



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

April 28, 2022

Tim Knowles, Director
Safety and Safeguards
Nuclear Fuel Services, Inc.
1205 Banner Hill Road
Erwin, TN 37650

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION TO SUPPORT ENVIRONMENTAL REVIEW OF NUCLEAR FUEL SERVICES, INC. APPLICATION TO AMEND ITS SPECIAL NUCLEAR MATERIALS LICENSE SNM-124 TO CONSTRUCT AND OPERATE A URANIUM METAL PROCESS (DOCKET NUMBER: 70-143)

Dear Tim Knowles:

The U.S. Nuclear Regulatory Commission (NRC) staff is evaluating a license amendment request to allow construction and operation of purification and conversion services for uranium metal (U-Metal Project) by Nuclear Fuel Services, Inc. (NFS) under its NRC Special Nuclear Material License, SNM-124. The staff received the application dated November 18, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession Package No. ML21327A108) for review. The application was supplemented by letters dated February 24, 2022 (ADAMS Accession Nos. ML22066B006 and ML22069A315).

The NRC staff is conducting a detailed environmental review of the application and has determined that additional information is necessary in connection with its review. The information needed by the staff is discussed in the enclosed request for additional information (RAI). We request that you provide responses to these RAIs within 30 days from the date of this letter. If you are unable to meet this deadline, please notify the NRC staff in writing, within two weeks of receipt of this letter, of your new submittal date.

Sincerely,

A handwritten signature in black ink that reads "Jill S. Caverly".

Signed by Caverly, Jill
on 04/28/22

Jill S. Caverly, Senior Project Manager
Environmental Review Materials Branch
Division of Rulemaking, Environmental,
and Financial Support
Office of Nuclear Material Safety
and Safeguards

Docket No. 70-143

cc: nfs@listmgr.nrc.gov

Enclosure: As stated

Requests for Additional Information for the Development of the Environmental Assessment for the BWXT Nuclear Fuel Services License Amendment Request to SNM-124 Authorizing Uranium Purification and Conversion Services (U-Metal Project)

The U.S. Nuclear Regulatory Commission (NRC) staff is evaluating a license amendment request (Agencywide Document Access and Management System (ADAMS) Accession No. ML21327A108), as supplemented (ADAMS Accession Nos. ML22066B006 and ML22069A315), to allow construction and operation of purification and conversion services for uranium metal (“U-Metal Project” or “proposed action”) at the Nuclear Fuel Services, Inc. (NFS) facility in Erwin, Tennessee (“facility”). Please provide the additional information listed below to support the staff’s environmental review pursuant to the regulations in Title 10 *Code of Federal Regulations* Part 51 that implement the National Environmental Policy Act of 1969, as amended. The NRC staff is using the guidance in NUREG-1748, “Environmental Review Guidance for Licensing Actions Associated with NMSS Programs” in its review of the application.

Applicable Regulatory Requirements, Permits, and Authorizations

1. Please provide a list of Federal, State, and Local Agency Licenses and Permits required for activities at the NFS facility and the current status of each. Also explain if any of these permits will need to be updated due to the processes associated with the proposed action. Please identify if any new permits will be required due to the proposed action. Please provide a copy of the current National Pollutant Discharge Elimination System (NPDES) permit.

Facility Operations

2. Please provide the physical details of the new facility including the details of all building/buildings that will be constructed or renovated as part of the proposed U-Metal Project including height, area and location. Please provide information in a publicly available response.
3. Provide details of the construction process for the new U-Metal Project including timeframe, material transport, access, noise, and effluent. Add any best practices or mitigation activities planned to reduce impacts. What is the expected duration of the proposed action?

Gaseous Effluent

4. Please provide a list of the gaseous effluents based on the proposed U-Metal Project. What additions or changes will be made to the Radiological Surveillance program based on the license amendment adding the U-Metal Project to the facility. Add details why or why not changes would be required.

Liquid Effluent

5. What liquid effluent and/or run-off will be associated with the addition of the U-Metal Project? How will the current permits and treatment be impacted?

Monitoring Program

6. What additions or changes will be made to the radiological surveillance program based on the proposed action? Will the radiological monitoring programs need to be revised due to the addition of the U-Metal Project?

Decommissioning

7. What is the expected timeframe for decommissioning for the proposed action, U-Metal Project and what activities would be required?

Land Use

8. Verify the additional building square footage. Will any non-paved land be impacted either by construction or operation? Verify no new construction entrances will be used and that the construction vehicles will enter through existing entrances.

Visual and Scenic Resources

9. Are there any actions or physical attributes of the new facilities due to the U-metal Project that might impact the visual resources during both construction and operation?
10. Verify that there have been no new scenic designated areas near the facility since the license renewal in 2011.
11. Will there be any visual impact from the new building at the facility during construction or operation? How tall is the new utility building compared to the rest of the facility structures?

Meteorology, Climatology, and Air Quality

12. Provide details of the proposed process of the U-Metal project and the particulates that would be release in addition to other approved process. Would any of the emissions from the new process create a need for a new air permit? Provide information on additional particulate control.
13. Provide information on the type of effluents and mitigation due to construction including fugitive dust.
14. Will construction or operation of the proposed project impact any Prevention of Signification Deterioration Class I areas within the region of the facility?

