

RELATED CORRESPONDENCE

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

EXCERPT  
USNRC

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OFFICE OF SECRETARY  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C.

In the Matter of )  
 )  
LOUISIANA ENERGY SERVICES, L.P. ) Docket No. 70-3070 -ML  
 )  
(Claiborne Enrichment Center) )  
\_\_\_\_\_ )

SUPPLEMENTAL ANSWERS TO APPLICANT'S INTERROGATORIES TO  
CITIZENS AGAINST NUCLEAR TRASH REGARDING CITIZENS  
AGAINST NUCLEAR TRASH'S CONTENTIONS B, I, and J

Intervenor, Citizen's Against Nuclear Trash ("CANT"), hereby files these supplemental answers to certain interrogatories pertaining to Contentions B, I, and J which are contained in "APPLICANT'S INTERROGATORIES TO CITIZENS AGAINST NUCLEAR TRASH REGARDING CITIZENS AGAINST NUCLEAR TRASH'S CONTENTIONS B, I, J, K, L, M AND Q." However, it should be noted that CANT has not made a final selection of all witnesses to testify on the matters addressed in CANT's Contentions, and those witnesses who are likely to testify have not yet completed their analysis of all of the issues encompassed in CANT's Contentions. Accordingly, CANT will continue to supplement its discovery responses.

**SPECIFIC INTERROGATORIES**

Decommissioning Plan Contention B:

Contention:

The LES decommissioning plan does not provide reasonable assurance that the CEC site can be cleaned up and adequately restored upon cessation of operations.

In its Memorandum and Order (Ruling on Contentions) of December 19, 1991, the NRC Atomic Safety and Licensing Board

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(Board) stated (pp. 6 - 15) that Contention B is litigable with regard to Bases 1, 4, and 5 to the extent described. It should be noted that the Board specifically stated in the above referenced order that "we see no reason to believe that the depleted uranium hexafluoride tails would be classified as mixed waste and would therefore be a material for which no disposal site is available. Id. at 14. (The Board further stated, at page 7 of its June 18, 1992, Memorandum and Order, ASLB No. 91-641-02-ML, that tails are a source material and not a mixed waste [sic] under RCRA.) Accordingly, Applicant's interrogatories and requests related to Contention B focus upon each Basis to the extent admitted by the Board.

Interrogatories and Requests:

Decommissioning Plan Contention B, Basis 1

INTERROGATORY NO. B.1-1:

Please review Exhibit I to the License Application, amended as of July 31, 1992, Environmental Report ("ER"), section 4.4, amended as of July 31, 1992, and Safety Analysis Report ("SAR"), section 11.8, amended as of July 31, 1992, and advise whether you are willing to withdraw Contention B, Basis 1. If you are not willing to withdraw Contention B, Basis 1, in light of Applicant's recent submittal, please answer interrogatory B.1-2 below.

ANSWER TO INTERROGATORY B.1-1:

CANT is not willing to withdraw Contention B, Basis 1.

INTERROGATORY NO. B.1-2, B.1-2.1 and B.1-2.2:

In light of the above-referenced modifications to the Decommissioning Funding Plan as described in the License Application, SAR and ER, provide the basis for your assertion that the Applicant has not identified each of the following and indicate how the information submitted by Applicant fails to adequately account for: the annual tails disposal costs estimated at \$21.3 million per year (1996 dollars); a reasonable plan for offsite disposal of tails;

Please include as part of your answer to interrogatories B.1-2.1 and B.1-2.2, specific information such as actual costs or requirements that would indicate that Applicant's costs or plans are in some way inadequate. Also, note that depleted UF6 ("DUF6," or "tails") is not mixed waste and Applicant's cost estimates and plans do not rely on sale of DUF6 as a resource.

ANSWER TO INTERROGATORY B.1-2, B.1-2.1, and B.1-2.2:

Information from Applicant fails to adequately account for disposal of depleted UF6 ("DUF6"). First, there is no place in the U.S. to "dispose" of DUF6. Second, applicant has failed to demonstrate that it has contracts to convert DUF6 into U308, or that any facility even exists to perform such a conversion. Third, even if its DUF6 can be converted into U308, applicant still has not identified what it would do with the leftover HF, which is a highly toxic chemical itself, nor what the disposal costs of this HF might be. Fourth, Applicant has, in different documents, provided wildly different figures for the cost of DUF6 disposal and/or conversion.

