

February 5, 2003

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

DOCKETED
USNRC

BEFORE THE COMMISSION

February 10, 2003 (11:05AM)

In the Matter of)
Nuclear Fuel Services, Inc.)
(Blended Low Enriched Uranium Project))

OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF
Docket No. 70-143
Special Nuclear Material
License No. SNM-124

APPLICANT'S OPPOSITION TO PETITIONERS' EMERGENCY REQUEST
TO ENJOIN CONSTRUCTION BY NFS OF BLEU PROJECT FACILITIES

Applicant Nuclear Fuel Services, Inc. ("Applicant" or "NFS") hereby opposes the Friends of the Nolichucky River Valley, the State of Franklin Group of the Sierra Club, the Oak Ridge Environmental Peace Alliance, and the Tennessee Environmental Council, (collectively "Petitioners") request¹ to enjoin NFS construction activities related to the Blended Low-Enriched Uranium ("BLEU") Project. The BLEU Project is part of a Department of Energy ("DOE") non-proliferation program to reduce stockpiles of surplus high-enriched uranium ("HEU") by down blending it to low-enriched uranium ("LEU"). NFS respectfully submits that the Commission should deny the request because Petitioners: (1) lack standing, and (2) fail to carry their burden of persuasion on any of the factors required to obtain the requested relief.

I. BACKGROUND

On February 28, 2002, NFS submitted a request to amend Special Nuclear Material License No. SNM-124 to authorize the storage of LEU-bearing materials, and

¹ "Petitioners' Emergency Request to Enjoin Construction by NFS of BLEU Project Facilities" (Jan. 21, 2003) ("Pet. Req.").

on October 11, 2002 requested a second amendment to authorize modification to special nuclear material processing operations in the BLEU Preparation Facility at NFS' nuclear fuel fabrication and uranium recovery facilities in Erwin, Tennessee.² NFS anticipates submitting a third license amendment request by May or June 2003 to authorize the operation of a uranium dioxide conversion facility. All three license amendments are in support of process operations associated with the BLEU Project. 67 Fed. Reg. at 66,173.

On November 27, 2002, pursuant to an order of the Presiding Officer,³ Petitioners filed a substitute request for hearing on the first proposed amendment.⁴ Petitioners simultaneously filed a request that the Presiding Officer hold this proceeding in abeyance pending NFS's submission of all three license amendment applications for the BLEU Project.⁵ Petitioners now ask the Commission for the extraordinary relief of an injunction against NFS on an "emergency" basis.

II. ANALYSIS

Petitioners ask the Commission to inject itself into a proceeding in which the Presiding Officer has yet to find that Petitioners: (1) have standing in which to participate, or (2) have put forth a germane area of concern. Absent any determination

² Letter from B. Marie Moore, Vice President, Safety and Regulation, NFS, to Director, Office of Nuclear Materials Safety and Safeguards, U.S. NRC (Feb. 28, 2002) ("NFS Letter"); Environmental Statements; Availability, etc.: Nuclear Fuel Services, Inc., Notice of docketing, etc., 67 Fed. Reg. 66,172 (Oct. 30, 2002); Nuclear Fuel Services, Inc., Notice of Receipt of Amendment Request and Opportunity to Request a Hearing, 68 Fed. Reg. 796 (Jan. 7, 2003).

³ Memorandum and Order (Suspending Further Proceedings Pending Issuance of Revised Federal Register Notice) (Sept. 23, 2002).

⁴ Request for Hearing by Friends of the Nolichucky River Valley, State of Franklin Group of the Sierra Club, Oak Ridge Environmental Peace Alliance, and Tennessee Environmental Council, (Nov. 27, 2002).

⁵ Request by Friends of the Nolichucky River Valley, State of Franklin Group of the Sierra Club, Oak Ridge Environmental Peace Alliance, and Tennessee Environmental Council To Hold Proceeding in Abeyance Pending Submission of Additional License Amendment Applications, (Nov. 27, 2002).

that they have a legal basis to appear before the Commission, Petitioners “seek to enjoin NFS from continuing construction of the Uranyl Nitrate Building (‘UNB’); commencing construction of the Oxide Conversion Building (‘OCB’) or Effluent Processing Building (‘EFB’); or making modification to the Blended Low-Enriched Processing Building (‘BPF’).” Pet. Req. at 1. Petitioners also boldly request “expedited consideration” of their request by the Commission, *id.* at 2, failing to note the inconsistency of that request with their prior request to hold the underlying licensing proceeding in abeyance.⁶

The Commission should reject Petitioner’s Request outright. Petitioners have not established standing in the underlying matter. Moreover, each of the four factors relevant to determining if the Commission should grant the relief requested weighs heavily against Petitioners. Thus, there is no basis for the Commission to act at all on this request, much less to order the relief sought.

A. Petitioners Do Not Have Standing to Seek Relief From the Commission

Petitioners are not properly before the Commission. Only if “a hearing request filed [pursuant to the rules] is granted” does a petitioner become “a party to the proceeding.” 10 C.F.R. § 2.1205(i) (emphasis added). “Petitioners’ hearing request is pending before the Presiding Officer.” Pet. Req. at 2 (emphasis added). Thus, Petitioners are not parties to the NFS license amendment proceeding and lack standing to seek any relief from the Commission. While the Commission cannot grant Petitioners’ injunction request until a standing determination has been made, the Commission can, and should, reject Petitioners’ injunction request for its total failure to meet the standard for granting an injunction, which is contained in 10 C.F.R. § 2.788(e).

⁶ See *supra* note 5 and accompanying text.