Noise

15. The application references 2011 noise standards. In addition, the ER states that the Town of Erwin does not have a specific environmental noise standard applicable to the NFS facility and that alarm levels outside the perimeter are not above significant levels. Are these facts still true in 2022? If not, please update the Town of Erwin noise requirements and any events that have exceeded the noise levels or have received complaints.
16. What are the specific sources of noise during the construction and operation phases of the proposed action? When and how long would these activities occur. What levels and mitigation measures are planned during these times? Are there any noise ordinances in the town of Erwin that would be exceeded by any activities on the site including construction and operational activities?

Geology and Soils

17. To what extent will the site be regraded to accommodate the new U-Metal Project facilities? Will any of the construction or operational activities involve the subterranean environment (e.g., below ground surface)? Will construction of the process buildings include foundational activities? Will there be any subsurface systems put in place? If so, provide details.

Water Resources –Surface Water

18. The application's Environmental Report states that "Under the proposed action, no significant changes in NFS' authorized operations are planned regarding the discharge of facility effluents into surface waters. Liquid effluents at the NFS site are treated first at the [wastewater treatment facility] before they are discharged in compliance with NRC regulatory limits and state authorized NPDES permit levels into the Nolichucky River. Storm water discharge at the [facility] is regulated under a TDEC [Tennessee Department of Environmental Compliance] multi-sector general NPDES storm water permit." What changes/additions would occur to the surface water discharge due to the addition of the U-Metal Project? How would any new liquid effluent be treated? Would the current permits need to be updated to account for any new effluents from the proposed action?
19. Are there any jurisdictional wetlands on or near the site? How will the proposed action affect those? Will there be any mitigation activities to avoid potential impacts?

Water Resources – Ground Water

20. What are the potential pathways for impacts to ground water due to construction and operation of the proposed U-Metal project?
21. Is there any potential interaction with the groundwater due to the U-Metal Project? How will leaks and spills be treated? Are there any accident scenarios associated with the proposed action in which the groundwater would be impacted?
22. What changes, if any, are being made to the sites environmental monitoring program due to the addition of the U-Metal project? What changes, if any, are being made to procedures related to the minimization of contamination of the subsurface due to the new project.

Ecological Resources – Terrestrial and Aquatic

23. The information regarding terrestrial resources in the application is dated from 1991 and 1996. Please provide updated information relevant to 2022. Please discuss any impacts if there is new information
24. The information regarding fish species present in the Nolichucky River is dated 1996. Please provide updated information relevant to 2022. Please discuss any impacts if there is new information

Ecological Resources – Aquatic

25. Will any of the activities including both construction and operation of the proposed action potentially impact ecological resources? How will the natural habitats surrounding the facility be maintained? Will additional mitigation measures be required as a result of the activities for the proposed action?

Ecological Resources Threatened and Endangered Species

26. The Environmental Report in the application identifies listed plant species that could potentially be impacted by activities at the facility. The ER references “the TDEC's August 20, 2021, response indicates that seven state-listed plant and animal species have been documented within one mile of the facility. Additional species are documented by TDEC within four miles of the facility; however, no impacts to any species are anticipated at such a great distance from the Facility. The TDEC species list does not document occurrences of any information for Planning and Consultation tool (IPaC) identified species within one mile of the Facility.” Please provide a copy of the referenced letter.

Ecological Resources Impacts

27. Will there be any construction impacts to ecological resources? How will the resources be protected during the construction process?

Historic and Cultural Resources Affected Environment

28. Provide the supporting data for the archaeological information from the National Park Service. Has a historic and cultural survey been conducted on this facility? If so, please provide a copy. Will any of the proposed construction or operation activities affect undisturbed areas of the facility?

Socioeconomics Impacts

29. How many jobs will the proposed action bring to the facility during both the construction and operational phases of the project? Would the addition of these jobs impact the housing, job market, school system within the immediate area?

Public and Occupational Health Impacts

30. What additional radiological sources are expected from the proposed action during the construction and operation phases? How will those be monitored? What mitigation will occur to reduce impact to the public?

Transportation

31. What is the current level of traffic to the facility due to operation and workers? Will transportation routes change due to the proposed action? Will there be any additional entrances for construction of the additional buildings? How many additional vehicles will be added to local roadways/railways due to construction and operation of the proposed action including material and workers?

Environmental Justice

32. Please update ER Table 13 – “Employee Data Distribution by Residence” with current information.

Waste Management

33. What additional wastes (radiological and non-radiological) will be produced due to the construction and operation of the U-Metal Project? How will these wastes be managed?
34. How will the proposed action impact the liquid waste effluents and gaseous effluents? How will they being managed to meet the current allowable release limits under State, local and other federal permits?
35. What and how much additional radiological, non-radiological, hazardous and commercial waste will be generated by construction and operation of the U-Metal Project? How will these wastes be disposed?

Cumulative Impacts

36. Provide a discussion on past, present, and reasonably foreseeable future actions that may result in a potential for cumulative environmental impacts. What other projects are under consideration or have been recently added within all resource areas? How would those actions cumulatively impact the environment when added to the impacts from construction and operation of the U-Metal Project?

NFS U-Metal Project License Amendment - Environmental RAIS DATE April 28, 2022

DISTRIBUTION:

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ADAMS Accession No.: Ltr ML22111A281

OFFICE	NMSS/REFS/ERMB			
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DATE	Apr 28, 2022			

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