For example, in a document dated April 10, 1992, (letter to Charles J. Haughney, Chief, NRC Fuel Cycle Safety Branch), applicant states that disposal of tails would be \$9.5 million/year. However, in the SAR at section 4.4.4.1 (October 1993) applicant states that annual tails disposal costs would be \$16.175 million, based on conversion to U308. An identical figure is given in the ER at section 11.8.14 (October 1993). Yet in its August 11, 1992 interrogatory, applicant states that tails disposal costs are estimated at \$21.3 million in 1996 dollars. These figures represent a change of more than 100% in less than two years (\$9.5 million/year versus \$21.3 million/year) and give little confidence about applicant's numbers.

CANT has consistently maintained that until applicant identifies where its wastes will go, and identifies specific

contracts indicating acceptance of the wastes, then it is difficult, if not impossible, to determine what applicant's actual waste disposal costs will be. This difficulty is highlighted by applicant's own inability to control its anticipated (much less actual) costs for waste disposal over less than a two-year period.

Applicant has not proven it has a "reasonable plan" for offsite disposal of its tails. Currently, there are no facilities within the United States which would accept these tails for "disposal." The U.S. Department of Energy ("DOE") already has thousands of tons of DUF6 awaiting some sort of disposal mandate. In the absence of actual disposal contracts (and applicant has failed to show that it has such actual contracts), applicant can have no more specific "plan" for its DUF6 than to join -- behind DOE and other DUF6 generators -- the line of generators who are searching for a plan.

CANT will concede for purposes of argument, that DUF6 is not a "mixed" waste as that term of art is defined under certain laws. In practical terms, however, DUF6 is both hazardous and radioactive, and thus fits any practical definition of mixed waste. While applicant may not be required to dispose of this material, legally, as a "mixed" waste, it must still protect the environment from both the radioactive and hazardous natures of this material.

LES has not identified where its "low-level" radioactive wastes might be disposed, nor provided an adequate basis for its estimates of the cost of "low-level" radioactive waste disposal. In fact, LES merely references two telephone conversations to

support its position regarding the disposal issue. The first conversation was between LES and the Entergy Corporation. (Reference 5, SAR at 11.8-17, October 1993.) Entergy is a generator of radioactive waste; it is not a disposal company. Its knowledge of disposal costs is likely to be limited, and perhaps optimistic.

The second phone conversation was with a representative of U.S. Ecology, a company that proposed to operate a "low-level" radioactive waste dump in Nebraska. (Reference 6, SAR at 11.8-17, October 1993.) However, since that conversation, Nebraska has denied a permit to U.S. Ecology to build a radioactive waste dump in Nebraska. This matter remains unsettled. In the interim, no reliance can be placed upon the disposal cost figures which LES has estimated because they are entirely speculative, and are not grounded in fact.

Further, applicant acknowledges that it will produce a limited amount of waste that is considered, by law, "mixed" hazardous/radioactive waste. There currently are no legal disposal facilities for this material, thus there is no basis for applicant's estimate of \$0.1 million for disposal of its mixed waste. Indeed, California documents (California being one of the few states which has attempted to even preliminarily address this issue) indicate that mixed waste disposal could reach \$10,000/cubic foot. See, e.g., California Department of Health Memorandum, attached as exhibit "1." This estimate -- the only legitimate

mixed waste disposal estimate of which we are aware -- does not mesh with applicant's estimate.

Decommissioning Plan Contention B, Basis 4:

INTERROGATORY NO. B.4-1:

Please review Exhibit I to the License Application, amended as of July 31, 1992, section 4.4 of the ER, amended as of July 31, 1992, and section 11.8 of the SAR, amended as of July 31, 1992, and advise whether you are willing to withdraw Contention B, Basis 4. If you are not willing to withdraw Contention B, Basis 4, please answer interrogatories and requests B.4-2 to B.4-6 below.

ANSWER TO INTERROGATORY NO. B.4-1:

CANT is not willing to withdraw Contention B, Basis 4.

INTERROGATORY NO. B.4-2:

Please explain fully how the above-referenced provisions to the License Applications, SAR and ER fail to provide adequate details regarding the determination of decommissioning costs. Include in your response the supporting basis for your explanation.

ANSWER TO INTERROGATORY NO. B.4-2:

See answer to interrogatories B.1-2, B.1-2.1, and B.1-2.2, above.