B. Petitioners Do Not Meet the Legal Standards For the Relief Requested

It is firmly established that the “burden of persuasion” in obtaining injunctive relief “rests on the moving party.” Alabama Power Co. (Joseph M. Farley Nuclear Plant Units 1 and 2), CLI-81-27, 14 NRC 795, 797 (1981). The standard for determining whether injunctive relief is appropriate is:

- (1) Whether the moving party has made a strong showing that it is likely to prevail on the merits;
- (2) Whether the party will be irreparably injured unless a stay is granted;
- (3) Whether the granting of a stay would harm other parties; and
- (4) Where the public interest lies.

10 C.F.R. § 2.788(e). Petitioners fail to meet their burden regarding any of these factors.

1. Petitioners are not likely to prevail on the merits

To meet the standard of making a strong showing that they are “likely to prevail on the merits,” Petitioners “must do more than merely establish possible grounds” for some future legal argument. Farley, CLI-81-27, 14 NRC at 797. In addition, “an ‘overwhelming showing of likelihood of success on the merits’ is necessary to obtain a stay where the showing on the other three factors is weak.” Id. (footnote omitted). In this case, because Petitioners’ arguments regarding the other factors are so weak, they must present an overwhelming basis for their claim of prevailing on the merits. They have not and can not.

Petitioners ask the Commission to enjoin NFS’s construction of the UNB, the OCB, the EPB and the BPF because the construction assertedly is proceeding, or will proceed, before the NRC Staff has complied with NEPA by completing its environmental review and determining whether an environmental impact statement (“EIS”) is required for the BLEU Project. Pet. Req. at 1-2. Contrary to Petitioners’ assertions, NFS has neither violated nor is not about to violate any Commission regulation. There is no

prohibition on pre-licensing construction in the Commission's regulations applicable to NFS. See 10 C.F.R. § 51.101.

Petitioners assert that the NRC "did not complete an environmental review for any of the three license amendments, because such review could only follow completion of a safety review." Id. at 4; see also id. at 8 & n.10. Petitioners are wrong on both counts. The NRC Staff's Environmental Assessment ("EA")⁷ assessed the impacts of the entire BLEU Project. EA at 1-1.⁸ The EA concluded that the Project "is not expected to result in significant adverse impacts to the environment." Id. at 5-1. The Staff issued a finding of no significant impact ("FONSI") for the first license amendment request -- which included construction of the UNB -- based on the EA. 67 Fed. Reg. 66,172. See also 67 Fed. Reg. 45,555 (2002). With respect to the second part of Petitioners' claim, a safety review was not required for the Staff to complete its environmental assessment. See Duke Cogema Stone & Webster (Savannah River Mixed Oxide Fuel Fabrication Facility), CLI-02-7, 55 NRC 205, 220-21 (2002). The Staff was permitted to complete its assessment based on the environmental information NFS submitted to it. Id.

Petitioners also claim that the review was incomplete because the EA stated that the NRC might conduct additional reviews after receiving the second and third license amendment requests. Pet. Req. at 3-4. The EA and the Federal Register notice regarding the first license amendment request stated the Staff would perform further environmental

⁷ U.S. Nuclear Regulatory Commission, Division of Fuel Cycle Safety and Safeguards, NMSS, 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).

⁸ Contrary to Petitioners' implication, Pet. Req. at 8, the NRC need not perform an EIS to assess the environmental effects of the BLEU Project. Under NRC regulations, an EA is appropriate for an amendment to a materials license. 10 C.F.R. § 51.21; compare 10 C.F.R. §§ 51.20(b)(7) and (10), 51.22(c).

assessments for the second and third license amendments only if the Staff found, upon NFS's submission of the second and third requests, that the EA "does not evaluate fully the[ir] environmental effects." 67 Fed. Reg. at 66,173; EA at 1-1. If, on the other hand, the Staff finds that the EA "appropriately and adequately assesses the environmental impacts of the [amendments], then no further assessment will be performed." 67 Fed. Reg. at 66,173. Thus, unless NFS changes the project,⁹ the EA will be the NRC's final environmental review for the BLEU Project.

Contrary to Petitioners claims, see Pet. Req. at 7, NFS's commencement of construction of the UNB and the OCB¹⁰ will not "commit[]" resources to a pre-ordained course of action before the agency has decided whether to prepare an EIS." First, the NRC issued a FONSI for the first amendment (the UNB), which constitutes a final NRC Staff determination that the NRC will not prepare an EIS for that action. 10 C.F.R. § 51.31. Second, while the NRC has not yet issued FONSIs for the second and third amendments, the EA states that the BLEU Project as a whole "is not expected to result in significant adverse impacts to the environment." EA at 5-1.¹¹ Thus, no EIS is required. See 10 C.F.R. § 51.32(a)(3).¹² Therefore, there is no reason for the Commission to grant Petitioners the extraordinary relief of enjoining NFS's construction of buildings.

⁹ As reflected in the second license amendment request, NFS has made no changes to the BLEU project. Nor will NFS make any changes to the project in connection with the third and final amendment request relating to the BLEU project.

¹⁰ Petitioners do not assert that NFS is about to begin any other construction activities. See Pet. Req. at 5.

¹¹ By definition, the construction impacts have to be even less than the project's total impacts, which the EA has concluded are "insignificant."

¹² In any event, constructing one building does not present an agency with a "fait accompli," see Pet. Req. at 7, in that its effects, if any, could be reversed by taking it down or relocating it.

Petitioners claim that under 10 C.F.R. § 70.23(a)(7), construction for any Part 70 licensed activity “which the Commission determines to have a significant impact on the human environment” should not begin until after the NRC has completed its environmental review. Pet. Req. at 9 & n.11. Petitioners, however, provide no basis for concluding that any construction will have “a significant impact on the human environment.” Certainly, the Commission has not so determined. Here, the NRC Staff’s EA has stated that the BLEU Project is not expected to have a significant impact on the human environment, EA at 5-1, so Petitioners’ claim does not entitle them to the relief they seek. In sum, Petitioners’ injunction request should be denied because it is highly unlikely that they will succeed on the merits of their claims.

