE	SMALL to MODERATE	SMALL to MODERATE
Water Resources – Groundwater	SMALL to MODERATE	SMALL to MODERATE	SMALL to MODERATE
Geology & Soils	SMALL (geology) SMALL to MODERATE (soils)	SMALL (geology) SMALL to MODERATE (soils)	SMALL (geology) SMALL to MODERATE (soils)
Ecology	SMALL to MODERATE	SMALL to MODERATE	SMALL to MODERATE
Noise	SMALL to MODERATE	SMALL to MODERATE	SMALL to MODERATE
Historic & Cultural	SMALL	SMALL	SMALL
Scenic & Visual	MODERATE	MODERATE	MODERATE
Public & Occupational Health	SMALL	SMALL	SMALL
Public & Occupational Health – Accidents	SMALL to MODERATE	SMALL to MODERATE	SMALL to MODERATE
Waste Management	MODERATE	MODERATE	MODERATE

Based on its review of the proposed action relative to the requirements set forth in 10 CFR Part 51, the NRC staff has determined that renewal of License SNM-124, for a period of 40 years would not significantly affect the quality of the human environment. In its license renewal request, NFS is proposing no changes in how it processes enriched uranium, and no significant changes in NFS' authorized operations are planned during the proposed license renewal period. The impacts of ongoing and planned construction actions – including those related to the physical protection and safeguarding of licensed materials – are not expected to significantly affect the quality of the human environment. Gaseous emissions and liquid effluents generated by the NFS facility are presently controlled and monitored by permit, and would continue to be required to meet regulatory limits for non-radiological and radiological components. Public and occupational radiological dose exposures that would be generated by continued NFS facility operations would continue to be required to meet 10 CFR Part 20 regulatory limits. Pursuant to 10 CFR 51.31 and 51.32, the NRC staff concludes that a FONSI is appropriate, and that preparation of an EIS is not warranted for the proposed action.

Dated at Rockville, Maryland, this 20 day of October, 2011.

FOR THE NUCLEAR REGULATORY COMMISSION

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