RAS 10679

October 18, 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

ASLBP No. 04-826-01-ML

OUTLINE SUMMARIES SUBMITTED ON BEHALF OF INTERVENORS NUCLEAR INFORMATION AND RESOURCE SERVICE AND PUBLIC CITIZEN ("NIRS/PC")

Preliminary statement

The following Outline Summaries are submitted on behalf of Nuclear Information and Resource Service and Public Citizen, Intervenors herein ("NIRS/PC"), pursuant to the order of the Atomic Safety and Licensing Board (the "Board") dated September 2, 2005.

Summaries

a. Outline Summary concerning deconversion issues:

1. Contention: LES has not presented a plausible strategy for deconversion of depleted uranium hexafluoride to a stable form for disposal. The Commission's standard requires a reasonable or credible plan supported by reasonable cost estimates. The evidence will show as follows:

2. Expert witness (Dr. Arjun Makhijani):

    a. A reasonable and credible plan for deconversion must address the deconversion of DUF6 to a more stable form, such as DU3O8, and safe disposal of deconversion

Template=SECY-049

SECY-02

products (i.e., neutralization of hydrofluoric acid and disposal of resulting calcium fluoride).

b. A reasonable and credible plan must comply with existing regulatory requirements including annual dose limits in 10 CFR Part 61 and EPA maximum concentration limits for drinking water.

c. LES has stated that its path of choice is to employ private deconversion and disposal. LES has stated that its second option is to ship the DUF6 to a Department of Energy ("DOE") deconversion plant at Portsmouth, Ohio, or Paducah, Kentucky for processing and subsequent disposal by DOE.

d. Private deconversion by Cogema would be carried out by a company with experience operating a deconversion plant in France and would be technologically plausible once a siting process is specified by the Commission and assuming the deconversion form chosen is DU3O8 and not DUO2.

e. Cost estimates of deconversion by Cogema should start with real-world data, i.e., the current price paid by Urenco for deconversion by Cogema in Europe. This price covers deconversion, transport to Holland, and storage there. This price is also escalated and must be converted to dollars.

f. The value cited by LES is based upon a response to a request for quotations and a business study by Urenco about a plant that has not been built. It is not based upon data about an operating plant.

g. Further, it is not appropriate to base an estimate on the assumption that byproducts such as HF will be sold, producing revenue.

h. Further, the LES estimate does not appropriately account for costs of neutralization of HF to generate CaF2.

i. Further, the LES estimate does not appropriately account for the costs of disposal of CaF2, since it assumes disposal in a solid waste landfill. An accurate estimate should assume disposal of CaF2 as low-level radioactive waste.

j. LES has also underestimated costs of decontamination and decommissioning.

k. LES has also omitted costs of management of emptied DUF6 cylinders.

l. LES's estimate for the cost of deconversion and disposal by DOE omits to include a contingency allowance, which must be generous in light of DOE's history of difficulties in managing radioactive waste-related projects and the present delays in construction of deconversion facilities.

m. Further, it is unrealistic to assume that DOE will be able to dispose of DU3O8 at the Envirocare site, given the environmental problems of such near-surface disposal.

n. Costs of dispositioning DUF6 from the LES plant will fall between [amounts stated in the prefiled testimony] per kgU.

3. Deposition testimony and cross-examination:

a. A plausible strategy has not been presented, because Cogema does not plan to build a deconversion plant.

b. Actual prices charged or quoted by Cogema must be considered.

c. Resale of HF must be excluded.

d. Rules of thumb, not based upon experience, cannot underlie a deconversion cost estimate.

e. LES's cost estimate for deconversion fails to account for inefficiencies of small scale in the deconversion plant that would serve the LES plant.

f. LES's estimate fails to account for risks of future increases in the value of the euro as against the dollar.

g. LES has failed to account correctly for costs of neutralization of HF.

h. There is no showing that CaF2 could be disposed of in a solid waste landfill.

i. CaF2 should be disposed of as low-level radioactive waste.

j. LES has failed to account for decontamination, treatment and disposal of the cylinders that contain DUF6.

k. LES has failed to account for the return on investment and compensation for risk required for construction of a deconversion plant.

l. The cost estimates for deconversion and disposal by DOE are not firm offers and do not commit DOE to a specific price. Further, they fail to include any contingency allowance and assume near-surface disposal at Envirocare.

b. Outline summary concerning transportation issues:

1. Contention: LES has not presented a plausible strategy for (a) transportation of depleted uranium hexafluoride from the enrichment plant to the deconversion plant and (b) transportation of depleted uranium after conversion to a stable form for disposal. The Commission's standard requires a reasonable or credible plan supported by reasonable cost estimates. The evidence will show as follows:

2. Expert testimony (Dr. Arjun Makhijani):

a. LES's transportation cost estimate rests upon data contained in an e-mail from the firm Transportation Logistics International. The estimate is not predicated on

documented and reasonable assumptions. The assumptions underlying the estimate are not stated.

b. LES has erroneously averaged the cost of transporting DUF6 and DU3O8, when it should have added the two costs, because both segments of transportation must be carried out.