2. Petitioners will not be irreparably injured unless the Commission acts

Petitioners’ conclusory assertion that they “will suffer irreparable harm” (Pet. Req. at 6) from the activities they seek to enjoin is legally and factually deficient. It is entirely the assertions of counsel and unsupported by any affidavit or declaration. Even assuming that counsel’s arguments are facts, Petitioners will not be harmed at all by denial of their request. Petitioners only claim of “injury” is that NFS’s actions may “foreclose consideration of alternatives” or make some alternatives “less feasible or attractive.” Pet. Req. at 9-10. First, Petitioners do not, and cannot, establish that allegedly foreclosing consideration of alternatives or making alternatives less feasible or attractive causes injury to them. Second, Petitioners do not, because they cannot, allege any irreparable environmental harm from activities occurring on an already heavily improved industrial site. See, e.g., Florida Power & Light Co. (St. Lucie Nuclear Power Plant, Unit No. 2), ALAB-404, 5 NRC 1185, 1187-88 (1977).

Petitioners alleged “harm” is completely illusory. The NRC Staff has evaluated the “proposed action and alternatives,” EA § 2, and concluded that “the proposed action

is not expected to result in significant adverse impacts to the environment.” EA at 5-1. Subsequent NFS activities cannot possibly “foreclose” an analysis that is already complete. In any event, a potential harm that may result from a future decision in a proceeding to which Petitioners’ are not yet even admitted is certainly not irreparable. St. Lucie, ALAB-404, 5 NRC at 1187 (no irreparable injury from future plant operation during proceeding on request to stay construction). Further, a potential adverse impact on an administrative action (i.e., reconsideration of alternatives) is definitely not irreparable, if it is even an injury. See, e.g., Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), ALAB-810, 21 NRC 1616, 1620 (1985) (must establish “concrete harm” to constitute irreparable injury). Finally, the NRC need not consider alternatives to an action that will have no significant impact on the environment. See, e.g., Portland General Elec. Co. (Trojan Nuclear Plant), ALAB-531, 9 NRC 263, 266 (1979).

Petitioners plainly have not carried their burden on this factor.

3. NFS, DOE, Framatome ANP (“Framatome”), and the Tennessee Valley Authority (“TVA”) will suffer significant harm if an injunction were granted

On the other hand, the need to continue the current limited activities is urgent. As described below, NFS, DOE, Framatome, and TVA stand to suffer adverse schedule impacts and associated financial losses from any delay in implementing the BLEU Project. NFS has based its hiring and contracting for the BLEU project on a schedule which includes the uninterrupted performance of project activities. Any significant delay in those activities would result in employee layoffs and financial losses. Declaration of Dwight B. Ferguson, Jr. (attached as Exhibit A) ¶ 5. TVA would be harmed financially through increased costs of nuclear fuel procurement to replace material expected from the BLEU Project. Declaration of James T. Robert (attached as Exhibit B) ¶ 5. Delay could also result in suspension or termination of TVA’s fuel fabrication contract with

Framatome with attendant substantial economic consequences to TVA and its customers. Id. A delay would cause Framatome similar harm resulting in an inability to meet its contractual obligations to TVA and incurring additional costs to mobilize and demobilize a number of subcontractors working on the BLEU Project. Declaration of Daniel J. Denver (attached as Exhibit C) ¶ 5.

Perhaps the greatest harm, however, would be the irreparable adverse impact on the United States' commitment to reducing the threat from proliferation of nuclear weapons. An injunction would delay the disposition of excess HEU pursuant to United States policy and an agreement between the United States and Russia on the nonproliferation of weapons of mass destruction.¹³ Such disposition is necessary to eliminate the potential for reuse of the material, to demonstrate the United States' commitment to disposal of surplus HEU, and to encourage other nations to take similar actions. Id. at 1-3.

Contrary to Petitioners' conclusory statements otherwise, it is clear that substantial harm to NFS, its BLEU Project partners, and irreparable harm to the United States would result from the action requested by Petitioners.

4. The public interest lies in timely completion of the BLEU Project

It is not reasonably contested that timely completion of the BLEU project is in the public interest. Certainly, Petitioners are totally silent on this score. The project's goal of reducing the stockpiles of surplus HEU through re-use or disposal benefits the entire international community. The United States has made an international commitment to take action in reducing the world's stockpile of HEU. DOE EIS at 1-1 to 1-3. Delay,

¹³ See USDOE, Office of Fissile Materials Disposition, Disposition of Surplus Highly Enriched Uranium, Final Environmental Impact Statement 1-1 to 1-2 (1996) ("DOE EIS") (attached as Exhibit D).

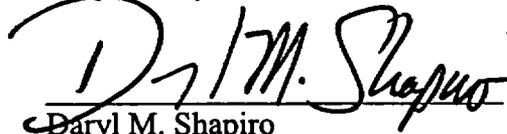
particularly unwarranted delay, undermines the United States' leadership position in this important project.

More directly, the local economy, in which NFS is a major employer, would be adversely impacted by an unwarranted delay. Local workers, their families, and the community would suffer unnecessarily from the economic impacts engendered by a project delay. Declaration of Larry Rose (attached as Exhibit E) ¶ 5. The BLEU Project is also an important foreign policy and national security initiative. EIS at 1-1 to 1-3. The public interest, international, national, and local, in reducing these real and tangible risks far outweigh the Petitioners' mere "concerns" with potential administrative issues.

III. CONCLUSION

In summary, Petitioners have submitted a request regarding a proceeding to which they have not even been admitted. Moreover, Petitioners have not met their burden of persuasion on any of the factors the Commission requires to support the extraordinary relief requested. Therefore, for the reasons discussed above, the Commission should decline to issue such extraordinary relief.

Respectfully submitted,



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Vice President and General Counsel

Nuclear Fuel Services, Inc.