The Safety Evaluation Report states that "[t]he NRC will not authorize release of the site for unrestricted use until the applicant adequately demonstrates that all decommissioning criteria applicable at the time of decommissioning have been met." (SER at 15-7). However, there currently are no legally promulgated standards for decommissioning sites and facilities and determining when a site may be released to unrestricted use. To avoid the problems of the past, and the problems at sites on the Site Decommissioning Management Plan list (NUREG-1444, Oct. 1993), it only makes sense that applicant commit to meeting the requirements

of what is currently a "staff draft"<sup>1</sup> on developing radiological criteria for decommissioning.<sup>2</sup>

Although CANT does not necessarily accept all of the numbers contained in this "staff draft," it should be noted that this draft, which soon will be released as a proposed rule, would require clean-up of nuclear facilities for unrestricted use so that the dose from residual radioactivity is, at most, 15 mrem/year, with a goal of 3 mrem/year.

This represents a substantial change from the current NRC requirements, which are based on a 1981 Branch Technical Position paper<sup>3</sup> in which the residual radiological criteria have an annual dose limit basis of 170 mrem/year. In NUREG-1444 at page 16, the NRC has admitted that 170 mrem/year exceeds the public exposure limit in 10 C.F.R. Part 20. Moreover, in the "staff draft" the NRC has persuasively argued that the 100 mrem/year limit in 10 C.F.R. Part 20 would be inappropriate and excessive as an upper limit for decommissioning, and that the decommissioning limit should be considerably more strict because the site will be released to unrestricted use. Applicant, as the only major nuclear project even proposed in the past decade, must commit to meeting these new NRC requirements on residual radiation.

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<sup>1</sup> "Draft Radiological Criteria for Decommissioning," 10 C.F.R. Part 20 (January 26, 1994).

<sup>2</sup> It is reasonable to assume that, by the time the CEC is being decommissioned, this "staff draft" will have become a final rule.

<sup>3</sup> SECY 81-576 (Oct. 5, 1981) at enclosure 2 page 3.

Finally, applicant's experience decommissioning centrifuges at its Almelo, Netherlands facility will be of limited relevance to American conditions. The low level waste disposal regulations, decommissioning regulations, and DUF6 disposal difficulties are likely to be of a considerably greater magnitude at the CEC facility than at the Almelo facility.

Accordingly, decontamination and decommissioning at the CEC facility should be a more difficult and expensive task than decontaminating and decommissioning pilot centrifuges which operated for only a few years, as is the case with the Almelo facility (i.e., radiation and other contamination levels are likely to be substantially higher for a centrifuge which operates for 30 years). Thus, the centrifuge decontamination and decommissioning cost estimates for the CEC must be re-done.

**INTERROGATORY NO. B.4-3:**

Specifically explain why the evaluation of decommissioning costs as described in the Urenco paper "Decommissioning and Decontamination of a USJVC Plant," dated April 27, 1989, (License Application, Exhibit I at 3) fails to provide a rational basis for the LES decommissioning cost estimates. Provide the supporting basis for your explanation.

ANSWER TO INTERROGATORY NO. B.4-3:

The evaluation of decommissioning costs as described in the Urenco paper "Decommissioning and Decontamination of a USJVC Plant" (the "USJVC Plan") fails to provide a rational basis for the LES decommissioning cost estimates for several reasons.

The USJVC Plan assumes that recovered scrap can be sold for unrestricted use based on experience in Europe. This is unwarranted and contrary to prevailing U.S. opinion. For example,



hydrofluoric acid recovered from conversion of DUF6 to U3O8 is slightly contaminated with uranium and is being commercially sold in Europe. However, in a document prepared by Martin Marietta Energy Systems, Inc., a major contractor of the Department of Energy and an operator of enrichment facilities, such hydrofluoric acid may not "be marketable in this country." "The Ultimate Disposition of Depleted Uranium," DE 91-006414 (1990) at 14. As a result, the cost estimates provided in the USJVC Plan, which allow for considerable revenues from sale of scrap and reusable equipment, are likely to be too optimistic under U.S. conditions.

In addition, the premise that some equipment can be sold for a significant fraction of its initial value seems unwarranted. For instance, it is assumed that diesel generators "might realize 60 to 70% of their initial capital value." USJVC Plan at § 6. CANT believes that after 30 years such equipment is likely to be obsolete and worthless on a number of grounds. For instance, energy efficiency and pollution control requirements for such equipment may have changed. Diesel may no longer be acceptable as a fuel, given other environmental considerations. Other equipment, such as the mass spectrometer and vacuum pumps, are also likely to be obsolete after 30 years, since the accuracy and performance requirements for such equipment are likely to be considerably more stringent after 30 years.

