

March 29, 2005

NEF#05-016

ATTN: Document Control Desk
Director
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Louisiana Energy Services, L. P.
National Enrichment Facility
NRC Docket No. 70-3103

Subject: Clarifying Information Related to Depleted UF₆ Disposition Costs and Request for License Condition.

- References:
1. Letter NEF#03-003 dated December 12, 2003, from E. J. Ferland (Louisiana Energy Services, L. P.) to Directors, Office of Nuclear Material Safety and Safeguards and the Division of Facilities and Security (NRC) regarding "Applications for a Material License Under 10 CFR 70, Domestic licensing of special nuclear material, 10 CFR 40, Domestic licensing of source material, and 10 CFR 30, Rules of general applicability to domestic licensing of byproduct material, and for a Facility Clearance Under 10 CFR 95, Facility security clearance and safeguarding of national security information and restricted data"
 2. Letter NEF#04-002 dated February 27, 2004, from R. M. Krich (Louisiana Energy Services, L. P.) to Director, Office of Nuclear Material Safety and Safeguards (NRC) regarding "Revision 1 to Applications for a Material License Under 10 CFR 70, "Domestic licensing of special nuclear material," 10 CFR 40, "Domestic licensing of source material," and 10 CFR 30, "Rules of general applicability to domestic licensing of byproduct material"
 3. Letter NEF#04-029 dated July 30, 2004, from R. M. Krich (Louisiana Energy Services, L. P.) to Director, Office of Nuclear Material Safety and Safeguards (NRC) regarding "Revision to Applications for a Material License Under 10 CFR 70, "Domestic licensing of special nuclear material," 10 CFR 40, "Domestic licensing of source material," and 10 CFR 30, "Rules of general applicability to domestic licensing of byproduct material"

4. Letter NEF#04-037 dated September 30, 2004, from R. M. Krich (Louisiana Energy Services, L. P.) to Director, Office of Nuclear Material Safety and Safeguards (NRC) regarding "Revision to Applications for a Material License Under 10 CFR 70, "Domestic licensing of special nuclear material," 10 CFR 40, "Domestic licensing of source material," and 10 CFR 30, "Rules of general applicability to domestic licensing of byproduct material"
5. Letter NEF#05-009 dated March 3, 2005, from R. M. Krich (Louisiana Energy Services, L. P.) to Director, Office of Nuclear Material Safety and Safeguards (NRC) regarding "Clarifying Information Related to Decommissioning Funding Plan"
6. Letter NEF#05-004 dated February 11, 2005, from R. M. Krich (Louisiana Energy Services, L. P.) to Director, Office of Nuclear Material Safety and Safeguards (NRC) regarding "Response to NRC Request for Additional Information Related to Preparation for the Final Environmental Impact Statement for the National Enrichment Facility"

By letter dated December 12, 2003 (Reference 1), E. J. Ferland of Louisiana Energy Services (LES), L. P., submitted to the NRC applications for the licenses necessary to authorize construction and operation of a gas centrifuge uranium enrichment facility. Revision 1 to these applications was submitted to the NRC by letter dated February 27, 2004 (Reference 2). Subsequent revisions (i.e., revision 2 and revision 3) to these applications were submitted to the NRC by letters dated July 30, 2004 (Reference 3) and September 30, 2004 (Reference 4), respectively.

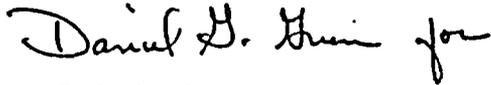
The Reference 5 letter, in part, provided references to supporting documentation for the depleted uranium hexafluoride (UF₆) disposition costs for the National Enrichment Facility (NEF). In a March 17, 2005, conference call between LES and NRC representatives, the NRC requested that clarification be provided concerning the depleted UF₆ disposition costs, including an explanation of development of the UF₆ disposition costs using the references identified in the Reference 5 letter. Some of the supporting documentation and explanation of the development of the depleted UF₆ disposition costs include information that is considered by LES to be confidential (i.e., proprietary) pursuant to 10 CFR 2.390, "Public inspections, exemptions, requests for withholding," paragraph (a)(4). Accordingly, the proprietary information will be submitted in accordance with 10 CFR 2.390 (b)(1) in a forthcoming letter. The remaining supporting documentation and explanation of the development of the depleted UF₆ disposition costs are included in the Enclosure, "Clarifying Information Related to Depleted UF₆ Disposition Costs."

