January 26, 2009

Erwin Citizens Awareness Network
P.O. Box 1151
Erwin, TN 37650

Dear Citizens:

Thank you for your letters dated October 31 and November 3, 2008, providing comments on the Nuclear Fuel Services (NFS) request to process uranium hexafluoride (UF_6) in the new Commercial Development (CD) line. Your comments were extensive and we appreciate the opportunity to review and evaluate them. Issues directly related to our final evaluation of the NFS request will be addressed in the Safety Evaluation Report (SER) we will issue with our final decision. Specifically, your concerns regarding earthquake risk, flood risk and demographic changes will be addressed in the SER. The purpose of this letter is to address other matters raised in your letters.

Letter dated October 31, 2008:

- In item 1, you state that you are appalled that we would consider the license amendment request. The U.S. Nuclear Regulatory Commission (NRC) is obligated to evaluate all requests to amend an NRC license.

- In item 2, you ask why the EA is so flimsy and where the Integrated Safety Analysis (ISA) is located. The EA incorporates site descriptions and previous assessments by reference in accordance with NRC procedures for preparing such documents.

  The full ISA is located at the NFS site. Only a summary of the ISA is required to be submitted to NRC. The complete ISA records are available for review by NRC staff at the NFS site and inspectors routinely select and review records during inspections. This information is withheld from the public because detailed information about which accidents have the worst consequences and which controls prevent them would be useful to an adversary.

- In item 7, you ask if material declared surplus and transferred to NFS for downblending will become the property of NFS. Ownership depends on the contract for the services. We do not have copies of the NFS contracts. The NRC license authorizes NFS to possess and process high-enriched uranium based on its safety and security programs, not ownership of the material.

- In item 11, you ask why the EA fails to reference a report by Agency for Toxic Substances and Disease Registry (ATSDR). The 2007 report published by ATSDR found that the hazards from past operations at NFS are "indeterminant" because there is a lack of information and no judgment can be made. No reference is made to this report in the EA because no findings are based on this information. However, we note that the ATSDR report ranks current and future operations as no apparent health hazard.

- In item 13, you ask for the definition of "significant". The Council on Environmental Quality published a definition in Title 40 of the *Code of Federal Regulations*, Part 1508.27 (40 CFR 1508.27). A copy of the definition of "significantly" is enclosed. In addition, NRC procedures provide guidance in Section 3.4.6 of NUREG-1748, "Environmental Review Guidance for Licensing Actions Associated with NMSS Programs." This document is available on the NRC web site at http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/.

- In item 14, you noted that a 1996 environmental impact statement from the U.S. Department of Energy (DOE) assumed that a filter fire released all uranium from various traps and filters. A supplement analysis from DOE increased the risk of filter fire by 100 percent. You asked if that makes a UF_6 release highly likely. The answer is no. The DOE analysis was for different processing lines handling much larger quantities of uranium in different chemical and physical forms. The DOE analysis of a filter fire is not applicable to a UF_6 release from the CD Line. Although we note that DOE estimated a very small risk from a filter fire and even with a 100 percent increase, it is still a very small risk.

- In item 15, you asked if the UF_6 is in Erwin already. The answer is yes. The UF_6 is stored in a high security vault because it is highly enriched. The NFS license already authorizes the receipt and storage of UF_6, so no amendment was required to receive it. A classified ISA addresses the risk of storing UF_6 in the high security vault. In addition, shipments of enriched uranium are not announced because the information would be useful to an adversary.

- In item 16, you asked why the public should believe that the ISA is accurate. You note that we have discovered unanalyzed conditions in the past. We have established detailed guidance for reviewing an ISA. In addition, NRC staff and licensee staff have gained a great deal of experience with ISAs in recent years. Lessons learned are being used to improve training and guidance. NRC inspectors and other staff will continue to review and verify ISA documents as additional operating experience is gained.

- In item 17, you state that accidents are unlikely only if items relied on for safety (IROFS) work and you claim that IROFS do not work most of the time. We disagree. There are hundreds of IROFS in the NFS facility and the vast majority work reliably and sufficiently. NRC requires that each IROFS be monitored closely so problems are identified and addressed. The event reports document the results of the monitoring.

- In item 18, you claim that nobody has looked at cumulative impacts which include the Studsvik facility. We disagree. The 2002 EA for the Blended Low-Enriched Uranium Project (ADAMS no. ML021790068) contains a discussion in section 5.1.3 which adds the effluents from the Studsvik facility to the effluents from the NFS facility (known and projected). No significant impact was identified.

<u>Letter dated November 3, 2008:</u>

- With regard to Request for Additional Information (RAI) Question 1, you ask about a statement concerning air contaminants. The statement refers to an evaluation by the State of Tennessee. The same question was raised in a letter from Wanda Kelley dated October 3, 2008. As we informed Ms. Kelley, her letter was forwarded to the Tennessee

Department of Environment and Conservation. You will need to contact the State for information on the air contaminants it considered. We do not have that information. The State is responsible for reviewing and approving requests for certain environmental permits.

- With regard to RAI Question 2, you request a copy of the emergency plan revision that addresses possible UF_6 accidents. Emergency plans are withheld from the public because detailed information about how a licensee would respond to an emergency would be useful to an adversary. However, the emergency plan is available to local response organizations. These organizations include the Erwin Fire Department, the South Unicoi County Volunteer Fire Department, the Unicoi County Sheriff's Department, and the Town of Erwin. Annual training is offered to these organizations on the emergency plan and the recommendations NFS would make for protecting the public near the facility.

