

January 26, 2004

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE PRESIDING OFFICER

DOCKETED
USNRC
March 9, 2004 (10:51AM)
OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

In the matter of)
)
Nuclear Fuel Services, Inc.) Docket No. 70-143
)
(Materials License SNM-124))
)

SIERRA CLUB ET AL.'S APPLICATION FOR STAY OF
*NRC STAFF DECISION TO ISSUE SECOND
LICENSE AMENDMENT FOR NFS BLEU PROJECT

I. INTRODUCTION

Pursuant to 10 C.F.R. § 2.1263, the State of Franklin Group of the Sierra Club¹, Friends of the Nolichucky River Valley, Oak Ridge Environmental Peace Alliance ("OREPA"), and Tennessee Environmental Council (hereinafter "Petitioners"), hereby respectfully request that the Presiding Officer stay the issuance of Amendment 47 to Nuclear Fuel Services, Inc.'s ("NFS's") license for its facility in Erwin, Tennessee.² The issuance of the license amendment should be stayed because it does not comply with the NRC's regulations for implementation of the National Environmental Policy Act ("NEPA"), nor is it consistent with the Staff's commitment to the Commission to conduct

¹ The State of Franklin Group of the Sierra Club has taken the place of Friends of the Nolichucky River Valley as the lead party among the Petitioners listed above.
² Letter from Gary S. Janosko, NRC, to Marie Moore, NFS, re: Nuclear Fuel Services, Inc. Amendment 47 – to Authorize Operations in the Blended Low-Enriched Uranium preparation Facility, to Approve Integrated Safety Analysis Summary for Existing Processes in BPF 9TAC No. L31693), and to Approve Revised ISA Summary Schedule (TAC No. L31782) (January 13, 2004) (hereinafter "Janosko Letter").

a complete and independent environmental assessment in *Nuclear Fuel Services, Inc.* (Erwin, Tennessee), CLI-03-03, 57 NRC 239 (2003).³

II. FACTUAL AND PROCEDURAL BACKGROUND

In June of 2002, the NRC Staff issued an Environmental Assessment (“EA”) that purported to address the site-specific environmental impacts of three license amendment applications that had been or would be submitted by NFS for the downblending of surplus High Enriched Uranium (“HEU”) into blended low-enriched uranium (“BLEU”) at NFS’s Erwin, Tennessee site.⁴ At that time, however, NFS had submitted an application for only the first license amendment, which pertained to storage of uranyl nitrate in the Uranyl Nitrate Storage Building (“UNB”). Thus, the EA identified the “proposed action” only as “to allow NFS to construct and operate” the UNB. EA at 1-2. In addition, although no such indication was given in the title of the EA, the EA’s text indicated that the Staff’s review of the environmental impacts of the second and third license amendment applications was provisional, and that the Staff would perform additional NEPA reviews during its safety review of those applications. *Id.* at 1-2.⁵

On October 30, 2002, the NRC issued a notice of opportunity to request a hearing on the first license application. 67 Fed. Reg. 66,172, as revised at 67 Fed. Reg. 68,699

³ Separately, Petitioners are also requesting the Presiding Officer to grant an extension of one business day for this stay application. Petitioners’ Request for Extension of Time to File Application for Stay of Issuance of Second License Amendment to NFS (January 26, 2004).

⁴ Environmental Assessment for Proposed License Amendments to Special Nuclear Material License No. SNM-124 Regarding Downblending and Oxide Conversion of Surplus High-Enriched Uranium.

⁵ On July 9, 2002, the NRC published a Finding of No Significant Impact (“FONSI”) for the first license amendment. 67 Fed. Reg. 45,555. The July 9 notice also contained an offer of an opportunity for a hearing, which was later determined to be defective. *See Nuclear Fuel Services, Inc.* (Erwin, Tennessee), LBP-03-01, 57 NRC 9, 10-11 (2003).

(November 12, 2002). On November 27, 2002, Petitioners submitted both a hearing request and a motion to hold the proceeding in abeyance pending submittal of all three license amendment applications.⁶ The Presiding Officer granted the motion on January 31, 2003. LBP-03-01, 57 NRC 9.