The Reference 6 letter provided the LES responses to NRC Requests for Additional Information (RAI), needed to support preparation of the final environmental impact statement for the NEF. The LES response to NRC RAI 4-6.A, in the Reference 6 letter, indicated that a facility that employs a depleted UF₆ deconversion process that results in the production of anhydrous hydrogen fluoride (HF) would not be pursued. Accordingly, LES formally requests a separate license condition be issued in the license for construction and operation of the NEF that states, "For the disposition of depleted UF₆, LES shall not use a depleted UF₆ deconversion facility that employs a process that results in the production of anhydrous HF."

March 29, 2005
NEF#05-016
Page 3

If you have any questions or need additional information, please contact me at 630-657-2813.

Respectfully,



R. M. Krich
Vice President – Licensing, Safety, and Nuclear Engineering

Enclosure:
Clarifying Information Related to Depleted UF₆ Disposition Costs

cc: T.C. Johnson, NRC Project Manager
M.C. Wong, NRC Environmental Project Manager

LES-05464

ENCLOSURE

Clarifying Information Related to Depleted UF₆ Disposition Costs

LES-05465

Clarifying Information Related to Depleted UF₆ Disposition Costs

The estimated cost of converting the depleted uranium hexafluoride (DUF₆) to depleted triuranium octoxide (DU₃O₈), \$2.67/kg depleted (D)U, is based on analyses performed by Louisiana Energy Services (LES), L.P., using information provided by Urenco. The analyses input and detailed results are considered proprietary and will be submitted separately. The cost of neutralizing the hydrogen fluoride byproduct of the conversion process to calcium fluoride (CaF₂) is subsumed in the conversion cost based on it being a step in the process and the conservative nature of the estimate. The estimate of approximately \$0.02/kgDU to dispose of the CaF₂ as industrial waste is based on information in a November 19, 2004 paper attached to an e-mail from Rod Krich to James Curtiss, dated November 21, 2004, and information in the November 21, 2004, e-mail. The e-mail and its attachment are attached (Attachment 1) to this enclosure.

The estimated cost for disposing of the depleted U₃O₈, \$1.14/kgDU, was derived from calculations based on information provided by Waste Control Specialists. The \$1.14/kgDU estimate is approximately the average of the costs per kgDU assuming a U₃O₈ density of 2.7 g/cc and 3.0 g/cc. The input and detailed results of this estimate are considered proprietary and will be submitted separately. Consistent with this estimate, a letter from Al Rafati, Envirocare of Utah, to E. James Ferland, LES, dated February 3, 2005, is attached (Attachment 2). The following conversion factors were used to convert from kgDUF₆ and kgDU₃O₈ to kgDU.

$$1 \text{ kgDUF}_6 = 0.68 \text{ kgDU}$$

$$1 \text{ kgDU}_3\text{O}_8 = 0.85 \text{ kgDU}$$

The estimated cost of transporting the DUF₆ and the DU₃O₈, \$0.85/kgDU was calculated from the range of costs provided by Transportation Logistics International (TLI), a world-wide shipper of uranium. The \$0.85/kgU estimate is approximately the average of the lower figure from the ranges for shipping DUF₆ and DU₃O₈. The specific range of costs is considered to be proprietary and will be submitted separately. The \$0.85/kgDU is independent of the distance traveled within the US and an e-mail from Rod Fisk, TLI, to Rod Krich, LES, dated March 23, 2005, providing the basis for this conclusion is attached (Attachment 3).

The overall estimate for dispositioning the DUF₆ is therefore \$4.68/kgU. Adding a 25% contingency to this figure brings it to \$5.85/kgDU. Consistent with this estimate, the US Department of Energy (DOE) has provided its cost estimate for dispositioning the DUF₆ generated by the National Enrichment Facility in its letter from Paul M. Golan, (DOE), to Rod Krich, LES, dated March 1, 2005 (Attachment 4). The DOE estimate of \$3.34/kg DUF₆ equates to \$4.91/kgDU, which is in good agreement with the LES estimate.