

RELATED CORRESPONDENCE

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September 23, 2004 (4:33PM)

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSIONOFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

Docket No. 70-3103

Louisiana Energy Services, L.P.
National Enrichment Facility

ASLBP No. 04-826-01-ML

RESPONSES ON BEHALF OF
PETITIONERS
NUCLEAR INFORMATION AND RESOURCE SERVICE
AND
PUBLIC CITIZEN
TO INTERROGATORIES BY APPLICANT
LOUISIANA ENERGY SERVICES, L.P.

Petitioners Nuclear Information and Resource Service and Public Citizen ("NIRS/PC")

respond herein to the interrogatories served by counsel for the Applicant, Louisiana Energy services, L.P., on September 9, 2004. The interrogatories, followed by the response by NIRS/PC, are as follows:

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 CFR 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.

Response:

1) Name, address, employer, etc.

George Rice
414 East French
San Antonio, TX 78212

Self employed; hydrologist

2) Education and experience

See resume attached to Petition.

3) Subject matter

Groundwater, contaminant fate and transport

4) Substance of facts and opinions

As stated in NIRS/PC Contention EC-1, LES has not adequately characterized existing conditions at the proposed site and has not adequately evaluated how its operations will affect groundwater and groundwater quality in the future.

5) Waterways on site

No known waterways are present on site.

6) Surface waters

Surface waters are bodies of water on the land surface. These include streams, lakes, ponds, and puddles. It is assumed that puddles and small streams form at the site in response to rainfall and snowmelt. There are no permanent bodies of surface water on the site.

7) Basis for statement that water from lined basins will infiltrate into the alluvium.

Lined basins often leak. The leakage may be due to manufacturing defects in the geosynthetic liner, installation defects, or deterioration of the liner after it is installed.

A discussion of some factors that contribute the leakage of liners is contained in EPA 1994a¹.

Laine and Miklas examined 61 geomembrane-lined facilities². The facilities included landfills and impoundments. Most of the geomembranes were made of HDPE, but some were made of PVC (e.g., XR-5) or polyethylene. Leaks were detected in 58 of the 61 facilities. The average density of leaks at all facilities was about 13 per acre.

The EPA recently released a report describing various methods for detecting leaks beneath lined landfills and impoundments³.

8) Laboratory vs. field estimates of permeability

This issue is discussed in the following texts:

Davis and DeWiest, page 165.

Linsley, Kohler, and Paulhus, page 131.

9) Basis for statement: "The water-bearing unit is at a depth of 325 ft".

¹ EPA 1994a, pages 33 – 35.

² Laine and Miklas, 1989.

³ EPA, 2004a.

This information was taken from Nicholson and Clebsch. The location of the well is shown in plate 2. The depth of the water-bearing unit is given in table 6 (page 82). The yield of this well was estimated to be 20 gpm⁴.

10) Affected water supplies

None are known at this time. However, the answer to this question depends on where the water that leaks from the basins and discharges from septic fields goes. Bodies of groundwater that form as a result of these leaks and discharges may: 1) be removed by evapotranspiration, 2) flow along the alluvial/Chinle contact, 3) flow into the groundwater system that exists in the Chinle Formation, or 4) flow into the Santa Rosa Aquifer.

LES has not investigated the fate of groundwater bodies that may form as the result of leakage from basins, or discharges to the septic leach fields.

According to the NRC, bodies of groundwater that form beneath the site may be discharged ... *in a minor seep at Custer Mountain or in the excavation 3.2 kilometers (2 miles) southeast of Monument Draw ...*⁵ However, the NRC does not explain why they believe that the groundwater may discharge at these locations.

Although there are reported to be no water wells within one mile of the site boundary⁶, groundwater in alluvium and the Dockum Group (Chinle Formation or the Santa Rosa Aquifer) has been used in the vicinity of the proposed site⁷. According to the

⁴ Nicholson and Clebsch, 1961, page 82.