February 5, 2003

CERTIFICATE OF SERVICE

I hereby certify that copies of Applicant's Opposition To Petitioners' Emergency Request To Enjoin Construction By NFS Of BLEU Project Facilities were served on the persons listed below by electronic mail or by facsimile and deposit in the U.S. mail, first class, postage prepaid, this 5th day of February, 2003.

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A handwritten signature in black ink, appearing to read "Dr. M. Shymer". The signature is written in a cursive style with a horizontal line underneath the name.

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* by U.S. mail only

** by facsimile and U.S. mail only

Exhibit A

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

Before the Commission

In the Matter of)	
	)	Docket No. 70-143
NUCLEAR FUEL SERVICES, INC.	)	Special Nuclear Material
	)	License No. SNM-124
(Special Nuclear Material License))	

DECLARATION OF DWIGHT B. FERGUSON, JR.

Dwight B. Ferguson, Jr. states as follows under penalties of perjury:

1. I am Dwight B. Ferguson, Jr., the President and Chief Operating Officer of Nuclear Fuel Services, Inc. ("NFS"), located in Erwin, Tennessee.
2. On February 28, 2002, NFS submitted a request for an amendment to its 10 C.F.R. Part 70 special nuclear material license to authorize the storage of low-enriched uranium (LEU)-bearing materials at the Uranyl Nitrate Building (UNB) at NFS's nuclear fuel fabrication and uranium recovery facilities in Erwin, Tennessee.¹ On October 11, 2002, NFS submitted a request for a second amendment to its special nuclear materials license to authorize processing operations in the Blended Low-Enriched Uranium Processing Facility (BPF) at its Erwin facilities.²
3. The license amendments are the first two of three amendments that will be necessary to support process operations associated with the portion of the Blended Low-Enriched

¹ Letter from B. Marie Moore, Vice President, Safety and Regulation, NFS, to Director, Office of Nuclear Materials Safety and Safeguards, U.S. NRC (Feb. 28, 2002) ("NFS Letter"); Environmental Statements; Availability, etc.: Nuclear Fuel Services, Inc., Notice of docketing, etc., 67 Fed. Reg. 66,172 (Oct. 30, 2002).

² Nuclear Fuel Services, Inc., Notice of Receipt of Amendment Request and Opportunity to Request a Hearing, 68 Fed. Reg. 796 (Jan. 7, 2003).

Uranium (BLEU) Project that will be performed at NFS. 67 Fed. Reg. at 66,173. The BLEU Project is part of a Department of Energy (DOE) program to reduce stockpiles of surplus high enriched uranium (HEU) through re-use or disposal as radioactive waste.³ Re-use of the HEU as LEU is the favored option of the DOE program because it converts nuclear weapons grade material into a form unsuitable for weapons, it allows the material to be used for peaceful purposes, and it allows the recovery of the commercial value of the material. Id.

4. NFS intends to participate in the BLEU Project by: 1) storing low-enriched uranyl nitrate solution from DOE's Savannah River Site ("SRS") at NFS's Erwin, Tennessee facility, 2) downblending highly enriched uranium/aluminum alloy and HEU metal to low-enriched uranyl nitrate solution, 3) converting the low-enriched uranyl nitrate solution to uranium dioxide (UO₂) powder, and 4) shipping the UO₂ powder to Framatome ANP, Inc., which will convert it into commercial reactor fuel to be used in Tennessee Valley Authority (TVA) nuclear power reactors. The first license amendment will enable the construction and storage of low-enriched uranyl nitrate solution at the UNB. The second license amendment will enable the downblending of HEU to LEU at NFS. The third license amendment will enable the conversion of uranyl nitrate solution to UO₂ and associated effluent processing. EA at 1-2 to 1-3. NFS anticipates submitting the third license amendment request in May or June 2003. Under the current schedule, NFS would be able to begin converting uranyl nitrate to UO₂ by April 2004.

5. Any legal action that would halt NFS's participation in the BLEU project as currently scheduled would cause harm in several respects. First, it would require NFS to lay off

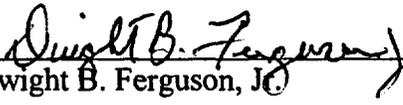
³ U.S. Nuclear Regulatory Commission, Division of Fuel Cycle Safety and Safeguards, NMSS, Environmental Assessment for Proposed License Amendments to Special Nuclear Material License No. SNM-124 Regarding Downblending and Oxide Conversion of Surplus High-Enriched Uranium (June 2002) ("EA") at 1-3.

workers at NFS whom NFS plans to use to construct and operate facilities for the BLEU Project. Currently, there are approximately 200 workers and support personnel at the NFS site engaged in a decommissioning project at the Erwin plant that will be substantially completed in late 2003. At that time, NFS plans to reassign these workers to operational and support positions for the BLEU Project. If NFS's BLEU Project activities are halted for any significant length of time, NFS would be forced to lay off those workers. In addition, NFS' planned hiring of contractor personnel would also be delayed. Such a result would clearly cause harm to the workers from the loss of income. Given the economic situation in the region around Erwin, Tennessee, where NFS's facility is located, it could be difficult for any laid off workers to find other employment in a timely manner, which would cause further harm to them and their families.

6. Halting NFS's participation in the BLEU project would also cause harm because it would keep NFS from receiving low-enriched uranyl nitrate solution from SRS for storage in the Uranyl Nitrate Storage Building and from meeting contractual obligations with Framatome for the provision of UO_2 to be fabricated into reactor fuel pellets to be used in TVA reactors. Under the current schedule for the license amendments, NFS would be able to begin converting uranyl nitrate to UO_2 in April 2004. Framatome will be installing new process equipment in its Richland, Washington plant to make fuel pellets from the UO_2 and to load fuel assemblies. That equipment should be operational by the third quarter of 2004. At that time Framatome would make the fuel assemblies to be used to refuel the TVA Browns Ferry nuclear reactors beginning in early 2005. If NFS's participation in the BLEU Project were delayed, NFS would be harmed because it would be unable to meet its contractual obligation to Framatome to deliver UO_2 by mid-2004. NFS's inability to provide UO_2 to Framatome could harm Framatome by preventing it from fabricating and providing fuel for the Browns Ferry reactors, which in turn could cause harm to TVA by denying it the source of fuel it has envisioned for the reactors.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 3, 2003


Dwight B. Ferguson, Jr.

