

RAS 8475

**RELATED CORRESPONDENCE**

September 9, 2004

DOCKETED  
USNRC

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

September 9, 2004 (3:47PM)

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

OFFICE OF SECRETARY  
RULEMAKINGS AND  
ADJUDICATIONS STAFF

In the Matter of:	)	
	)	Docket No. 70-3103-ML
Louisiana Energy Services, L.P.	)	
	)	ASLBP No. 04-826-01-ML
(National Enrichment Facility)	)	

APPLICANT'S INTERROGATORIES  
TO NUCLEAR INFORMATION AND RESOURCE SERVICE AND PUBLIC CITIZEN

Pursuant to 10 C.F.R. §§ 2.706(b) and 2.705(e), Louisiana Energy Services, L.P. ("Applicant") hereby serves Applicant's Interrogatories upon Nuclear Information and Resource Service and Public Citizen (NIRS/PC), Intervenors in the above-captioned case.

Each interrogatory should be answered fully in writing, under oath or affirmation. Responses should include all pertinent information known to Intervenors, its officers, directors, members, employees, advisors, representatives or legal counsel. In answering each interrogatory and in responding to each request, it would be appreciated if the interrogatory or request could be recited immediately preceding each answer or response.

These interrogatories and requests shall be continuing in nature as required by 10 C.F.R. § 2.705(e). Thus, any time Intervenors claim information which renders any previous response incorrect, incomplete or which indicates that a response was incorrect or incomplete when made, Intervenors should supplement its previous response to the appropriate interrogatory or request to produce. Also, Intervenors should supplement its response with respect to any question addressing the identity and locations of persons having knowledge of discoverable

Template = SECY-035

SECY-02

matters, and the identity of each person expected to be called as a witness at the hearing, including the subject matter and subject of the witness' testimony. As required by 10 C.F.R. § 2.705(e), supplements to Intervenors' response must be seasonably submitted, and in no case less than 30 days prior to the scheduled hearing date.

The term "documents" shall include information contained in any tangible medium of expression, including but not limited to, articles, letters, memoranda, notes, graphs, charts, calculations, photographs, electronic communications (including e-mails), data stored on magnetic and optical digital and analog data storage devices, and any other writing of whatever description.

Intervenors are requested to address in its answers Applicant's clarifications of and modifications, changes, and amendments to the License Application, Environmental Report, Safety Analysis Report and other relevant reports which were available to Intervenors prior to these interrogatories. With respect to each interrogatory, Intervenors are further requested to:

1. State the full name, address, occupation, resume and present employer of each person(s) answering the following interrogatories and requests, and designate the interrogatory or the part thereof that such person(s) answered.
2. If the answer to any interrogatory below, or any contention or basis for a contention listed below relies upon one or more calculations:
  - a. Describe each calculation and identify any documents setting forth such calculation;
  - b. Provide the name and location of each person who performed the calculation and the date the calculation was made;

- c. Describe each assumption made in each calculation, to include the value of and basis for each assumption.
  - d. Describe each constant and variable in each calculation, to include the value and basis for each constant and the source of the data applied to each variable.
  - e. Provide the results of each calculation.
  - f. Explain in detail how each calculation provides a basis for the contention.
3. If the answer to any interrogatory or request below relies upon conversations, consultations, correspondence or any other type of communications with one or more individuals:
  - a. Identify by name and address each such individual;
  - b. State the educational and professional background of each such individual, including occupation and institutional affiliations;
  - c. Describe the nature of each communication with such individual, when it occurred, and identify all other individuals involved;
  - d. Describe the information received from such individuals and explain how it provides a basis for the contention; and
  - e. Identify each letter, memorandum, tape, note or other record related to each conversation, consultation, correspondence, or other communication with such individuals.
4. In the answer to each interrogatory or request below, identify fully any documents used as the basis for the answer to the interrogatory or related to the subject of the interrogatory, upon which Intervenors intend to rely in establishing the contention or the basis for the contention.

## SPECIFIC INTERROGATORIES

### **Contention EC-1 -- Impacts Upon Ground and Surface Water**

“Petitioners contend that the Environmental Report (ER) contained in the application does not contain a complete or adequate assessment of the potential environmental impacts of the proposed project on ground and surface water, contrary to the requirements of 10 C.F.R. 51.45.”