In light of the difficulty of marketing slightly contaminated material in the United States, the amount of material to be disposed of as waste from the CEC facility is likely to be

considerably greater than assumed in the USJVC Plan. Thus, the decommissioning costs for the CEC will be correspondingly higher. In this context, one should note that there are currently no regulations for unrestricted use of slightly contaminated scrap metal. It is also noteworthy that when the NRC attempted to promulgate regulations permitting such uses by designating them as "Below Regulatory Concern" these attempts were defeated by intense opposition from the public. A change in this situation is unlikely. Thus, the prediction that there will be "a small amount of residues which are non-recoverable for either technical or economic reasons . . . [and] a very small amount of intractably contaminated material" (USJVC Plan at § 4 paragraph c) is far too optimistic. Accordingly, disposal costs for the CEC will be far greater than suggested.

Also, the personnel requirements for dismantling (USJVC Plan at § 5.3) are based on the European experience. CANT believes that current and future U.S. requirements will call for more personnel for dismantling than suggested in the USJVC Plan.

And finally, the disposal cost estimates for Barnwell, as listed in the USJVC Plan, do not reflect current disposal costs at this facility which have escalated. Moreover, the Beatty facility, which is also referenced, is closed.

**INTERROGATORY NO. B.4-4:**

Explain why the information provided by the Applicant fails to comply with the requirements of 10 C.F.R. Section 70.25(a) and (e)? Provide specific examples, if any, of noncompliance as part of the full basis for your explanation.

ANSWER TO INTERROGATORY NO. B.4-4:

1) As discussed in response to interrogatories B.1-2, B.1-2.1, B.1-2.2, B.4-2, and B.4-3, LES does not have an adequate basis for its decommissioning cost estimates; thus, the amount of funds which LES plans to set aside under its decommissioning funding plan are inadequate to meet the regulations and protect public health and safety.

2) LES states that it "presently anticipates" that it will update its decommissioning cost estimates "approximately" every five years. EX.I-9. CANT believes that, given the prevailing uncertainties regarding waste disposal options, and the ever changing nature of the radioactive waste disposal business, this review should be committed to by LES, not merely speculated upon.

3) LES claims that its disposition of its DUF6 tails is a normal part of operation, and thus need not be provided for in a decommissioning funding plan. EX.I-4. CANT believes this is an erroneous characterization, as there is likely to be a substantial quantity of DUF6 at the LES site at the end of the plant's life, which has not been properly decommissioned. In fact, given the uncertainty that LES will be able to dispose of DUF6 tails during the operating life of the plant (see CANT's comments on the Draft EIS, at pp.9 and 28-31), it is likely that all or most of the tails will still be sitting on the CEC site when the plant stops operating. Accordingly, in order to provide reasonable assurance that the CEC will be decommissioned promptly and safely, the costs

of tails disposal should be guaranteed pursuant to one of the funding mechanisms described in 10 C.F.R. § 70.25(f).

4) LES states that it intends to follow the requirements of 10 C.F.R. § 70.25(f) (3) for the establishment of an external sinking fund, accompanied by a surety method. However, Appendix I provides insufficient detail to assure that the requirements of § 70.25(f) (3) are met. For instance, § 70.25(f) (3) provides that licensees must make periodic contributions to the trust fund that are sufficient "to pay decommissioning costs at the time termination of operation is expected." Exhibit I states that LES will make "periodic contributions" to the trust fund, but provides no information to indicate the amount of those contributions, or whether the amounts are calculated to assure that if LES stopped operations at any time during its operating life, there would be sufficient funds available to decommission the facility at that point.

5) Exhibit I does not state the amount of the surety bond, which should be the full amount of the decommissioning cost estimate.

#### Decommissioning Plan Contention I [sic]

##### Contention:

The license application for the CEC is incomplete in many major respects.

In its Memorandum and Order (Ruling on Contentions) of December 19, 1991, the NRC Atomic Safety and Licensing Board (Board) stated (pp. 31 - 32) that Contention I is lim'ed to the following eleven issues, the first seven of which relate to the ER, and the remaining four of which (8-11) relate to the SAR:

1. Environmental impacts of site preparation and construction;
2. Monitoring data to support source term determinations for gaseous effluent;
3. Evaluation of means of reducing liquid effluent concentrations;
4. Assessment of radiological impacts of plant operation;
5. Environmental effects of accidents;
6. Baseline data for pre-operational effluent and environmental monitoring program;
7. Program to maintain releases as low as reasonably achievable (ALARA);
8. Finalization of design features for earthquakes, tornadoes, and missiles;
9. Quality assurance program for Class I equipment;
10. Program for surveillance and maintenance of cylinders containing tails in interim storage; and
11. Management and control program.

