

October 11, 2005

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
LOUISIANA ENERGY SERVICES, L.P.	)	Docket No. 70-3103
	)	
(National Enrichment Facility)	)	ASLBP No. 04-826-01-ML

NRC STAFF REBUTTAL TESTIMONY REGARDING TRANSPORTATION

Q.1. Please State your name, occupation and by whom you are employed.

A.1. (TJ) Timothy C. Johnson. I am the U.S. Nuclear Regulatory Commission (NRC) Project Manager overseeing the licensing of the proposed Louisiana Energy Services, L.P. (LES) uranium enrichment facility near Eunice, New Mexico. I have been the PM for the project since its inception in January 2002, when LES initiated discussion with NRC for the project.

A.1. (JM) Jennifer Mayer. I am employed as a consultant by ICF Consulting. I am providing this testimony under a technical assistance contract with the NRC.

A.1. (CD) Craig Dean. I am employed by ICF Consulting. I am providing this testimony under a technical assistance contract with the NRC.

Q.2. Have you previously submitted testimony in this proceeding?

A.2. (TJ, JM, CD) Yes, we provided pre-filed direct testimony in this proceeding on September 15, 2005, on behalf of the NRC Staff. In that testimony, we described our individual responsibilities related to the NRC Staff's review of the application by Louisiana Energy Services, L.P. (LES) to construct and operate a uranium enrichment facility in Lea County, New Mexico, to known as the National Enrichment Facility (NEF). Statements of our professional qualifications were attached to that testimony.

Q.3. What was the purpose of your previous testimony?

A.3. (TJ, JM, CD) The purpose of our joint direct testimony is to provide the NRC Staff's views concerning the admitted contentions regarding the cost of transportation as it relates to LES's decommissioning cost estimate.

Q.4. What is the purpose of this testimony?

A.4. (TJ, JM, CD) To provide our views on NIRS/PC's pre-filed testimony of Dr. Arjun Makhijani regarding transportation.

Q.5. Have you read the direct pre-filed testimony of Dr. Makhijani regarding transportation? If so, please state your opinion of the testimony.

A.5. (TJ, JM, CD) Yes we have. First, we disagree with Dr. Makhijani's assertion that the cost estimate for transportation was insufficiently documented. LES provided documentation from the Chief Financial Officer of a transportation vendor, TLI, Inc., citing specific cost numbers for transport of depleted  $UF_6$  and for uranium oxides. In addition, he explained that these costs were conservative and were independent of distance because the primary cost components were overhead expenses. LES Exhibits 98, 99. In our opinion, these estimates provided sufficient documentation to support LES's cost estimate because they were provided by an independent third party vendor.

Q.6. What is your opinion of Dr. Makhijani's assertion that the LES underestimated the transportation cost by averaging the costs provided for  $UF_6$  and uranium oxides instead of adding them?

A.6. (TJ, JM, CD) For the purpose of decommissioning, the tails produced at the enrichment facility must first be transported as  $UF_6$  to a deconversion facility where they are converted to a uranium oxide,  $U_3O_8$ . Thereafter, the  $U_3O_8$  must be transported to a disposal site. Both of these transportation segments are necessary for final disposition of the tails. The transportation costs associated with disposition of the tails must include

the costs of both of these transportation segments. LES obtained an estimate from a transportation which contained two costs - one for the transport of  $UF_6$  and another for the cost of transport of  $U_3O_8$ . LES Exhibits 98, 99. It is our understanding and belief that the cost estimates provided by TLI and relied upon by LES included both segments of the transportation necessary for disposal - from the proposed enrichment facility to the deconversion facility and from the deconversion facility to the ultimate disposal site - for each type of material being transported. Therefore, we concluded that it was appropriate for LES to use the average of the two costs. Dr. Makhijani, on the other hand, assumes that the cost information for each type of material -  $UF_6$  and uranium oxide - only refers to one leg of the journey.

Q.7. What is your opinion of Dr. Makhijani's assertion that LES should have derived its cost estimate for transportation by adding the costs for transport of  $UF_6$  and  $U_3O_8$ ?