⁵ NRC, 2004a, pages 4-13 and 4-14. Custer Mountain is approximately 20 miles from the site (Nicholson and Clebsch, 1961, plate 2).

⁶ NRC, 2004a, page 3-37.

⁷ Alluvial wells approximately three miles west of the proposed site have been used for domestic purposes (Nicholson and Clebsch, 1961, page 80 and plate 2). The City of Eunice had an old public supply well in the Dockum. This well was about six miles west of the site (Nicholson and Clebsch, 1961, page 80 and plate 2). The

Lea County Water Plan, deeper aquifers such as the Dockum Group may be developed for future water supplies⁸. The plan recommends investigating areas where faulting may have fractured these aquifers⁹.

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 CFR 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 Sec. 101(b)(1) and 55 USC Sec. 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.

1) Name, address, employer, etc.

George Rice
414 East French
San Antonio, TX 78212

Self employed, hydrologist

town of Oil Center, about 12 miles northwest of the site, obtains water from the Dockum Group (Leedshill-Herkenhoff, 2000, page 6-12, and Nicholson and Clebsch, 1961, page 69 and plate 2).

⁸ Leedshill-Herkenhoff, 2000, page 8-5.

⁹ Leedshill-Herkenhoff, 2000, page 8-5.

2) Education and experience

See resume attached to Petition.

3) Subject matter

Long-term effects of pumpage on the Hobbs well field and the Ogallala Aquifer.

4) Substance of facts and opinions

The water used at the proposed facility would be pumped from the Hobbs well field (Lea County Underground Water Basin, Ogallala Aquifer)¹⁰. Groundwater in the Basin is being pumped at a rate faster than it is being recharged¹¹. LES has not determined how this pumpage would affect water levels and the long-term productivity of the Hobbs well field or the Lea County Underground Water Basin.

5) Define significant

In the context of the location and the nature of the facility, water needs are significant when they are substantial in volume and require an uninterrupted priority for an extended period of time, i.e., decades.

6) Basis for water shortage

A projected water shortage is an anticipated situation in which some current and expected water users may be required to curtail their usage.

References

Barrett, M.E., R.D. Zuber, E.R. Collins, J.F. Malina, Jr., R.J. Charbeneau, and G.H. Ward, 1993, *A Review and Evaluation of Literature Pertaining to the Quality and Control of Pollution from Highway Runoff and Construction*, Technical Report CRWR 239, April 1993.

Davis, S.N., and R.J.M. DeWiest, 1966, *Hydrogeology*.

¹⁰ Louisiana Energy Services, 2004a, page 4.4-5; and Leedshill-Herkenhoff, 2000, page 1 of Executive Summary and page 7-2.

¹¹ Leedshill-Herkenhoff, 2000, page 1 of Executive Summary and page 5-4.

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Laine, D.L., and M.P. Miklas, Jr., 1989, *Detection and Location of Leaks in Geomembrane Liners Using an Electrical Method: Case Histories*, Southwest Research Institute, San Antonio, Texas, Proceedings of the 10th National Conference, Superfund '89, Washington, D.C., U.S.A., Nov. 27-29, 1989, http://www.leaklocationservices.com/pubs/detection_location.pdf

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Nicholson, A., and A. Clebsch Jr., 1961, *Geology and Ground-Water Conditions in Southern Lea County, New Mexico*; Ground-Water Report 6, New Mexico Bureau of Mines and Mineral Resources, 1961.

NRC, 2004a, *Environmental Impact Statement for the Proposed National Enrichment Facility in Lea County, New Mexico, Draft Report for Comment*, NUREG-1790, September 2004.

USGS, 2004a, *Concentrations of Polycyclic Aromatic Hydrocarbons (PAHs) and Major and Trace Elements in Simulated Rainfall Runoff from Parking Lots, Austin, Texas, 2003*, Open File report 2004-1208.

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

“Petitioners contend that Louisiana Energy Services, 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 (“DUF₆”) 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 U₃O₈ 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 U.S. 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.