Interrogatories and Requests:

INTERROGATORY NO. I.1 and I.1-a:

In light of the information in ER, sections 4.0 and 4.1, as amended by Applicant on March 31, 1992, which provide additional information on the environmental impacts of site preparation and construction: Are you willing to withdraw this aspect of contention I?

ANSWER TO INTERROGATORY NO. I.1 and I.1-a:

No.

INTERROGATORY NO. I.1-b:

If you are not willing to withdraw this aspect of Contention I, provide specific descriptions of the information, or types or [sic] information, related to the environmental impacts of site preparation and construction that you believe Applicant has omitted from the ER. Include reference to regulations, regulatory guidance

or other authorities requiring or recommending that this information be provided.

ANSWER TO INTERROGATORY NO. I.1-b:

See CANT's comments on the Draft EIS at pp. 8-24, and 32-36, attached hereto as exhibit "2" and incorporated herein by reference.

INTERROGATORY NO. I.11 and I.11-a:

In light of the July 31, 1992, changes to Chapter 11 of the SAR, which provide additional information on the management and control program: Are you willing to withdraw this aspect of Contention I?

ANSWER TO INTERROGATORY I.11 and I.11-a:

No.

INTERROGATORY NO. I.11-b:

If you are not willing to withdraw this aspect of Contention I, provide specific descriptions of the information, or types or [sic] information, related to the program for surveillance and maintenance of cylinders containing tails in interim storage that you believe Applicant has omitted from the proposed License Application. Include reference to regulations, regulatory guidance or other authorities requiring or recommending that this information be provided.

ANSWER TO INTERROGATORY I.11-b:

The July 31, 1992 changes to Chapter 11 of the SAR do not materially add to CANT's knowledge regarding any planned surveillance and maintenance of cylinders containing tails in interim storage at the proposed CEC facility.

Exterior corrosion of cylinders is a documented problem. In June of 1990, two cylinders at the Portsmouth facility were discovered to have holes in their walls. "Uranium Hexafluoride Handling," Oakridge National Laboratories, Second International Conference (Oct. 29-31, 1991) at page 9. The only way to prevent

all corrosion is to store cylinders indoors with additional monitoring equipment "which would escalate costs dramatically." Id. at 126.

Pursuant to 10 C.F.R. § 50.40(a) LES must "provide reasonable assurance that [it] will comply with the regulations in [Chapter I of Title 10]. . . and that the health and safety of the public will not be endangered." LES can only satisfy this requirement by implementing a monitoring and surveillance program for the tails cylinders which LES plans to store on site at the CEC facility.

#### Assessment of Costs Under NEPA, Contention J

##### Contention:

The Environmental Report does not adequately describe or weigh the environmental, social, and economic impacts and costs of operating the CEC. Moreover, the benefit-cost analysis fails to demonstrate that there is a need for the facility. See, e.g., Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), ALAB-422, 6 NRC 33, 90 (1977) (in a power production plant licensing case, "need for power" is "a shorthand expression for the 'benefit' side of the cost-benefit balance which NEPA mandates."). On the whole, the costs of the project far outweigh the benefits of the proposed action.

In its Memorandum and Order (Ruling on Contentions) of December 19, 1991, the NRC Atomic Safety and Licensing Board (Board) stated (pp. 33 - 39) that Contention J Bases 1, 2, 5, 7 and 8 are denied, and that Bases 3, 4, 6 and 9 are admitted. Accordingly, Applicant's interrogatories and requests related to Contention J focus upon each admitted Basis to the extent admitted by the Board.

##### Interrogatories and Requests:

###### Contention J, Basis 3

###### INTERROGATORY NO. J.3-1:

Does Basis 3 set forth any concerns that have not been voiced in Contention B, Bases 1, 4 and 5?

ANSWER TO INTERROGATORY NO. J.3-1:

Yes. Contention J concerns NEPA's required benefit-cost analysis which must be performed with respect to the CEC facility in general, and basis 3 of Contention J concerns that NEPA analysis as it pertains to decommissioning costs in particular. In contrast, bases 1, 4, and 5 of Contention B concern safety issues and NRC requirements as they pertain to decommissioning.

INTERROGATORY NO. J.3-2:

If the answer to interrogatory j.3-1 is Yes, provide specific descriptions of the information, or types or [sic] information, related to the estimated cost of decommissioning (in addition to the Decommissioning Funding Plan (Exhibit I to the License Application), submitted by Applicant on July 31, 1992, and the Urenco paper "Decommissioning and Decontamination of a USJVC Plant," dated April 27, 1989, (License Application, Revision 2, Exhibit I at 3)) that you believe Applicant has omitted from the decommissioning cost estimate. Include reference to regulations, regulatory guidance or other authorities requiring or recommending that this information be provided.