- With regard to RAI Question 3, you asked what accidents were postulated to be caused by an earthquake and what were the results of the analysis. The results of the accident analysis are withheld from the public because the information would be useful to an adversary. NFS stated in its response that it evaluated the breach of every enclosure, column, vessel, tank, and transfer line in the CD Line process. We believe this is an acceptable approach.

- With regard to RAI Question 4, you ask what the NRC is doing to prevent acceptance of incomplete and sloppy ISAs. See the response to Item 16 above.

- With regard to RAI Question 5, you request the revision of the ISA for IROFS CDS3-16. The complete ISA is maintained at the NFS site. The ISA summary being reviewed is Revision 0 dated August 2007.

- With regard to RAI Question 7, you request a copy of Table 6-1 from the ISA Summary. This information is withheld from the public because it contains a detailed list of controls that prevent criticality accidents which would be useful to an adversary.

- With regard to RAI Question 9, you ask how NRC can assure the public that UF_6 will be handled safely. We are performing a detailed review to confirm that NFS has defined an acceptable safety program before any processing is authorized. If operations are authorized, detailed inspections will be performed to confirm that the safety program has been fully implemented before any material is processed. Even if we have no objection to starting operations, we will continue to observe and inspect the operations for safe and secure performance.

- With regard to RAI Question 13, you ask about the consequences if a UF_6 cylinder ruptures. The worst case release of UF_6 is estimated to result in radiation exposures at the fence line less than half of the radiation dose limit workers are allowed to receive each year. Soluble uranium levels at the fence line are estimated to be well below levels that would cause a toxic chemical injury. Hydrofluoric acid vapors at the fence line are estimated to be at concentrations well below levels that would cause mild irritation such as coughing and sneezing.

- With regard to RAI Question 14, you ask about the combustible material in and around the CD Line. The combustible materials are solid materials such as cloth, paper, plastic, and wood. NFS has committed to comply with various fire protection standards which include limiting the amount of combustible material, maintaining fire detection and fire fighting equipment, and maintaining a trained fire brigade at the site.

- With regard to RAI Questions 15-18, you note that several fire safety issues have been identified in recent years. We agree that several compliance issues and performance issues have been identified in recent years. In each case, NRC inspectors have reviewed the investigation results and corrective actions taken by NFS to ensure adequate protection of the public and the environment.

- With regard to RAI Questions 19-20, you note that NFS has had releases to the environment going back to 1962. You ask how NRC is going to regulate NFS differently to prevent releases. NRC has expanded and revised many of its regulations over the years to improve protection of the public and the environment. A major revision to the standards for protection against radiation (10 CFR Part 20) was issued in 1991. In addition, a major revision to the regulations for licensing enriched uranium (10 CFR Part 70) was issued in 2000. NRC will continue to change its regulations as necessary improvements are identified.

- In summary, you note that NFS commits to revise its ISA in many of the RAI responses and you request a copy of the ISA. As noted above, we only have a summary of the ISA, but this document is withheld from the public because details of accidents with high consequences and the controls that prevent them would be useful to an adversary.

As documented previously in our October 8, 2008 letter, members of the public may request that a license be modified, suspended, or revoked by submitting a petition in accordance with the regulations in 10 CFR 2.206. Please inform us if you wish to submit a petition.

With regard to your request that your letter be placed in the Agencywide Document Access and Management System (ADAMS), your letter is available under ADAMS no. ML083180246. ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from ADAMS.

If you have any questions about this letter, please contact me at 301-492-3136 or by e-mail at peter.habighorst@nrc.gov.

Sincerely,

/RA/

Peter J. Habighorst, Chief
Fuel Manufacturing Branch
Fuel Cycle Licensing Directorate
Division of Fuel Cycle Safety
and Safeguards
Office of Nuclear Material Safety
and Safeguards

Enclosure: 40 CFR 1508.27

Docket No.: 70-143
License No.: SNM-124

If you have any questions about this letter, please contact me at 301-492-3136 or by e-mail at peter.habighorst@nrc.gov.

Sincerely,

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[Code of Federal Regulations]
[Title 40, Volume 24, Parts 790 to END]
[Revised as of July 1, 1999]
From the U.S. Government Printing Office via GPO Access
[CITE: 40CFR1508.27]

TITLE 40--PROTECTION OF ENVIRONMENT

CHAPTER V--COUNCIL ON ENVIRONMENTAL QUALITY

PART 1508--TERMINOLOGY AND INDEX--Table of Contents

Sec. 1508.27 Significantly.

Significantly as used in National Environmental Policy Act (NEPA) requires considerations of both context and intensity:

(a) Context. This means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.

(b) Intensity. This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action. The following should be considered in evaluating intensity:

(1) Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.

(2) The degree to which the proposed action affects public health or safety.

(3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

(4) The degree to which the effects on the quality of the human environment are likely to be highly controversial.

(5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

(6) The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

(7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.

(8) The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

(9) The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

(10) Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

[43 FR 56003, Nov. 29, 1978; 44 FR 874, Jan. 3, 1979]