Response: 1, 2. The testifying expert will be Arjun Makhijani, whose resume is attached to the Petition.

3, 4: It remains a fact that neither LES, nor DOE, has a plausible disposal strategy for DU waste. Thus, LES cannot assume that waste delivered to DOE will be disposed of in an appropriate and lawful manner. DOE’s plans for conversion of DUF₆ to U₃O₈ do not change that fact. DOE’s plans do not include any additional conversion capacity to treat privately-generated waste. Further, there is no site or mine that has been located for disposal. Without an actual site, there

can be no demonstration that disposal is consistent with safety. The doses estimated for mine disposal in the ER, and restated in the draft EIS, are implausibly low for the stated disposal strategy. Further, U_3O_8 can undergo chemical changes that can make it more mobile in the environment. Hence, while conversion reduces the risk of DU storage, it does not represent a strategy for long-term disposal. The two are distinct problems. See also response to interrogatory as to Contention EC-4.

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 CFR 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_6 ”) 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.

Response: 1, 2. The testifying expert will be Arjun Makhijani, whose resume is attached to the Petition.

3. Arjun Makhijani will testify on the nature of depleted uranium (DU) as a waste, the de-conversion of DUF_6 , disposal of Greater-than-Class C (GTCC) and Transuranic (TRU) waste, the risks and technical demands of managing these waste forms in relation to DU waste, the chemical form and waste encapsulation matrices for disposal of DU oxides as a waste, and

disposal facility considerations. He will also discuss costs of de-conversion, decommissioning, waste conditioning, and waste disposal.

4. The following represents a very brief description of the testimony to the extent that work on these areas is complete:

1. DU cannot be considered Class A low level waste.
2. The disposal options proposed in the DEIS are inappropriate for DU.
3. DU has a specific activity far exceeding 100 nanocuries per gram. All three of the uranium isotopes in DU waste are long-lived alpha emitting radionuclides. DU is GTCC waste, which makes it equivalent to TRU waste in EPA terms.
4. GTCC waste and TRU waste must be disposed of in a deep geologic repository in waste forms that are designed to minimize the peak dose at the time of peak occurrence.
5. Doses from DU disposal will grow over time for hundreds of thousands of years because of in-growth of decay products thorium-230 and radium-226. Radiation doses from uranium and its decay products are highly dependent on geochemical and hydrogeological conditions and must be calculated in a site specific fashion in order to be reliable. This is a necessary but not sufficient condition for sound dose estimates. The radiation dose estimates for DU disposal in Table 4-19 of the DEIS appear to be implausibly low for the stated disposal strategy.
6. U_3O_8 does not have appropriate chemical and physical properties for proper disposal. A ceramic zircon-like waste form is likely to be necessary to reduce estimated radiation doses for the long periods of time involved.
7. Repository costs of deep geologic disposal for DU should be developed in reference to the costs of finding, licensing and operating the Waste Isolation Pilot Plant (WIPP) with

due consideration to the fact that the specific activity of the DU will grow for hundreds of thousands of years due to Th-230 and Ra-226 in-growth.

8. It may be even more difficult, time-consuming, and expensive to site a repository for DU than it was to license and open WIPP, given the high (alpha-emitting) specific activity of the material and public misgivings about radioactive waste.

9. An assumption that DOE will take DU waste, process it and dispose of it in conformity with NRC rules is speculative, since DOE has long resisted external regulation and has an unenviable record in terms of environmental protection and regulatory compliance.

10. Cogema has not itself operated a deconversion facility that converts the HF into anhydrous hydrofluoric acid (AHF) at its plant in France. When the engineering analysis was completed in 1997, apparently no large-scale facility had been put into routine industrial anywhere. The costs, operations issues, environmental impacts and transportation risks of AHF in the context of de-conversion of DUF_6 are at this stage not based on actual experience.