1. Provide the name, address, profession, employer, and area of professional expertise of each person whom NIRS/PC expects to call as a witness, including any expert witness at the hearing.
2. Provide the educational and scientific expertise of each witness.
3. Provide the subject matter on which each of the witnesses is expected to testify.
4. Provide the substance of the facts and opinions to which each witness is expected to testify and a summary of the grounds for each opinion, including the documents and all pertinent pages or parts thereof upon which each witness will rely or will otherwise use for his testimony.
5. Identify any "waterways", as that term is defined by the Army Corps of Engineers, that you believe are present on the NEF site. Provide all supporting documentation.
6. Define what you consider to be "surface waters". Identify all "surface waters" that are present on the NEF site. Provide all supporting documentation.
7. Provide the basis for the statement in your Petition that water from the evaporation basins will infiltrate into the alluvium, where such basins have installed liners.

8. Provide the basis for the statement in your Petition that "laboratory measurements often underestimate the bulk permeability of a rock body because they do not account for fractures and other features that may act as fast flow paths."
9. Provide the basis for the statement in your Petition that "the water-bearing unit is at a depth of 325 feet."
10. Identify what water supplies would be impacted by the NEF and the distance of such water supplies from the NEF site.

**Contention EC-2 – Impact Upon Water Supplies**

“Petitioners contend that the Environmental Report (ER) contained in the application does not contain a complete or adequate assessment of the potential environmental impacts of the proposed project upon water supplies in the area of the project, contrary to 10 C.F.R. 51.45.

To introduce a new industrial facility with significant water needs in an area with a projected water shortage runs counter to the federal responsibility to act “as a trustee of the environment for succeeding generations,” according to the National Environmental Policy Act § 101(b)(1) and 55 U.S.C. § 4331(b)(1). To present a full statement of the costs and benefits of the proposed facility the ER should set forth the impacts of the National Enrichment Facility on groundwater supplies.”

1. Provide the name, address, profession, employer, and area of professional expertise of each person whom NIRS/PC expects to call as a witness, including any expert witness at the hearing.
2. Provide the educational and scientific expertise of each witness.
3. Provide the subject matter on which each of the witnesses is expected to testify.

4. Provide the substance of the facts and opinions to which each witness is expected to testify and a summary of the grounds for each opinion, including the documents and all pertinent pages or parts thereof upon which each witness will rely or will otherwise use for his testimony.
5. Provide the basis for the statement in your Petition that the NEF will have "significant water needs." Define "significant."
6. Provide the basis for the statement in your Petition that there is a "projected water shortage" or a "severe long-term water shortage" in the area. Provide all documentation upon which these statements are based.

**Contention EC-3/TC-1 -- Depleted Uranium Hexafluoride Storage and Disposal**

"Petitioners contend that Louisiana Energy Service, L.P., (LES) does not have a sound, reliable, or plausible strategy for private sector disposal of the large amounts of radioactive and hazardous Depleted Uranium Hexafluoride ("DUF<sub>6</sub>") waste that the operation of the plant would produce in that:

- (A) The statement (LES Environmental Report (ER) 4.13-8) that a ConverDyn partner, General Atomics, "may have access to an exhausted uranium mine . . . where depleted U<sub>3</sub>O<sub>8</sub> could be disposed" represents a grossly inadequate certitude for a "plausible strategy" determination, particularly for a radioactive and hazardous substance which has been accumulating in massive quantities in the United States for fifty-seven years without a plausible disposal program.

(B) Similarly, the statement that “discussions have recently been held with Cogema concerning a private conversion facility” (ER 4.13-8) is without substance.

(C) The disposition of depleted uranium must be addressed based on the radiological hazards of this material that require that it be disposed of in a deep geological repository.”

1. Provide the name, address, profession, employer, and area of professional expertise of each person whom NIRS/PC expects to call as a witness, including any expert witness at the hearing.
2. Provide the educational and scientific expertise of each witness.
3. Provide the subject matter on which each of the witnesses is expected to testify.
4. Provide the substance of the facts and opinions to which each witness is expected to testify and a summary of the grounds for each opinion, including the documents and all pertinent pages or parts thereof upon which each witness will rely or will otherwise use for his testimony.

**Contention EC-4 – Impacts of Waste Storage and Disposal**

“Petitioners contend that the Louisiana Energy Services, L.P. Environmental Report (ER) lacks adequate information to make an informed licensing judgment, contrary to the requirements of 10 C.F.R. Part 51. The ER fails to discuss the environmental impacts of construction and lifetime operation of a conversion plant for the Depleted Uranium Hexafluoride (“UF<sub>6</sub>”) waste that is required in conjunction with the proposed enrichment plant.”

1. Provide the name, address, profession, employer, and area of professional expertise of each person whom NIRS/PC expects to call as a witness, including any expert witness at the hearing.
2. Provide the educational and scientific expertise of each witness.
3. Provide the subject matter on which each of the witnesses is expected to testify.
4. Provide the substance of the facts and opinions to which each witness is expected to testify and a summary of the grounds for each opinion, including the documents and all pertinent pages or parts thereof upon which each witness will rely or will otherwise use for his testimony.

