

NRC effluent and environmental monitoring requirements. The effluent program monitors the airborne, liquid, and solid waste streams produced during operation of the NFS Plant. The environmental program monitors the air, surface water, sediment, soil, groundwater, and vegetation in and around the NFS Plant.

Airborne, liquid, and solid effluent streams that contain radioactive material are generated at the NFS Plant and monitored to ensure compliance with NRC regulations in 10 CFR part 20. Each effluent is monitored at or just before the point of release. The results of effluent monitoring are reported on a semi-annual basis to the NRC in accordance with 10 CFR 70.59.

Airborne and liquid effluents are also monitored for nonradiological constituents in accordance with State discharge permits. For the purpose of this EA, the State of Tennessee is expected to set limits on effluents under its regulatory control that are protective of health and safety and the local environment. On October 10, 2002, the Tennessee Air Pollution Control Board issued a discharge permit for airborne effluents from the BPF.

Environmental Impact of Proposed Action

A full description of the environmental impacts of the proposed action is provided in the 1999 EA related to the renewal of the NFS license (Ref. 1) and a 2002 EA related to the first amendment for the BLEU Project (Ref. 2). The previously authorized operations are analyzed in the 1999 EA and the new operations are analyzed in the 2002 EA. For the proposed action, construction and processing operations will result in the release of low levels of chemical and radioactive constituents to the environment. Under accident conditions, higher concentrations of materials could be released to the environment over a short period of time. Based on the information provided by NFS and summarized in the EA's referenced above, the safety controls to be employed for the proposed action appear to be sufficient to ensure planned operations will be safe. Detailed accident analyses have been performed by NFS in an integrated safety assessment (ISA). NRC's review of the ISA will ensure compliance with the performance requirements in 10 CFR Part 70. This will provide additional confidence that potential accidents have been adequately evaluated before making a decision on the proposed action.

For normal operations, the effluent air emissions from the BPF will be

discharged through the existing main NFS stack. While some effluents for the proposed action are expected to increase, the total annual dose estimate for the maximally exposed individual from all planned effluents is less than 0.01 milliseivert (mSv) or 1 millirem (mrem). This result is well below the annual public dose limit of 1 mSv (100 mrem) in 10 CFR 20.1301, and the constraint on air emissions to the environment of 0.1 mSv (10 mrem) in 10 CFR part 20.1101. BPF operations are not expected to increase the dose to workers at the NFS facility because the types and quantity of material, and the processing, will be similar to what is already licensed at the site. Surface water quality at the NFS site is currently protected by enforcing release limits and monitoring programs. No significant change in surface water impacts is expected from BPF operations. The proposed action will not discharge any effluents to the groundwater; therefore, no adverse impacts to groundwater are expected. BPF operations will be conducted in existing facilities; therefore, no adverse impacts to local land use, biotic resources, or cultural resources are expected. The proposed action involves transportation of feed material to the NFS site. All transportation will be conducted in accordance with the applicable NRC and U.S. Department of Transportation regulations; therefore no adverse impacts from transportation activities are expected.

Environmental Impact of No Action Alternative

Under the no action alternative, NFS would not be able to carry out its contract obligations to produce a commercial product from U.S. Government surplus, weapons-usable, high-enriched uranium. Failure to fulfill its role in the DOE program could cause DOE to select other alternatives for disposition of the surplus material that may be less cost effective and incur greater environmental impacts. For example, the disposal option would incur additional costs and consume available disposal space that may be better utilized for non-reusable wastes. If NFS were not able to fulfill its contract, DOE may transfer the downblending work to other facilities.

Based on its review, the NRC staff has concluded that the environmental impacts associated with the proposed action are insignificant.

Agencies and Persons Contacted

On May 31, 2002, the NRC staff contacted the Director of the Division of Radiological Health in the Tennessee

Department of Environment and Conservation (TDEC) concerning the 2002 EA (Ref. 2) and the potential impact of the BLEU Project on the environment. On August 6, 2003, the NRC staff contacted the Director of the TDEC Division of Radiological Health concerning the revised environmental impacts in this EA. On August 22, 2003, the Director responded that they had reviewed the draft EA and had no comments.

On May 22, 2002, the NRC staff contacted the Tennessee Historical Commission, Division of Archeology concerning the 2002 EA (Ref. 2) and the potential effect of the BLEU Project on historical resources. No additional consultation was made because the proposed action is entirely within existing facilities and the facility description in the amendment request (Ref. 4) is not significantly different from the facility description in the 2002 EA.

On June 6, 2002, the NRC staff contacted the Fish and Wildlife Service concerning the 2002 EA (Ref. 2) and the potential effect of the BLEU Project on endangered species. No additional consultation was made because the proposed action is entirely within existing facilities and the facility description in the amendment request (Ref. 4) is not significantly different from the facility description in the 2002 EA.

References

Unless otherwise noted, a copy of this document and the references listed below 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).

1. U.S. Nuclear Regulatory Commission, "Environmental Assessment for Renewal of Special Nuclear Material License No. SNM-124," January 1999, ADAMS No. ML031150418.
2. U.S. Nuclear Regulatory Commission, "Environmental Assessment for Proposed License Amendments to Special Nuclear Material License No. SNM-124 Regarding Downblending and Oxide Conversion of Surplus High-Enriched Uranium," June 2002, ADAMS No. ML021790068.
3. U.S. Department of Energy, "Disposition of Surplus High Enriched Uranium Final Environmental Impact Statement", DOE/EIS-0240, Volume 1, June 1996. This document is available to the public from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.
4. B.M. Moore, Nuclear Fuel Services, Inc., Letter to U.S. Nuclear Regulatory