Document #: 1302997 v.1

Exhibit B

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE COMMISSION**

In the Matter of)	
)	
NUCLEAR FUEL SERVICES, INC.	)	Docket No. 70-143
)	
(Erwin, Tennessee))	
)	
(Materials License SNM-124))	

DECLARATION OF JAMES T. ROBERT

James T. Robert subscribes and declares:

1. I am employed by the Tennessee Valley Authority (TVA) within TVA's Nuclear Fuel organization as Manager, Nuclear Fuel Projects, a position I have held since January 1994. Prior to being assigned to this position, I held the positions of Manager, Nuclear Fuel Economics (December 1991-January 1994); Manager, Nuclear Fuel Engineering (May 1985-December 1991); Supervisor, Core Design (May 1980-May 1985); and Nuclear Fuel Engineer (January 1975-May 1980). I have official and personal knowledge of the matters stated herein.

2. As Manager, Nuclear Fuel Projects, I am responsible for directing highly specialized projects related to the safe and economical use of nuclear fuel in TVA's reactors. TVA's Nuclear Fuel organization is responsible for nuclear fuel procurement, its utilization in TVA's reactors, and for engineering support to ensure the safe operation of the fuel.

3. In April 2001, TVA entered into an agreement with Framatome ANP (Framatome) to provide nuclear fuel fabrication services using Blended Low Enriched Uranium (BLEU) as the source of uranium for fuel fabrication. These

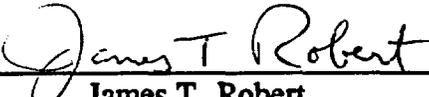
services include the receipt and storage of blended low enriched uranium solution delivered from the U. S. Department of Energy's Savannah River Site, the preparation of blended low enriched uranium solution from highly enriched uranium delivered from the U. S. Department of Energy sites at Savannah River and Oak Ridge, and the conversion of the blended low enriched uranium solutions to low enriched uranium dioxide powder. To accomplish these services, it is necessary for Framatome to construct facilities on the site of its prime subcontractor, Nuclear Fuel Services (NFS) in Erwin, TN. NFS will operate the facilities to carry out Framatome's contractual obligations to TVA.

4. The schedule for design, construction, and licensing of the facilities to be built for the BLEU Project is based on providing the first nuclear fuel reload fabricated from BLEU to TVA by January 2005.

5. If the BLEU Project is delayed by the "Petitioners' Emergency Request to Enjoin Construction by NFS of BLEU Project Activities," dated January 21, 2003, TVA will be harmed financially through increased costs for nuclear fuel procurement. To date, TVA has expended \$37 million (with pending invoices for \$6.9 million) on the BLEU project. The schedule for construction and operation of the necessary fuel processing facilities at the NFS site does not have the flexibility to allow a several month delay and still provide the uranium dioxide powder needed for the first BLEU reload in January 2005. If BLEU is not available to provide the January 2005 fuel reload, TVA will have to procure enriched uranium from the market for this reload. Based upon the information currently available to me, the net impact of delaying use of BLEU in this single reload would be a present value loss of approximately \$4.1 million and higher fuel costs for TVA's customers. Further regulatory-caused delays could potentially result in the suspension or termination of TVA's contractual arrangement with Framatome, resulting in a much more severe economic impact to TVA and its customers.

Pursuant to 28 U.S.C. § 1746 (1994), I declare under penalty of perjury
that the foregoing is true and correct to the best of my knowledge.

Executed this 27th day of January, 2003.



James T. Robert

Exhibit C

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

Before the Presiding Officer

In the Matter of)	
	)	Docket No. 70-143
NUCLEAR FUEL SERVICES, INC.	)	Special Nuclear Material
	)	License No. SNM-124
(Special Nuclear Material License))	

DECLARATION OF DANIEL J. DENVER

DANIEL J. DENVER states as follows under penalties of perjury:

1. I am employed by Framatome ANP, Inc. (FANP) as Executive Project Manager for the Framatome portion of the Blended Low-Enriched Uranium Project (BLEU). I have been the Executive Project Manager for FANP since January 2001. My duties consist of overall program management of the BLEU Project within FANP including matters relating to contract management and administration.

2. On February 28, 2002, Nuclear Fuel Services, Inc. (NFS) submitted a request for an amendment to its 10 C.F.R. Part 70 special nuclear material license to authorize the storage of low-enriched uranium (LEU)-bearing materials at the Uranyl Nitrate Building (UNB) at NFS' nuclear fuel fabrication and uranium recovery facilities in Erwin, Tennessee.¹ The license

¹ Letter from B. Marie Moore, Vice President, Safety and Regulation, NFS, to Director, Office of Nuclear Materials Safety and Safeguards, U.S. NRC (Feb. 28, 2002) ("NFS Letter"); Environmental Statements; Availability, etc.: Nuclear Fuel Services, Inc., Notice of docketing, etc., 67 Fed. Reg. 66,172 (Oct. 30, 2002).

amendment is the first of three amendments that will be necessary to support process operations associated with the portion of the BLEU Project that will be performed at NFS. 67 Fed. Reg. at 66,173. The BLEU Project is part of a Department of Energy (DOE) program to reduce stockpiles of surplus high enriched uranium (HEU) through re-use or disposal as radioactive waste.² Re-use of the HEU as LEU is the favored option of the DOE program because it converts nuclear weapons grade material into a form unsuitable for weapons, it allows the material to be used for peaceful purposes, and it allows the recovery of the commercial value of the material. Id.