**Contention EC-5/TC-2 – AGNM TC-i – Decommissioning Costs**

“Louisiana Energy Services, L.P., (LES) has presented estimates of the costs of decommissioning and funding plan as required by 42 U.S.C. 2243 and 10 C.F.R. 30.35, 40.36, and 70.25 to be included in a license application. See Safety Analysis Report 10.0 through 10.3; ER 4.13.3. Petitioners contest the sufficiency of such presentations as based on (1) a contingency factor that is too low; (2) a low estimate of the cost of capital; and (3) an incorrect assumption that the costs are for low-level waste only.”

1. Provide the name, address, profession, employer, and area of professional expertise of each person whom NIRS/PC expects to call as a witness, including any expert witness at the hearing.
2. Provide the educational and scientific expertise of each witness.
3. Provide the subject matter on which each of the witnesses is expected to testify.
4. Provide the substance of the facts and opinions to which each witness is expected to testify and a summary of the grounds for each opinion, including the documents and all

pertinent pages or parts thereof upon which each witness will rely or will otherwise use for his testimony.

**Contention EC-6/TC-3 – Costs of Management and Disposal of Depleted UF<sub>6</sub>**

“Petitioners contend that the Louisiana Energy Services, L.P., (LES) application seriously underestimates the costs and the feasibility of managing and disposing of the Depleted Uranium Hexafluoride (“DUF<sub>6</sub>”) produced in the planned enrichment facility in that:

- (A) LES’s reliance on the Lawrence Livermore National Laboratory (LLNL) Report as a basis for LES’s cost estimate for deconversion and disposal is not justified given the report states its cost estimates as medians.
- (B) LLNL cost estimates are based on travel distances of 1000 kilometers or 620 miles (§ 4.1.3, at 37; id. 92), but the data presented in the LES application show that travel over 1000 miles would be required to convert the DUF<sub>6</sub> at Paducah, Kentucky or Portsmouth, Ohio, and travel of an additional 1000 miles (Environmental Report (ER) Table 4.13-1) would be required to get the material to a disposal site.
- (C) In LLNL’s projections of the cost of decommissioning, it is assumed that materials such as steel used in the construction could be recycled. (See ER 4.13-17). Thus, it is assumed that such material would not constitute waste. However, such an assumption cannot be made.
- (D) Significant revenues are assumed from the sale of calcium difluoride (“CaF<sub>2</sub>”) -- \$11.02 million per year (ER 4.13-17, Table 4.13-2; LLNL Report at 50). These assumptions are unfounded and cannot be incorporated in the calculation of the cost of decommissioning.

- (E) A problem arises with respect to disposal of  $\text{CaF}_2$ . It is not known whether the  $\text{CaF}_2$  will be contaminated with uranium. Such contamination would prevent the resale of the  $\text{CaF}_2$  and would require that such material be disposed of as low-level waste.
- (F) There is an even more significant risk that the magnesium difluoride (" $\text{MgF}_2$ ") would also be contaminated. The LLNL report states that  $\text{MgF}_2$  generated in decommissioning may be contaminated. (§ 6.3.2, at 119). Such contamination would require that such material be disposed of as radioactive waste. Such disposal would raise the cost of decommissioning by more than \$400 million. (See Table 6.17, at 120).
- (G) LES's "preferred plausible strategy" for the disposition of depleted  $\text{UF}_6$  is the possible sale to a "private sector conversion facility" followed by disposal of deconverted  $\text{U}_3\text{O}_8$  in a "western U.S. exhausted underground uranium mine." (ER 4.13-8). Such a conversion strategy cannot be accepted as plausible given that no such conversion facility exists nor is it likely to be built to suit LES's timing and throughput requirements.
- (H) The mine disposal option advanced by LES (ER 4.13-11) cannot be considered plausible given the single mine identified in the application opposes use of its property and storage of waste in a such mine will not be realistically approvable if  $\text{DUF}_6$  is not considered low-level waste.
- (I) The "engineered trench" method of waste disposal proposed by LES is not likely to be acceptable (ER 4.13-11, -19) if  $\text{DUF}_6$  is not considered low-level waste."

1. Provide the name, address, profession, employer, and area of professional expertise of each person whom NIRS/PC expects to call as a witness, including any expert witness at the hearing.
2. Provide the educational and scientific expertise of each witness.
3. Provide the subject matter on which each of the witnesses is expected to testify.
4. Provide the substance of the facts and opinions to which each witness is expected to testify and a summary of the grounds for each opinion, including the documents and all pertinent pages or parts thereof upon which each witness will rely or will otherwise use for his testimony.