3. Deposition and cross-examination testimony:

a. LES's transportation cost estimate rests upon data contained in an e-mail from the firm Transportation Logistics International. The estimate is not predicated on documented and reasonable assumptions. The assumptions underlying the estimate are not stated.

b. LES has erroneously averaged the cost of transporting DUF6 and DU3O8, when it should have added the two costs, because both segments of transportation must be carried out.

c. Outline Summary concerning disposal issues:

1. Contention: LES has not presented a plausible strategy for disposal of depleted uranium from the LES enrichment plant. The Commission's standard requires a reasonable or credible plan supported by reasonable cost estimates. The evidence will show as follows:

2. Expert testimony (Dr. Arjun Makhijani):

a. LES has proposed, as its first option, disposal of DU3O8 in a private near-surface disposal facility, and has given cost estimates. As its second option LES has proposed that DOE will deconvert and dispose of depleted uranium, and LES has given cost estimates for this option. Neither option satisfies the Commission's requirements.

b. LES and Staff assume that depleted uranium is classified as Class A low-level radioactive waste. This is erroneous. Depleted uranium has not been classified under 10 CFR Part 61. To classify such material, additional analysis is required.

c. Waste classification does not, standing alone, establish the suitability of near-surface disposal.

d. Whether near-surface disposal of depleted uranium will comply with the dose limitations in 10 CFR Part 61 requires site-specific analysis of a specific proposed disposal site.

e. Near-surface disposal, as is proposed by LES, is not likely to comply with the dose limitations in 10 CFR Part 61, Subpart C.

f. Reliance on the cost estimate contained in the LES-WCS Memorandum of Agreement is imprudent and unreasonable. The WCS site has no license and does not set its own prices for disposal.

g. The letter from an official of Envirocare cited by LES does not support reliance on a cost estimate below that cited by WCS. At the time of the letter the LES application contained cost estimates in the range of $1.47 to $2.17 per kg U, and it is those estimates to which the letter refers.

h. Given that shallow land burial is very unlikely to be able to satisfy existing dose limitations, it is best to assume that depleted uranium will be disposed of in a geologic repository. Depleted uranium, in its characteristics, is most comparable to transuranic waste, which is similar to Greater than Class C waste under 10 CFR 61.55(a). Aspects such as decay mode, half-life, specific activity, environmental mobility, dose conversion factors, and cancer risk factors indicate that near-surface

disposal is unlikely to satisfy disposal regulations. It is not relevant that the average activity of waste in WIPP exceeds that of a depleted uranium inventory. Shallow land disposal is generally not appropriate for such material.

i. LES and Commission Staff have pointed to the Envirocare site as a suitable disposal site. However, the State of Utah allows only Class A waste, making acceptance of depleted uranium unlikely. Envirocare's permit would also preclude such disposal. Envirocare performance assessments also indicate that depleted uranium would not be acceptable. Other near-surface disposal sites are ineligible candidates.

j. The DOE PEIS has not determined that near-surface disposal would be acceptable.

k. Disposal costs are best estimated on the basis of real-world experience. Based on costs experienced at WIPP, disposal cost will be between [amounts stated in the prefiled testimony] per kgU. Overall costs of deconversion, transportation, and disposal would be between [amounts stated in the prefiled testimony] per kg U.

3. Deposition and cross-examination testimony:

a. The Commission has consistently stated that classification of depleted uranium under 10 CFR Part 61 would require environmental analysis.

b. The Commission has consistently opposed shallow land disposal of depleted uranium from an enrichment plant.

c. LES has the obligation to show that its disposal strategy can be carried out within the existing regulatory framework, including 10 CFR Part 61, and is environmentally acceptable.

d. LES and Commission Staff erroneously assume that depleted uranium is Class A low-level radioactive waste.

e. LES and Commission Staff erroneously assume that depleted uranium could be disposed of in any facility licensed to dispose of Class A low-level radioactive waste.

f. In fact disposal must comply with dose limits in 10 CFR Part 61.

g. Presentations by LES show that near-surface disposal would not comply with applicable dose limits in 10 CFR Part 61.

h. LES has made no showing that the Envirocare site or any other near-surface disposal site would comply with applicable dose limitations in 10 CFR Part 61. In fact the Envirocare site is not likely to comply with such limits.

i. Under the standards applied for waste classification in 10 CFR Part 61, depleted uranium would not be classified as Class A low-level radioactive waste.

j. Comparison with the average concentration of the WIPP inventory is not relevant.

k. The disposal cost estimate that LES relies upon concerns WCS, which is not a licensed and operating disposal site. The LES estimate also relies upon an asserted estimate from Envirocare, which actually does not have the dollar value claimed by LES.

d. Outline Summary concerning contingency factor issues:

1. Contention: LES's strategy for deconversion, transportation and disposal of depleted uranium from the LES enrichment plant does not incorporate a reasonable cost estimate with regard to the contingency allowance. The evidence will show as follows:

2. Expert testimony (Dr. Arjun Makhijani):

   a. The 25% value for a contingency allowance is not predicated upon extensive relevant experience.