ANSWER TO INTERROGATORY NO. J.3-2:

See answers to interrogatories B.1-2, B.1-2.1, B.4-2. B.4-3, and B.4-4.

INTERROGATORY NO. J.3-3:

If the answer to Interrogatory J.3-1 is No, are you willing to merge basis J.3 with the admitted bases for Contention B and withdraw Basis J.3?

ANSWER TO INTERROGATORY NO. J.3-3:

No. See answer to interrogatory J.3-1.

INTERROGATORY NO. J.4-1:

In light of the information provided in ER, section 1.2, and Applicant's letter dated April 30, 1992, which provides additional information on the need for the facility, are you willing to withdraw Contention J, Basis 4?



ANSWER TO INTERROGATORY NO. J.4-1:

No.

INTERROGATORY NO. J.4-2 and J.4-a:

If you are not willing to withdraw Basis 4, answer the following questions. Provide specific descriptions of the information, or types or [sic] information, related to the need for the facility that you believe Applicant has omitted from the ER. Include reference to statutes, regulations, regulatory guidance or other authorities requiring or recommending that this information be provided.

ANSWER TO INTERROGATORY NO. J.4-2 and J.4-2-a:

The ER at section 1.2, LES's letter of April 30, 1992, and the Draft EIS provide no new information about the purported need for the LES facility. See CANT's comments on the Draft EIS at pp. 5 and 24-28. (Exhibit "2".)

Data demonstrating a need for the proposed CEC facility in the United States enriched uranium market (which CANT understands is the market to which LES is restricted) is required as part of the cost-benefit analysis under the applicable NEPA regulations.

The courts have found an additional requirement for a cost-benefit analysis in which the need for the proposed action, the satisfaction of which is the benefit side of the scale, is weighed against its environmental costs.

(Emphasis added.) United States Energy Research and Development Administration Project Management Corporation Tennessee Valley Authority, (Clinch River Breeder Reactor Plant), CLI-76-13, 4 N.R.C. 67, 76 (1976). See also, Calvert Cliffs' Coordinating Committee v. AEC, 449 F.2d 1109 (C.A.D.C. 1971). Specifically, in the licensing of a nuclear facility, the NRC has held that an applicant must demonstrate "a genuine need" for its facility and that this need determination is an "essential element" in approval

of a license. Niagara Mohawk Power Corporation (Nine Mile Point Nuclear Station, Unit 2), ALAB-264, 1 NRC 347, 352 (1975). See also, Public Service Company of New Hampshire, et al. (Seabrook Station, Units 1 and 2), ALAB-422, 6 NRC 33, 90 (1977); Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2) ALAB-422, 6 NRC 33, 90 (1977); United States Energy Research and Development Administration Project Management Corporation Tennessee Valley Authority (Clinch River Breeder Reactor Plant), CLI-76-13, 4 NRC 67, 77 (1976); Niagara Mohawk Power Corp. (Nine Mile Point, Unit 2), 1 NRC 347, 352 (1975); Duke Power Company (Catawba Nuclear Station Units 1 and 2), ALAB-355, 4 NRC 397, 405 (1976); and Vermont Yankee Nuclear Power Corporation (Vermont Yankee Nuclear Power Station), ALAB-179, RAI-74-2, 159, 175 (1974).

LES has not demonstrated a need for the proposed facility because, in fact, there is no need. According to the ER at Section 1.2, applicant projects a U.S. need of 10.27 SWU by the year 2010. This is based on a chart prepared by Energy Resources International, Inc. (1990). However, according to a 1993 Report by the U.S. Department of Energy ("DOE"),<sup>4</sup> U.S. uranium enrichment needs through the year 2010 range from 8.8 to 10.7 SWU/year<sup>5</sup>. These projections vary based on a "no new nuclear plant orders" scenario (8.8 SWU/year) to an "upper reference" scenario (which

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<sup>4</sup> "World Nuclear Capacity and Fuel Cycle Requirements 1993," DOE/EIA-0436(93), (November 1993). See also, "Annual Energy Outlook 1994," DOE/EIA-0383(94) (January 1994) which contains projections to the year 2010, similar to those in the 1993 DOE Report.

<sup>5</sup> All SWUs listed in millions.

CANT believes is unrealistic) of 10.7 SWU/year. The "no new orders" scenario must be considered as closer to reality, at least for the foreseeable future. But under either scenario, the United States Enrichment Corporation ("USEC") can meet this demand for enrichment services, since it is capable of producing 19.3 SWU annually. (1993 DOE Report at 33.)