3. FANP has several roles in the BLEU Project. First, FANP supplies plant and process design, equipment and manages the construction at NFS' Erwin, Tennessee facility of: 1) a storage facility for low-enriched uranyl nitrate, and 2) a building for the conversion of the low-enriched uranyl nitrate solution to uranium dioxide (UO₂) powder. FANP will also be responsible for shipping the UO₂ powder to an FANP facility in Richland, Washington. The second role is the fabrication of ceramic fuel pellets from the UO₂ for use in commercial reactors owned by the Tennessee Valley Authority (TVA). Once the UO₂ arrives in Richland, FANP will convert it into a ceramic fuel pellet. FANP will use these ceramic fuel pellets in the fabrication of nuclear fuel assemblies for use in TVA reactors. The work for TVA is carried out by means of two separate contracts. In addition, downblending of highly enriched uranium/aluminum alloy and HEU metal to low-enriched uranyl nitrate solution carried out by NFS on this project is being done under a subcontract arrangement with FANP.

² U.S. Nuclear Regulatory Commission, Division of Fuel Cycle Safety and Safeguards, NMSS, 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) ("EA") at 1-3.

4. For the project activities in Erwin, Tennessee, the first license amendment will enable the construction and storage of low-enriched uranyl nitrate solution at the UNB. The second license amendment will enable the downblending of HEU to LEU at NFS. The third license amendment will enable the conversion of uranyl nitrate solution to UO₂ and associated effluent processing. EA at 1-2 to 1-3. NFS submitted the second license amendment application to the NRC by letter dated October 11, 2002, and anticipates submitting the third license amendment request in May or June 2003. Under the current schedule, NFS would be able to begin converting uranyl nitrate to UO₂ by April 2004.

5. Enjoining NFS' and thus, FANP's work on the BLEU project would cause significant harm to FANP because it would prevent FANP from meeting its contractual obligations with TVA for providing UO₂ fuel pellets for use in fuel to be used in TVA reactors and the fabrication of nuclear fuel assemblies. Under the current schedule, the process of converting uranyl nitrate to UO₂ would begin in April 2004. In order to meet this contractually required date, construction of other structures will begin in the next two months at NFS' Erwin, Tennessee facility including the Oxide Conversion Building. In addition, FANP will acquire and install new process equipment in its Richland, Washington plant to make fuel pellets from the UO₂ and to load fuel assemblies. That equipment is scheduled to be operational by the third quarter of 2004. Because some of the construction activities at Erwin, Tennessee have already been delayed due to inclement weather and other factors, any further delay in construction activities can not be recovered through any means available to FANP.

6. FANP would also be harmed by a delay because it would incur additional costs to complete its portion of the BLEU Project. These costs would result from the demobilization and remobilization of a number of subcontractors presently working at Erwin, Tennessee. In

addition, material and labor costs would increase if the delays were significant and the project would lose construction efficiencies thereby increasing overhead and administrative costs to FANP. FANP may also have to reduce staff if a delay were significant. FANP has hired personnel specifically for the BLEU Project and while it may find other work for them over a short period of time, any delay of significance would result in a reduction in force.

7. FANP had expected to recognize substantial revenues for delivery of pellets under its BLEU contract with TVA beginning in 2004 and fuel assemblies beginning in 2005. If the receipt of this revenue is delayed because FANP is unable to meet its contractual commitments to TVA, FANP will be required to find other sources of revenue to support its operations at a significant cost to FANP.

I declare under penalty of perjury that the foregoing is true and correct.

Executed this 24th day of January 2003.


Daniel J. Denver

Exhibit D



Office of
Fissile Materials Disposition

United States Department of Energy

**Disposition of Surplus
Highly Enriched Uranium
Final Environmental
Impact Statement**

Volume I

June 1996

For Further Information Contact:
U.S. Department of Energy
Office of Fissile Materials Disposition, 1000 Independence Ave., SW, Washington, D.C. 20585

Chapter 1

Introduction, Purpose of, and Need for the Proposed Action

1.1 INTRODUCTION

The Department of Energy (DOE) is the Federal agency responsible for the management, storage, and disposition of weapons-usable fissile materials from U.S. nuclear weapons production and dismantlement activities. Highly enriched uranium (HEU) is a weapons-usable fissile material; in certain forms and concentrations, it can be used to make nuclear weapons.¹ In accordance with the *National Environmental Policy Act* of 1969 (NEPA), the Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500–1508), and DOE's NEPA Implementation Procedures (10 CFR Part 1021), DOE has prepared this environmental impact statement (EIS) to evaluate alternatives for the disposition of U.S.-origin HEU that has been or may be declared surplus to national defense or national defense-related program needs by the President.

This EIS consists of two volumes. Volume I contains the main text and the technical appendices that provide supporting details for the analyses contained in the main text. Volume II contains the comments received on the HEU Draft EIS during the public review period and the DOE responses to those comments. A summary of the *Disposition of Surplus Highly Enriched Uranium Final Environmental Impact Statement* (HEU EIS) is also available as a separate document. Changes to the HEU Draft EIS are shown by side bar notation (vertical lines adjacent to text) in this HEU Final EIS for both the text and tables. Deletion of one or more sentences is indicated by the phrase "text deleted" in brackets. Similarly, where a table or figure has been removed, the phrase "table deleted" or "figure deleted" is shown.

¹ Plutonium (Pu) is the other major weapons-usable fissile material. This document covers the disposition of surplus HEU. The storage of nonsurplus Pu and the storage and disposition of surplus Pu, as well as the storage of nonsurplus HEU and surplus HEU before disposition (or continued storage of surplus HEU if no action is selected in the Record of Decision for this HEU EIS), are analyzed in the *Storage and Disposition of Weapons-Usable Fissile Materials Programmatic Environmental Impact Statement*, which was issued (in draft form) in February 1996.