On October 22, 2002, NFS submitted its second license amendment request, which would allow NFS to downblend HEU to low-enriched uranium in the BLEU Preparation Facility ("BPF").⁷ Attachment 3 to the second license amendment application consisted of an "ISA Summary", which evaluates the consequences of an array of accident scenarios that NFS considers to be credible.⁸ The NRC posted the non-proprietary portion of the ISA Summary on the ADAMS system. Sections 3, 4, and 5 of the ISA address the likelihood and consequences of accidents, and proposed safety controls. Together, these three sections comprise hundreds of pages of text and tables. Much of the information in the tables is coded, and is not readily understandable to a

⁶ 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; 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.

⁷ Letter from B. Marie Moore, NFS, to Director, Office of Nuclear Material Safety and Safeguards, NRC. As described in the EA, the process to be used at the BPF is "multi-stage." EA at 2-1. First, about 7.4 metric tons ("MT") of HEU aluminum alloy and 9.6 MT of HEU metal ("buttons") will be used to produce high-enriched uranyl nitrate (UN). The high-enriched UN will then be downblended with UN produced from 211.7 MT of natural uranium oxide to produce a low-enriched UN solution. EA at 2-1.

⁸ *Id.*, Attachment III, Integrated Safety Analysis for Uranium Aluminum Dissolution and Downblending Processes in the Blended Low-Enriched Uranium Preparation Facility, Revision 0 (October 11, 2002).

layperson. Nevertheless, it is clear that there is a wide array of accident scenarios that NFS considers “credible” and therefore requiring analysis.⁹

The NRC posted notice of an opportunity to request a hearing on the second license amendment at 68 Fed. Reg. 796 (January 7, 2003). Petitioners submitted a second hearing request which contended, *inter alia*, that the June 2002 EA was insufficient to support the issuance of the requested license amendment because the operation of the BPF involved potentially significant impacts, because it involved new activities that had not been evaluated in any previous environmental impact statement (“EIS”), and because the NRC Staff apparently assumed that accidents involving HEU and/or hazardous chemicals at the BPF and the BLEU project in general are not credible.¹⁰

In early 2003, after NFS began construction on the UNB without having received the first license amendment, Petitioners submitted an application to the Commission to stay construction until the NRC had completed its NEPA review for the entire BLEU Project.¹¹ The Commission denied Petitioners’ stay motion, holding that it lacked authority to enjoin NFS’s construction activities and that the Staff had completed its NEPA review for the first license amendment application. CLI-03-03, 57 NRC at 247-250. With respect to the second license amendment application, the Commission warned that NFS must proceed “at its own risk” if it began construction before the Staff’s NEPA

⁹ See, e.g., Section 4.2.3, Table 4-2 (Radiological Safety Consequence Analysis Summary (Workers); Section 4.2.2 and Table 4-3 (Fire and Explosion Consequence Analysis Summary), Section 4.2.5 and Table 4-4 (Environmental Chemical Safety Consequences Bounding Table).

¹⁰ Second 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 at 7-12 (February 6, 2003).

¹¹ Petitioners’ Emergency Request to Enjoin Construction by NFS of Bleu Project Facilities (January 21, 2003).

review was finished. *Id.* The Commission also noted that the Staff “expects to conduct additional, more extensive reviews, and to issue a ‘separate, independent environmental assessment’ or EIS on those amendments.” *Id.*, 57 NRC at 247.

On September 17, 2003, the NRC issued an EA and FONSI for the second license amendment.¹² The EA/FONSI Document addressed potential accidents at the facility in a single paragraph:

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.*

Id. at 4 (emphasis added). Thus, at the time the NRC Staff issued the FONSI, it had not completed its review of NFS’s ISA. In effect, the EA/FONSI Document served as a “Prediction” of No Significant Impact, to be confirmed during the Staff’s safety review.

On January 13, 2004, the NRC Staff sent NFS the Janosko Letter, issuing the second license amendment to NFS. The Staff provided the parties with a copy of the

¹² Environmental Assessment and Finding of No Significant Impact for License Amendment Request Dated October 11, 2002, Blended Low-Enriched Uranium Preparation Facility (hereinafter “EA/FONSI Document”).

Janosko letter in Board Notification 2004-02.¹³ Neither the Board Notification nor the Janosko Letter makes any reference to a NEPA review of the second license amendment application.¹⁴ The Board Notification mentions a Staff Safety Evaluation Report (“SER”), which presumably contains confirmation of the Staff’s statement that “NRC’s review of the ISA will ensure compliance with the performance requirements in 10 CFR Part 70.”¹⁵ But the Board Notification fails to give any citation to a publicly available version of the SER.