Further, as indicated on page 12 of the 1993 DOE Report, U.S. importation of highly enriched uranium ("HEU") from Russia is likely to equal 500 metric tons of HEU, or about 70 million SWU of low-enriched uranium (nearly seven years worth of SWUs), given no other production whatsoever, for the entire U.S. need. The United States has identified importation of this HEU, and its subsequent downblending into LEU, as a matter of the utmost importance to national security. Thus, to the extent that applicant is able to compete with sales of this HEU downblended into LEU, applicant would interfere with national security policy.

In short, the USEC is perfectly capable of handling all uranium enrichment demand for the foreseeable future, and the USEC is uniquely capable of meeting national security needs by downblending and marketing HEU from Russia (and other Commonwealth of Independent States).

Therefore, applicant has not shown a need for this facility. Applicant has merely shown that there is an arena in which it desires to attempt to be competitive. However, the United States is not required to grant a permit or license to facilities which would compete with our national interests, or which would

unnecessarily pollute our air and water, simply because an entity wishes to do so. Rather, in the interests of pollution prevention (and, in this unique case, national security), the United States is perfectly justified in denying a permit to build and/or operate a facility which would create pollution while not meeting a demonstrated need for services or products, and which would (by any objective measure) compete with the national security goals of the United States.

Respectfully submitted,

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Telephone: (504) 522-1394

By: Nathalie M. Walker  
Nathalie M. Walker

February 11th, 1994.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

02-25110  
USNRC

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

'94 FEB 14 AM 11:39

In the Matter of )  
 )  
LOUISIANA ENERGY SERVICES, L.P. )  
 )  
(Claiborne Enrichment Center) )  
 )

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Docket No. 70-3070

OFFICE OF SECRETARY  
DOCKETING & SERVICE  
FRANCF

CERTIFICATE OF SERVICE

I hereby certify that copies of the "SUPPLEMENTAL ANSWERS TO APPLICANT'S INTERROGATORIES TO CITIZENS AGAINST NUCLEAR TRASH REGARDING CITIZENS AGAINST NUCLEAR TRASH'S CONTENTIONS B, I, and J" have been served on this 11th day of February, 1994, as follows:

Administrative Judge  
Morton B. Margulies, Chairman  
Atomic Safety and Licensing Board  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

By first class mail  
2 copies

Administrative Judge  
Richard F. Cole  
Atomic Safety and Licensing Board  
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Washington, D.C. 20555

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U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

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Secretary of the Commission  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555  
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Service Section

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Washington, D.C. 20555

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Respectfully submitted,

SIERRA CLUB LEGAL DEFENSE FUND, INC.  
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Telephone: (504) 522-1394

By: Nathalie M. Walker  
Nathalie M. Walker

Attorneys for intervenor,  
Citizens Against Nuclear Trash

February 11th, 1994.

## DEPARTMENT OF HEALTH SERVICES

714/744 P STREET  
P.O. BOX 942732  
SACRAMENTO, CA 94234-7320  
(916) 445-0498



July 16, 1990

TO: LICENSED POSSESSORS OF RADIOACTIVE MATERIALS,  
SOUTHWESTERN COMPACT

FROM: Environmental Management Branch  
714 P Street, Room 616  
Sacramento, CA 95814  
(916) 445-0498

SUBJECT: Mixed Low-Level Radioactive Waste Disposal

The California Department of Health Services is considering an option for mixed low-level radioactive waste disposal that may impact your operations. It appears that the cost of developing and operating a disposal facility will be extraordinarily high, and that the cost of disposal may be over \$10,000 per cubic foot. It has been suggested that, rather than requiring disposal capability to be provided, it may be more feasible to require that all mixed wastes be treated, placed into waste forms, or delisted so that they are no longer hazardous wastes and therefore can be disposed of as low-level waste at the Ward Valley facility.

The Department is soliciting your comments on the proposal, even though you may not produce mixed waste. Please let us know, by July 31, 1990 whether you know of any mixed waste which cannot be rendered non-hazardous, or foresee any other unsolvable problems.

Please address your views to:

Low-Level Radioactive Waste Program  
Environmental Management Branch  
Department of Health Services  
714 P Street, Room 616  
Sacramento, CA 95814

Feel free to call me at (916) 323-2019, if you have questions.