11. The present assumption for assessing environmental impacts of the LES facility should be that CaF_2 or MgF_2 will be generated through the neutralization of HF created by DUF_6 deconversion and that the neutralization products will be disposed of as waste.

12. Deconversion costs, which NIRS/PC are still in the process of examining, are likely to cost hundreds of millions or even billions of US dollars.

13. NIRS/PC have not yet completed their evaluation of decommissioning costs.

14. Given that there is no reasonably sure disposal option for DU, the possibility that the state of New Mexico would be stuck with it in perpetuity should be evaluated. The lessons from the high costs to the state of New York and the federal government as well

as the people of the region of West Valley, New York, reprocessing plant are germane in this context. To ensure that LES does not default on its waste and decommissioning obligations, adequate financial guarantees corresponding to the magnitude of anticipated geologic repository costs (including waste forms, waste packaging and engineered barriers) should be provided up front as part of the licensing process.

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 USC 2243 and 10 CFR 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.

Response:1. Charles Komanoff; c/o KEA, 636 Broadway, Room 602, New York, NY 10012; consulting economist; Komanoff Energy Associates; energy economics.

2. Komanoff holds a B.A. (cum laude) in Economics and Applied Mathematics from Harvard University. He has written numerous books, monographs, and journal and popular articles about the U.S. energy sector, including two books dealing primarily with nuclear power engineering, regulation and economics. He has served as consultant to the U.S. Department of Energy, the U.S. Congress' Office of Technology Assessment, governmental agencies of 15 U.S. states, and numerous municipalities, primarily on nuclear power matters.

3. Komanoff is expected to testify on: the need for and financial prospects of the National Enrichment Facility; the cost to build, operate, maintain and decommission the NEF; and alternatives to the NEF.

4. The answer to this question ("substance of facts and opinions") is in development as Komanoff researches and prepares his testimony.

Contention EC-6/TC-3 – Costs of Management and Disposal of Depleted UF₆

"Petitioners contend that the Louisiana Energy Services, L.P. (LES) application seriously underestimates the costs and feasibility of managing and disposing of the Depleted Uranium Hexafluoride ("DUF₆") 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 DUF₆ 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 ("CaF₂")—\$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 CaF₂. It is not known whether the CaF₂ will be contaminated with uranium. Such contamination would prevent the resale of the CaF₂ 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 ("MgF₂") would also be contaminated. The LLNL report states that MgF₂ 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 UF_6 is the possible sale to a "private sector conversion facility" followed by disposal of deconverted U_3O_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 the waste in such mine will not be realistically approvable if 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 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.

Response: 1, 2. The testifying expert will be Arjun Makhijani, whose resume is attached to the Petition.

3, 4: Most cost issues are covered above in the response to the interrogatory concerning

Contention EC-4, to the extent that such issues have been developed at this time. Costing based on disposal as Class A waste is not correct, because DU cannot be considered Class A waste.

The CaF_2 or MgF_2 may be contaminated and would need to be disposed of as low-level radioactive waste. Costs cited were based on the study done by Lawrence Livermore National Laboratory.

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 statements 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 operations. 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 . . . “

Response:

1. a. Charles Komanoff; c/o KEA, 636 Broadway, Room 602, New York, NY 10012; consulting economist; Komanoff Energy Associates; energy economics.

b. Michael F. Sheehan, Osterberg & Sheehan, 33126 Callahan Road, Scappoose OR 97056; consultant in utility economics, solid waste regulation, nuclear economics.

2. a. Komanoff holds a B.A. (cum laude) in Economics and Applied Mathematics from Harvard University. He has written numerous books, monographs, and journal and popular articles about the U.S. energy sector, including two books dealing primarily with nuclear power engineering, regulation and economics. He has served as consultant to the U.S. Department of Energy, the U.S. Congress' Office of Technology Assessment, governmental agencies of 15 U.S. states, and numerous municipalities, primarily on nuclear power matters.

b. Sheehan's qualifications are provided in his resume (attached to NIRS/PC responses to interrogatories by NRC Staff).