III. THE PRESIDING OFFICER SHOULD ISSUE A STAY.

Issuance of a stay is warranted under a balancing of the four factors set forth in 10 C.F.R. § 2.788(e). First, on the basis of statements made by the NRC Staff in the course of this proceeding, Petitioners have an extremely strong likelihood of prevailing on the merits of their claim that the Staff’s environmental review is insufficient to support the issuance of a license to NFS because it is incomplete.¹⁶ Contrary to the Staff’s January 17, 2003, representations, on which the Commission relied in CLI-03-3, the Staff’s EA/FONSI Document is neither independent nor final. The EA/FONSI document reflects the Staff’s acceptance, without independent confirmation, that NFS has made an

¹³ Board Notification 2004-02, Memorandum to Administrative Judge Alan S. Rosenthal from Gary s. Janosko re: New Information Potentially Relevant and Material to Licensing Board Proceeding in the Matter of Nuclear Fuel Services, Inc., Erwin, Tennessee (January 15, 2004).

¹⁴ On October 23, 2003, NFS submitted the last of the three license amendment applications, for the Oxide Conversion Building (“OCB”). The NRC published a notice of opportunity to request a hearing at 68 Fed. Reg. 74,635 (December 24, 2003). Like the hearing notice for the second license amendment, this notice did not contain any mention of a NEPA review. Petitioners plan to request a hearing on the third license amendment.

¹⁵ The Board Notification provides an ADAMS accession number for a proprietary version of the SER (ML033530470), but no date of issuance can be found, either in the Board Notification or on the ADAMS system.

¹⁶ See Second Hearing Request at 8.

adequate evaluation of accidents and their consequences. EA/FONSI Document at 4. The EA/FONSI Document concedes that the FONSI is not final because it lacks the "additional confidence" that the Staff needs "before making a decision on the proposed action." *Id.*¹⁷ Even if the Staff ultimately gained that confidence through its safety review, the Staff's basis for confidence is not documented in any publicly available SER.

Moreover, Petitioners are highly likely to prevail on their claim that the environmental impacts of the proposed BLEU Project are significant, and that neither of the rationales offered by the NRC for failing to prepare an EIS is lawful. On its face, the EA demonstrates that the environmental impacts of the BPF are significant. Operation of the BPF will involve the handling of a very large quantity of radioactive material, including a substantial quantity (17 MT) of highly radioactive HEU. EA at 2-1. The EA also describes a number of concentrated toxic and explosive chemicals that will be used in the process, including sodium hydroxide (30 % solution), sodium nitrate (45 % solution), and nitric acid (70% solution). EA at 5-8. Nine storage tanks will be needed for "combustible liquids" and other chemical products. EA at 5-9. The EA acknowledges that the handling of these radioactive and volatile materials at the BPF would be dangerous, because "[a]n uncontrolled release" could "pose a risk to the environment as well as to workers and public health and safety." EA at 5-7.¹⁸

¹⁷ Thus, issuance of the second license amendment is also unlawful under 10 C.F.R. § 51.101(a)(1), which, *inter alia*, prohibits the NRC from taking an action that would "have an adverse environmental impact" unless and until the NRC Staff has made a "final" FONSI or prepared an EIS.

¹⁸ See also EA at 5-8:

Primary hazards associated with the operation of the BLEU Preparation facility involve: spill of chemical and or radioactive material in the building, leak in a storage tank or

Thus, the EA itself demonstrates that operation of the BPF poses the risk of a serious leak, explosion or other accident that could have a significant adverse effect on the quality of the human environment.

Both of the Staff's rationales for failing to prepare an EIS are faulty. First, the Staff believes that the impacts of the proposed BPF are not significant, because "safety controls to be employed for the proposed action appear to be sufficient to ensure planned operations will be safe." *Id.* at 4. This reasoning, however, is completely inconsistent with NRC case law and long-established agency practice. The NRC has prepared many EISs for nuclear facilities, and in no case has the decision to prepare an EIS been based on the supposition that the facility would *not* comply with the regulations. Indeed, compliance with NRC safety regulations is a prerequisite for operation of *any* nuclear facility. A NEPA analysis must go further than evaluating compliance with safety regulations, however, to examine the risks of operating the facility *in spite of* regulatory compliance. *Limerick Ecology Action v. NRC*, 869 F.2d 719, 741 (3rd Cir. 1989).¹⁹ Although NFS's ISA Summary has identified an array of credible accidents that could occur at the BPF, the Staff has completely failed to make, or present to the public, any

supply piping, release of gaseous and particulate effluents (chemical and/or radioactive materials) due to a malfunction of the process off gas treatment system, and upset in the control of process parameters leading to undesirable reactions and release of hazardous or explosive compounds such as hydrogen, hydrogen peroxide, ammonia, NO₂, nitric acid vapors. The loss of control of the process may include release of radioactive materials and nuclear criticality.