b. The validity of a contingency allowance depends upon the underlying cost estimate. Where the underlying estimate is itself uncertain, the contingency allowance must be generous. Here, the deconversion cost estimate is expressly uncertain, has been adjusted in ways that decrease the level of certainty, and is rendered more uncertain by other factors. Thus, the 25% allowance added to LES's baseline estimate would not be adequate.

c. A contingency allowance must be provided in connection with the IEER estimate of deconversion costs because of the small scale of a plant to serve the LES enrichment plant, in particular.

d. A significant contingency allowance is required with respect to the disposal cost estimates based on assumptions of disposal either at the WCS site or at the Envirocare site. The WCS estimate is highly uncertain, and the letter from Envirocare appears to refer to dollar values very different from LES's current estimate.

e. A contingency allowance reflects the difficulty of the task. The safe disposal of depleted uranium of concentration in excess of 300 nCi/g in compliance with applicable standards is very unlikely to be accomplished by near-surface disposal and is likely to require isolation in a geologic repository. The identification and qualification of such a facility is a complex, lengthy and risky process. There is no basis to conclude that disposal will be simple and straightforward.

f. The 25% contingency allowance called for by NUREG-1757 is premised upon a baseline estimate that employs documented and reasonable assumptions and is designed to account for unforeseen circumstances. Such amount at minimum is

necessary here, but given the problems with the baseline estimate cannot be deemed sufficient.

g. Triennial cost adjustments cannot reasonably be used to make major adjustments in cost estimates or decommissioning plans.

h. The present LES estimates do not account adequately for HF neutralization or CaF2 disposal. Neither do they account for the fact that shallow land burial is very unlikely to be acceptable. It is critical to develop a valid baseline cost estimate, recognizing these realities, and to predicate the contingency allowance on such an estimate.

i. The estimate of the cost of deconversion and disposal through the DOE is insufficiently based to support a contingency allowance for unforeseen costs. A new baseline estimate must be prepared based upon realistic appraisal of likely costs and the likely outcome of environmental analysis of near-surface disposal.

j. The likely cost of deconversions, transportation and disposal of depleted uranium will be between [amounts stated in the prefiled testimony] per kg U.

3. Deposition testimony and cross-examination:

a. Contingency allowances are generally developed on the basis of experience in similar tasks and studies of line-item costs and factors that may cause those costs to vary.

b. A contingency allowance, as used here, accounts for industrial accidents, equipment malfunctions, and the like within the defined project scope.

c. Several factors are not accounted for in the contingency allowance and (if not) would need to be accounted for in another way.

d. LES's experts assume that such factors will not play an important part, but such assumption is unfounded.

e. To ensure that funds are available in event a third party must conduct deconversion, transportation, and disposal, there must be a valid baseline estimate, to which an allowance may be added for unforeseen costs.

Respectfully submitted,

Lindsay A. Lovejoy, Jr.
618 Paseo de Peralta, Unit B
Santa Fe, NM 87501
(505) 983-1800
(505) 983-0036 (facsimile)
E-mail: lindsay@lindsaylovejoy.com

Counsel for Petitioners
Nuclear Information and Resource Service
1424 16th St., N.W. Suite 404
Washington, D.C. 20036
(202) 328-0002

and

Public Citizen
1600 20th St., N.W.
Washington, D.C. 20009
(202) 588-1000

October 18, 2005

CERTIFICATE OF SERVICE

Pursuant to 10 CFR § 2.305 the undersigned attorney of record certifies that on October 18, 2005, the foregoing Outline Summaries Submitted on behalf of Intervenors Nuclear Information and Resource Service and Public Citizen was served by electronic mail and first class mail upon the following:

G. Paul Bollwerk, III
Atomic Safety and Licensing Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001
e-mail: gpb@nrc.gov

Dr. Paul B. Abramson
Atomic Safety and Licensing Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001
e-mail: pba@nrc.gov

Dr. Charles N. Kelber
Atomic Safety and Licensing Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001
e-mail: CKelber@att.net

James R. Curtiss, Esq.
David A. Repka, Esq.
Martin J. O'Neill, Esq.
Winston & Strawn
1700 K St., N.W.
Washington, D.C. 20006
e-mail: jcurtiss@winston.com
drepka@winston.com
moneill@winston.com
aroma@winston.com

John W. Lawrence, Esq.
National Enrichment Facility
100 Sun Avenue, N.E.
Albuquerque, NM 87109
e-mail: jlawrence@nefnm.com

Office of the General Counsel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001
Attention: Associate General Counsel for Hearings, Enforcement, and Administration
e-mail: OGCMailCenter@nrc.gov
lbc@nrc.gov
mjb5@nrc.gov;
jth@nrc.gov

Office of Commission Appellate Adjudication
Mail Stop O-16C1
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Secretary
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001
Attention: Rulemakings and Adjudications Staff (original and two copies)
e-mail: hearingdocket@nrc.gov

Lindsay A. Lovejoy, Jr.
618 Paseo de Peralta, Unit B
Santa Fe, NM 87501
(505) 983-1800
(505) 983-0036 (facsimile)
e-mail: lindsay@lindsaylovejoy.com