Acting as lead agency, DOE requested the participation of agencies and organizations that have jurisdiction or expertise in the proposed action (40 CFR 1501.6). The Environmental Protection Agency (EPA) and United States Enrichment Corporation (USEC) have established frameworks for technical cooperation and each has signed a memorandum of understanding (MOU) with DOE concerning the development of the EIS for the disposition of surplus HEU (Appendix H). The EPA, which has authority under NEPA and under Section 309 [42 U.S.C. 7609] of the *Clean Air Act* and Amendments to review the proposed action, is a cooperating agency.

1.1.1 BACKGROUND

The end of the Cold War created a legacy of weapons-usable fissile materials both in the United States and the former Soviet Union. Further agreements on disarmament between the two nations may increase the surplus quantities of these materials. The global stockpiles of weapons-usable fissile materials pose a danger to national and international security in the form of potential proliferation of nuclear weapons, and the potential for environmental, safety, and health consequences if the materials are not properly safeguarded and managed.

[Text deleted.]

In September 1993, President Clinton issued the Non-proliferation and Export Control Policy (Appendix A) in response to the growing threat of nuclear proliferation. Further, in January 1994, President Clinton and Russia's President Yeltsin issued a joint statement between the United States and Russia on nonproliferation of weapons of mass destruction and the means of their delivery (Appendix B). In accordance with these policies, the focus of the U.S. nonproliferation efforts in this regard is five-fold: to secure nuclear materials in the former Soviet Union; to assure safe, secure, long-term storage and disposition of surplus fissile materials; to establish transparent and irreversible nuclear reductions; to strengthen the nuclear nonproliferation regime; and to control nuclear exports.

Highly Enriched Uranium—A Weapons-Usable Fissile Material

Fissile materials are capable of undergoing nuclear fission, the splitting of an atom that results in the release of a large amount of energy. Plutonium (Pu) and highly enriched uranium (HEU) are the primary fissile materials used as the explosive components of nuclear warheads. Uranium (U) in nature consists of a combination of isotopes, chemically identical elements with the same number of protons (the same atomic number) but different numbers of neutrons (different atomic weights). Natural uranium consists of, by weight, about 99.3-percent uranium-238 (U-238) (the isotope with an atomic weight of 238) and about 0.7-percent U-235 (the isotope with an atomic weight of 235). [Text deleted.]

Through technically complex, costly, energy-intensive, and time-consuming processes that exploit the slightly different sizes of the atoms of the different isotopes, uranium can be "enriched" in the U-235 isotope, which is the primary fissile isotope of uranium. (Because the isotopes are chemically identical, no simple chemical process can be used to effect enrichment.) Uranium that has been enriched from the natural level of 0.7 percent to the range of 3- to 5-percent U-235 can be used to fuel light water nuclear reactors that are used to generate electricity around the world. Uranium that has been enriched to 20-percent or greater U-235 is called "highly enriched" and can be used in nuclear weapons (it is a weapons-usable fissile material).

Whereas enriching uranium is difficult, reversing the process to reduce its enrichment is a relatively simple matter of dilution. Simply blending HEU with slightly enriched (1 to 2 percent), natural (0.7 percent), or depleted (0.2 to 0.7 percent) uranium by one of several available processes reduces the enrichment of the resulting mixture. By blending a product to less than 20-percent enrichment (low-enriched uranium [LEU]), the material is made unusable in nuclear weapons. The resulting LEU cannot be made weapons-usable without going through the difficult enrichment process again. [Text deleted.]

To demonstrate the United States' commitment to these objectives, the President announced on March 1, 1995, that approximately 200 metric tons (t) of fissile materials, 165 t of which are HEU, had been declared surplus to U.S. defense needs.² Continuing arms control processes may result in the dismantlement of additional weapons and result in further increases in surplus fissile materials, including HEU.

1.1.2 THE PROPOSED ACTION

The Department of Energy proposes to blend down surplus HEU to low-enriched uranium (LEU) to eliminate the risk of diversion for nuclear

proliferation purposes and, where practical, to reuse the resulting LEU in peaceful, beneficial ways that recover its commercial value.³ Unlike plutonium (Pu), of which most isotopes are weapons-usable, only uranium that has been enriched to 20 percent or more in the uranium-235 (U-235) isotope could be used for weapons. The isotope most abundant in nature is U-238. Therefore, the weapons-usability of HEU can be eliminated by blending it with material that is low in U-235 and high in U-238 to create LEU. This isotopic blending process can be performed by blending HEU with depleted uranium (DU), natural uranium (NU), or LEU blendstock. Once HEU is blended down to LEU, it is no more weapons-usable than existing, abundant supplies of LEU. It would need to be re-enriched to be useful in weapons, which is a costly, technically demanding, and time-consuming process. Therefore, blending to LEU is the most timely and effective method for eliminating the proliferation threat of surplus HEU.

² The Secretary of Energy's *Openness Initiative* announcement of February 6, 1996, declared that the United States has about 213 t of surplus fissile materials, including the 200 t the President announced in March 1995. Of the 213 t of surplus materials, the *Openness Initiative* indicated that about 174.3 t (hereafter referred to as approximately 175 t) are HEU, including 10 t previously placed under International Atomic Energy Agency (IAEA) safeguards in Oak Ridge, Tennessee. The HEU Draft EIS, which identified the current surplus as 165 t, did not include the IAEA-safeguarded material.

³ Low-enriched uranium has commercial value because at appropriate enrichment levels and in appropriate forms, it can be used as fuel for the generation of electricity in nuclear power plants.