A.7. (TJ, JM, CD) As discussed above, this would not be appropriate because we believe that the cost estimates already provided include both segments of the transportation necessary to dispose of depleted uranium. However, even if one accepted Dr. Makhijani's assumption that the cost estimates reflect only one segment of the journey, adding the two costs together would likely result in an overly conservative cost estimate because not all costs would be incurred twice. TLI has stated that the overhead costs involved included the following: Material packaging, marking and labeling, communications, vehicle tracking, vehicle maintenance, driver training, security, loading and unloading of cargo and insurance. LES Exhibit 99. While some cost elements may be incurred independently for each segment of the trip; i.e, loading and unloading, other elements such as driver training, vehicle maintenance and tracking, and insurance should not be counted twice as these costs would be shared between both segments of the trip. The same trucks used to deliver the  $UF_6$  to the

deconversion facility would be able to take the  $U_3O_8$  produced by the deconversion facility to the disposal site.

Q. Does this conclude your testimony?

A. (TJ, JM, CD) Yes.

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CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF REBUTTAL TESTIMONY REGARDING TRANSPORTATION" in the above-captioned proceedings have been served on the following by deposit in the United States mail; through deposit in the Nuclear Regulatory Commission's internal system as indicated by an asterisk (\*), and by electronic mail as indicated by a double asterisk (\*\*) on this 11<sup>th</sup> day of October, 2005.

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**Louisiana Energy Services, L.P., Docket No. 70-3103-ML**  
**October 2005 Evidentiary Hearing on Contested Issues**  
**Hearing Exhibits**

Party Exh. #	Witness/ Panel	Description
Staff 36	Deconversion	NUREG-1790, "Final Environmental Impact Statement for the Proposed National Enrichment Facility in Lea County, New Mexico" (June 2005), Chapters 2 and 4 ("Alternatives" and "Environmental Impacts")
Staff 37	Deconversion	NUREG-1827, "Safety Evaluation Report for the National Enrichment Facility in Lea County, New Mexico" (June 2005), Chapter 10 ("Decommissioning")
LES 82	Deconversion	NUREG-1757, "Consolidated NMSS Decommissioning Guidance" (Sept. 2003), Volume 3 ("Financial Assurance, Recordkeeping, and Timeliness"), pp. iii, 4-1 to 4-11, A-25 to A-30
Staff 38	Deconversion	NUREG/CR-6477, "Revised Analyses of Decommissioning Reference Non-Fuel-Cycle Facilities" (Jul. 1998)
LES 83	Deconversion	National Enrichment Facility Safety Analysis Report, Chapter 10 ("Decommissioning") (most current version)
Staff 39	Deconversion	In-Office Review Summary: LES Decommissioning Fund (April 19, 2005)
LES 97	Deconversion	E-mail from Rod Krich (LES) to James Curtiss (Winston & Strawn LLP) (Nov. 21, 2004), with Attachment, "CaF <sub>2</sub> Disposal Option, prepared by George Harper, Framatome-ANP (Nov. 19, 2004)
Staff 40	Deconversion	Letter from Robert C. Pierson, NRC, to Robert A. Williams, Westinghouse Electric Corp., "Subject: Renewal," (Nov. 3, 1995), enclosing "Safety Evaluation Report for the Renewal of Special Nuclear Material License SNM-1107 for the Westinghouse Electric Corporation Columbia Fuel Fabrication Facility, Columbia, South Carolina" (Sept. 1995) (excerpt).