**Contention EC-7 – Need for the Facility**

“Petitioners contend that the Environmental Report (ER) does not adequately describe or weigh the environmental, social, and economic impacts and costs of operating the National Enrichment Facility (See ER 1.1.1 et seq.) in that:

- (A) Louisiana Energy Services, L.P.’s (LES) presentation erroneously assumes that there is a shortage of enrichment capacity.
- (B) LES’s statement of “need” for the LES plant (ER 1.1) depend primarily upon global projections of need rather than projections of need for enrichment services in the U.S.
- (C) LES has referred to supply and demand in the uranium enrichment market (ER 1.1), but it has not shown how LES would effectively enter this market in the face of existing and anticipated competitors and contribute some public benefit.”

1. Provide the name, address, profession, employer, and area of professional expertise of each person whom NIRS/PC expects to call as a witness, including any expert witness at the hearing.
2. Provide the educational and scientific expertise of each witness.
3. Provide the subject matter on which each of the witnesses is expected to testify.
4. Provide the substance of the facts and opinions to which each witness is expected to testify and a summary of the grounds for each opinion, including the documents and all pertinent pages or parts thereof upon which each witness will rely or will otherwise use for his testimony.
5. Provide the basis for your conclusion that there is no shortage of enrichment capacity, including any projections or estimates that have been made regarding the demand for enrichment services and the supply of enrichment services available to meet this demand over the period of time that the National Enrichment Facility will be in operation. Provide any estimates or projections that you have made regarding "global projections" versus "U.S. projections" of enrichment demand. Identify all assumptions that have been made in your projections or estimates. Provide all analyses performed by David Osterberg and Dr. Arjun Makhijani.
6. Identify all "existing and anticipated competitors" referred to in this contention.
7. Provide the basis for the statement in your Petition that "[t]here is no indication that needs of U.S. nuclear utilities cannot be met without construction and operation of the LES facility." Identify all conversations, consultations, correspondence or any other type of communication that you have had with representatives of, or consultants to, U.S. nuclear utilities.

8. Define what is meant by the statement in your Petition "it has not been shown how LES will effectively enter this market . . . "

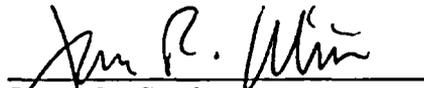
**Contention TC-6 – Natural Gas-Related Accident Risks**

“Petitioners contend that the Safety Evaluation Report does not contain a complete or adequate assessment of accidents involving natural gas transmission facilities in that there has been no Integrated Safety Analysis based on module-specific data.”

1. Provide the name, address, profession, employer, and area of professional expertise of each person whom NIRS/PC expects to call as a witness, including any expert witness at the hearing.
2. Provide the educational and scientific expertise of each witness.
3. Provide the subject matter on which each of the witnesses is expected to testify.
4. Provide the substance of the facts and opinions to which each witness is expected to testify and a summary of the grounds for each opinion, including the documents and all pertinent pages or parts thereof upon which each witness will rely or will otherwise use for his testimony.
5. Provide the basis for the statement that the natural gas pipeline analysis must be included in the Safety Evaluation Report (sic; assume reference should be to Safety Analysis Report), in view of the guidance contained in Chapter 3 of NUREG-1520.

6. Define the term "module-specific" analysis referred to in your Petition.

Respectfully submitted,

  
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Dated at Washington, District of Columbia  
this 9th day of September 2004

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of: )  
Louisiana Energy Services, L.P. )  
(National Enrichment Facility) )

Docket No. 70-3103-ML  
ASLBP No. 04-826-01-ML

CERTIFICATE OF SERVICE

I hereby certify that copies of the "Applicant's Interrogatories To Nuclear Information and Resource Service/Public Citizen" in the captioned proceeding have been served on the following by e-mail service, designated by \*\*, on September 9, 2004 as shown below. Additional service has been made by deposit in the United States mail, first class, this 9th day of September 2004.

Chairman Nils J. Diaz  
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Commissioner Edward McGaffigan, Jr.  
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Commissioner Jeffrey S. Merrifield  
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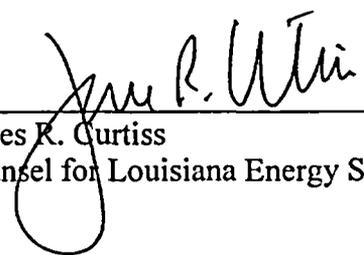
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