¹⁹ As the Third Circuit of the U.S. Court of Appeals held in *Limerick Ecology Action*, "simply meeting the requirements of the AEA does not exempt the Commission from complying with NEPA's procedural requirements." *Id.* at 741. The scope of the environmental analysis must include all reasonably foreseeable accidents, including low-probability events, unless they are so unlikely as to be "remote and speculative." *Id.* at 739; *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), CLI-90-4, 31 NRC 333, 335 (1990).

independent assessment of their likelihood or consequences of these accidents, or measures that could mitigate them. The Staff's inaction violates NEPA's two-fold requirement "that the environmental impacts of agency action be given careful consideration *and* that the public be informed of them." *Limerick, supra*, 869 F.2d at 741 (emphasis added).

The Staff's second rationale for failing to prepare an EIS is that it has already evaluated the environmental impacts of the proposed BLEU project, in a 1999 EA for renewal of NFS's license, and the June 2002 EA. EA/FONSI Document at 4. But the NRC Staff does not explain which environmental impacts are covered by the 1999 EA and which impacts are not covered. According to the June 2002 EA, some of the HEU downblending activities are "new." EA at 5-8. And some that aren't new are "patterned after" on or "very similar to" former operations. *Id.* This qualitative and non-specific language is utterly insufficient to satisfy NEPA's requirement for a "hard look" at environmental impacts. *Natural Resources Defense Council v. Morton*, 458 F.2d 827, 838 (D.C. Cir. 1972). Moreover, the Staff cannot rely on the June 2002 EA because it is concededly incomplete. *See* CLI-03-01, 57 NRC at 244-45.

Second, if the second license amendment is issued without an adequate environmental review, Petitioners will suffer irreparable harm in the form of an unacceptable risk to their health and environment. As discussed above, the processes to be used at the BPF involve highly radioactive, toxic, and explosive materials. The NRC concedes that an accidental uncontrolled release of these materials "could pose a risk to the environment as well as to workers and public health and safety." EA at 5-7. NFS

should not be allowed to put the health of Petitioners and their environment at risk, in the absence of any assurances from the NRC Staff that it has conducted a thorough environmental review of the proposed license amendment.

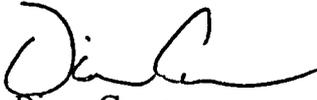
Third, Petitioners do not believe that the requested stay would cause significant harm to NFS. Even if NFS could operate the BPF, it has not received permission to conduct the entire process for downblending of HEU. NFS has yet to receive approval for the third license amendment request, which would allow it to convert the low-enriched uranyl nitrate produced at the BPF to UO_2 powder. EA at 2-5. Thus, the stay would not delay actual production of LEU by the BLEU Project.

Finally, the requested stay is in the public interest. From the beginning, the Staff's conduct of the NEPA process for the BLEU Project has been confusing, misleading and inconsistent. To protect the public interest in a fair hearing and a reasonable, consistent, and transparent NEPA review process, the Presiding Officer should hold the Staff accountable to its commitment to issue a new EA or EIS for the second license amendment. The Presiding Officer should also require the Staff to fully document the basis for its NEPA findings before allowing the permit to issue.

IV. CONCLUSION

For the foregoing reasons, the Presiding Officer should stay the issuance of the second license amendment to NFS, pending completion of this adjudicatory proceeding.

Respectfully submitted,



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January 26, 2004

CERTIFICATE OF SERVICE

I certify that on January 26, 2004, copies of SIERRA CLUB ET AL'S APPLICATION FOR STAY OF NRC STAFF DECISION TO ISSUE SECOND LICENSE AMENDMENT FOR NFS BLEU PROJECT and SIERRA CLUB ET AL'S MOTION FOR EXTENSION OF DEADLINE FOR FILING APPLICATION FOR STAY OF ISSUANCE OF SECOND LICENSE AMENDMENT TO NFS were served on the following by first-class mail, and by e-mail if so designated:

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