The Department of Energy's inventory of surplus HEU consists of a variety of chemical, isotopic, and physical forms. If blended down, much of the resulting LEU will be suitable for commercial use in the fabrication of fuel for nuclear power plants. Other portions of the resultant LEU would contain uranium isotopes, such as U-234 and U-236, that would make them less desirable for commercial use. To the extent that they could not be commercially used, these portions would need to be disposed of as low-level waste (LLW). Some of the material, the "off-spec" material⁴, may or may not be suitable for commercial use because its isotopic composition would not meet current industry specifications for commercial nuclear reactor fuel. Nonetheless, it could be used as fuel under certain circumstances, as explained later in this EIS.

[Text deleted.]

[Figure deleted.]

All of the materials covered in the HEU EIS may be subject to international and/or bilateral inspection. All of the surplus fissile materials and the unclassified material forms may be subject to inspection by the International Atomic Energy Agency (IAEA) pursuant to the U.S./IAEA Safeguard Agreement or based on agreements between the United States and Russia to increase transparency of nuclear weapons dismantlement. Currently, 10 t of HEU is under IAEA safeguards in a storage vault at the Y-12 Plant. Future plans are to maximize the amount of surplus HEU under IAEA safeguards (pursuant to Presidential Decision Directives 13 and 41) in either static storage or down-blending operations. Facilities for surplus HEU

⁴ Off-spec material is material that, when blended to LEU, would not meet industry standard (American Society for Testing and Materials) specifications for isotopic content of commercial nuclear reactor fuel. The ultimate disposition of the off-spec material will depend on the ability and willingness of nuclear fuel fabricators and nuclear utilities to use and the Nuclear Regulatory Commission to license the use of off-spec fuel. (For instance, fuel with a higher than usual proportion of the isotope U-236, which inhibits the fission process that is needed for reactors to produce heat and electricity, can still be used in nuclear fuel if the fuel is at a somewhat higher enrichment level. High levels of U-234 can have implications for worker radiation exposures in fuel fabrication.) Utilities have expressed some interest in the use of such material, but the practical extent of that interest will depend upon cost and market conditions, among other things.

disposition would need to accommodate inspection requirements. Other modifications to facility design might be needed should new treaties such as the *Open Skies Treaty* and the protocols for the *Biological and Chemical Warfare Conventions* become effective.

Because of the multiplicity of existing material forms and potential end products (commercial reactor fuel or LLW), disposition of the entire inventory of surplus HEU is likely to involve multiple processes, facilities, and business arrangements. As described in Section 1.4.2, DOE has established a Preferred Alternative in this EIS. The Preferred Alternative is to gradually blend down surplus HEU, sell the resulting LEU for commercial use, and eventually blend and dispose of the non-usable LEU as LLW.

1.2 PURPOSE OF AND NEED FOR THE PROPOSED ACTION

The Department of Energy proposes to blend down surplus HEU from the weapons program to LEU to eliminate the risk of diversion for nuclear proliferation purposes and, where practical, to reuse the resulting LEU in peaceful, beneficial ways that recover its commercial value. The purpose of the proposed action is to reduce the threat of nuclear weapons proliferation worldwide in an environmentally safe manner by reducing stockpiles of weapons-usable fissile materials, setting a nonproliferation example for other nations, and allowing peaceful, beneficial reuse of the material to the extent practical. [Text deleted.]

Comprehensive disposition actions are needed to ensure that surplus HEU is converted to proliferation-resistant forms consistent with the objectives of the President's nonproliferation policy. These proposed actions would essentially eliminate the potential for reuse of the material in nuclear weapons and would demonstrate the U.S. commitment to dispose of surplus HEU and encourage other nations to take similar actions toward reducing stockpiles of surplus HEU. [Text deleted.] The proposed actions would begin to reduce DOE's HEU inventory and costs associated with storage, accountability, and security rather than depending upon indefinite storage of all such material.

Exhibit E

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

Before the Commission

In the Matter of)	
	)	Docket No. 70-143
NUCLEAR FUEL SERVICES, INC.	)	Special Nuclear Material
	)	License No. SNM-124
(Special Nuclear Material License))	

DECLARATION OF LARRY ROSE

Larry Rose states as follows under penalties of perjury:

1. I am County Executive of Unicoi County, Tennessee. The Nuclear Fuel Services, Inc. (NFS) facility in Erwin, Tennessee, is located in Unicoi County.

2. NFS has requested an amendment to its NRC special nuclear material license to authorize (1) the storage of low-enriched uranium-bearing materials at the Uranyl Nitrate Building and, (2) processing operations in the Blended Low-Enriched Uranium Processing Facility at its Erwin, Tennessee facility.

3. The license amendments are the first two of three amendments that will be necessary to support the Blended Low-Enriched Uranium (BLEU) Project that will be performed at NFS. The BLEU Project is part of a Department of Energy program to reduce stockpiles of surplus high enriched uranium through re-use or disposal as radioactive waste. On January 21, 2003, Friends of the Nolichucky River Valley, the State of Franklin Group of the Sierra Club, Oak Ridge Environmental Peace Alliance, and Tennessee Environmental Council requested the NRC to prohibit NFS construction activities related to the BLEU Project.

4. NFS informed the County that the prohibition of construction activities for the BLEU Project for any significant length of time would require NFS to lay off up to 200 current workers and support personnel at NFS whom NFS plans to assign to operational and support positions for the BLEU Project. NFS is the largest employer in Unicoi County, employing approximately 275 county residents. It is unlikely that any laid off NFS workers would be able to find new jobs in the region at comparable wages.

5. The loss of jobs at NFS would have a significant impact on the local economy. It would cause a reduction in spending in the county by laid off workers and their families. The reduction in spending would cause a loss of sales tax revenue to the county, which in turn would harm the county's ability to fund county schools and provide police, fire, and hospital services to county residents.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 4, 2003



Larry Rose