3. a. Komanoff is expected to testify on: the need for and financial prospects of the National Enrichment Facility; the cost to build, operate, maintain and decommission the NEF; and alternatives to the NEF.

b. Sheehan's testimony will cover the following issues: a) The need for the facility; b) The impact of the facility on the national security concerns developed at length in Chapter 1 of the ER, and in the no-action alternative of Chapter 7 and elsewhere in the ER, including, but not limited to problems of proliferation in an age of terrorism; c) The cost-benefit analysis and associated analyses presented in ER Chapters 7-8; d) The comparison of alternative sites; e) The

evaluation of the scenarios presented by LES in ER Chapter 1. Sheehan has not finished reviewing the materials in this case, including outstanding data requests.

4-8. a. Answers to these questions with respect to Komanoff (“substance of facts and opinions”) are in development as Komanoff researches and prepares his testimony.

b. 4, 5. Sheehan has not yet completed his analysis of this question, nor has he received LES’ responses to the data requests propounded on this issue. A preliminary review of the ER, however, suggests that there is no shortage of supply of low-enriched uranium (LEU) and that the arguments suggesting that more enrichment capacity needs to be built are policy arguments related to where the supply of LEU ought to come from, mostly designed to favor one supplier of LEU over other suppliers. Each of these choices has economic consequences and environmental ramifications of various sorts that the ER has not addressed in an objective and satisfactory fashion. No “projections or estimates” have at this point been completed by Sheehan, pending the completion of his analysis of the materials in this case.

6. These include in the first circle USEC, Russian highly-enriched uranium (HEU), and European suppliers; while the adjustments in terms of price and supply of all other world suppliers would have a secondary impact.

7. The case made in the ER is insufficient to support the argument that without the LES plant commercial nuclear power plants in the U.S. will be forced to close for lack of fuel in the foreseeable future. Sheehan has had, as of this date, no conversations with U.S. nuclear utilities or their consultants on this issue.

8. LES has yet to present an analysis of the price and competitiveness of LES’ proposed product relative to the products of other suppliers, and what the response might be of those other suppliers. In light of this “it has not been shown how LES will effectively enter this market . . .”

Contention TC-6 – Natural Gas-Related Accident Risks


CONTENTION: 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.


Response:

NIRS/PC do not intend to present a witness concerning the matters referred to in this interrogatory.

The foregoing responses are true and correct to the best of my knowledge.

 9/23/04
Michael Mariotte
Executive Director
Nuclear Information and Resource Service

Respectfully submitted,

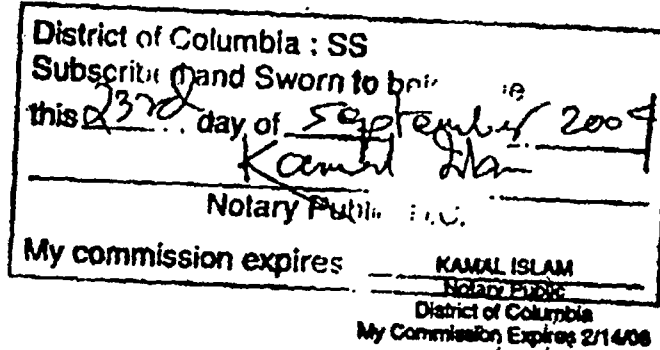

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September 23, 2004



CERTIFICATE OF SERVICE

Pursuant to 10 CFR § 2.305 the undersigned attorney of record certifies that on September 23, 2004, the foregoing Responses on Behalf of Petitioners Nuclear Information and Resource Service and Public Citizen to Interrogatories by Applicant Louisiana Energy Services, L.P., was served by electronic mail and by first class mail upon the following:

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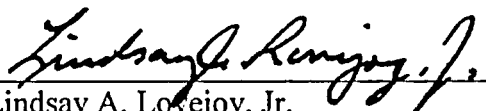
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Attention: Rulemakings and Adjudications Staff (original and two copies)
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