Party Exh. #	Witness/ Panel	Description
Staff 41	Deconversion	Letter from Robert C. Pierson, NRC, to L.J. Maas, Siemens Power Corporation, "Subject: Renewal," (Nov. 15, 1996), enclosing "Safety Evaluation Report for the Renewal of Special Nuclear Material License SNM-1227 for the Siemens Power Corporation Richland Engineering and Manufacturing Facility, Richland, Washington" (Nov. 1996) (excerpt).
Staff 42	Deconversion	Letter from Michael F. Weber, NRC, to Ralph Reda, "Subject: Safety Evaluation Report: Application dated September 19, 1997, Changes to Table 6.0 for the DCP HF Effluent Recovery and Storage Facility," (Sept. 26, 1997), enclosing "Safety Evaluation Report for the Renewal of Special Nuclear Material License SNM-1097 for the General Electric Company, Nuclear Energy Production, Wilmington, North Carolina" (June 1997) (excerpt).
LES 77	Deconversion	Letter from V. Autry, Director of Division of Waste Management, Bureau of Land and Waste Management, South Carolina Department of Health and Environmental Control, to L. Garner, Regulatory Affairs Coordinator, Starmet CMI (Apr. 1, 1999)
LES 78	Deconversion	Letter from V. Autry, Director of Division of Waste Management, Bureau of Land and Waste Management, South Carolina Department of Health and Environmental Control, to L. Garner, Regulatory Affairs Coordinator, Starmet CMI (June 17, 1999)
LES 76	Deconversion	Slide, AREVA-COGEMA, "Defluorination of Depleted UF <sub>6</sub> – The W defluorination facility" (Sept. 26 2004)
LES 98	Transportation	E-mail from Rod Fisk (Transportation Logistics International, Inc.) to Rod Krich (LES) (Dec. 2, 2004) <b>[PROPRIETARY]</b>
LES 99	Transportation	E-mail from Rod Fisk (Transportation Logistics International, Inc.) to Rod Krich (LES) (Mar. 23, 2005)
LES 109	Disposal	Section 4.13 of the NEF Environmental Report, "Waste Management Impacts" (most current revision)(nonproprietary)
LES 103	Disposal	Letter from Al Rafati (Envirocare of Utah, LLC) to E. James Ferland (LES) (February 3, 2005)

Party Exh. #	Witness/ Panel	Description
LES 104	Disposal	Memorandum from Matthew Blevins (NRC) to Scott Flanders (NRC), "Subject: Telephone Summary Regarding Depleted Uranium Disposal", with attached Telephone Summary (Apr. 6, 2005)
LES 105	Disposal	Memorandum of Agreement Between Louisiana Energy Services, L.P. and Waste Control Specialists, LLC" (Jan. 14, 2005) <b>[PROPRIETARY]</b>
Staff 43	Disposal	STP-04-003, "NRC Process to Identify Decommissioning Sites with Inadequate Funding for Remediation" (Jan. 2004)
LES 91	Rebuttal Deconversion	Urenco Business Study (Aug. 26, 2004) <b>[PROPRIETARY]</b>
NIRS 56	Rebuttal Deconversion	Hatem Elayat, Julie Zoler, Lisa Szytel. "Cost Analysis Report for the Long-Term Management of Depleted Uranium Hexafluoride," UCRL-AC-127650, Livermore, CA: Lawrence Livermore National Laboratory, May 1997.
LES 16	Rebuttal Disposal	"Construction and Operation of a Depleted Uranium Hexafluoride Conversion Facility at the Portsmouth, Ohio Site" (DOE/EIS-0360), Vol. 1
LES 17	Rebuttal Disposal	"Construction and Operation of a Depleted Uranium Hexafluoride Conversion Facility at the Paducah, Kentucky Site" (DOE-EIS-0359), Vol. 1
NIRS 109	Rebuttal Disposal	US EPA, "Waste Characterization Program Documents Applicable to Transuranic Radioactive Waste From the Hanford Site for Disposal at the Waste Isolation Pilot Plant," <i>available at</i> <a href="http://www.epa.gov/fedrgstr/EPA-WASTE/2001/November/Day-27/f29545.htm">http://www.epa.gov/fedrgstr/EPA-WASTE/2001/November/Day-27/f29545.htm</a>
LES 101	Rebuttal Disposal	10 CFR 71, "Licensing Requirements for Land Disposal of Radioactive Waste" (2005)
NIRS 169	Rebuttal Disposal	NUREG-0945, Vol. 1, "Draft Environmental Impact Assessment on 10 CFR 61, 'Licensing Requirements for Land Disposal of Radioactive Waste,'" App. G-Q (Sept. 1981)

Party Exh. #	Witness/ Panel	Description
Staff 44	Rebuttal Disposal	Letter from Dane Finerfrock, State of Utah, Department of Environmental Quality, to Paul Lohaus, NRC, "Subject: Possession Limits of Calibration Source" (Sept. 19, 2005)
Staff 45	Rebuttal Disposal	R.D. Baird, et al., "Evaluation of the Potential Public Health Impacts Associated with Radioactive Waste Disposal at a Site Near Clive, Utah (June 1990)