  
Don J. Winkler, Chief





Sunrise, Mt. McKinley

Ansel Adams

# SIERRA CLUB LEGAL DEFENSE FUND, INC.

*The Law Firm for the Environmental Movement*

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January 27, 1994 - CORRECTED COPY

Ref: 08-814

Mr. John W. N. Hickey, Chief, Enrichment Branch  
U.S. Nuclear Regulatory Commission  
Division of Fuel Cycle Safety and Safeguards  
Office of Nuclear Material Safety and Safeguards  
Mail Stop 4-E-4  
Washington, D.C. 20555

RE: Comments on NUREG-1484 (Draft Environmental Impact Statement for the proposed Claiborne Enrichment Center, Homer, Louisiana); Docket No. 70-3070-ML, ASLBP No. 91-641-02-ML, (Special Nuclear Materials License)

Dear Mr. Hickey:

The Sierra Club Legal Defense Fund, Inc. ("SCLDF"), on behalf of Citizens Against Nuclear Trash ("CANT") hereby submits the following comments on the Draft Environmental Impact Statement ("Draft EIS") for the construction and operation of the proposed Claiborne Enrichment Center ("CEC") outside of Homer, Louisiana (NUREG-1484).<sup>1</sup>

This Draft EIS was ostensibly prepared to assess the potential environmental impacts of the construction and operation of the proposed CEC facility. The Nuclear Regulatory Commission ("NRC") proposes to issue the applicant, Louisiana Energy Services, Ltd. ("LES"),

<sup>1</sup> These comments were prepared with assistance from Dr. Arjun Makhijani, President of the Institute for Energy and Environmental Research (technical and engineering issues); Helen M. Hunt (safeguards issues); Dr. Robert T. Bullard and Dr. Kristin Shrader-Frechette (sociological and economic issues); and Dr. Farhad Atash (land use issues).



a license to construct and operate the CEC based upon this Draft EIS.

However, under the law, a license cannot be issued based on this Draft EIS, which is so grossly deficient in its discussion of the potential impacts of the proposed facility that it entirely fails to adequately describe "the environmental effects of . . . the proposed action" as required by 40 C.F.R. § 1502.16(d).

For example, there is absolutely no discussion of any impacts of the proposed facility on the two African-American communities of Forest Grove and Center Springs -- the communities closest to the proposed site. In fact, neither of these historic communities appears on any of the numerous maps included in the Draft EIS, although more distant, predominantly White communities of similar size are noted (see, e.g., p. 3-2 where the communities of Marsalis, Aycock, Lillie, Antioch, and Leton are identified). A more blatant instance of environmental racism is difficult to imagine. And all this notwithstanding the fact that in a September 1993 report the Louisiana Advisory Committee to the U.S. Commission on Civil Rights found that many "black communities [in Louisiana] are disproportionately impacted" by environmental problems, and specifically warned that "[t]he U.S. Environmental Protection Agency should monitor the communities of . . . Forest Grove and Center Springs."<sup>2</sup>

Yet key agencies such as the Environmental Protection Agency in Washington were not even consulted during the drafting of the EIS -- nor were the Department of Energy, the Department of State, the Department of Defense, the CIA, the National Security Council, or the Department of Transportation, each of which has expertise on a wide variety of matters pertaining to impacts of the proposed CEC facility. The NRC's failure to consult these other agencies is all the more egregious in light of the fact that the licensing of the proposed CEC facility could have significant adverse impacts on major national policy goals and programs of these agencies, such as the Department of State's goal of reducing international weapons fuel stockpiles, the Department of Energy's efforts to control international leakage of safeguards information, and the EPA's program for promoting environmental equity in government decisionmaking.

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<sup>2</sup> "The Battle For Environmental Justice in Louisiana . . . . Government, Industry and the People", September 1993 at 63 (Finding 1) and 67 (Recommendation 8), attached hereto as exhibit "1".

And questions of paramount importance to neighbors of the proposed facility are not answered in the Draft EIS, such as exactly where (other than on site, next door to residents) LES intends to put the nearly 115,000 metric tons of hazardous radioactive waste that will be generated by the facility. What these neighbors know, but the Draft EIS tries to hide, is that there currently is no disposal site available for such waste.

As a consequence of these, and numerous other fundamental flaws in the Draft EIS set forth below, a revised draft EIS must be prepared for public comment pursuant to 40 C.F.R. § 1502.9(a) before any further action can be taken by the NRC on the LES license application.

1.) THE DRAFT EIS IS INADEQUATE BECAUSE THE NUCLEAR REGULATORY COMMISSION FAILED TO CONSULT WITH ALL APPROPRIATE FEDERAL AGENCIES REGARDING THE PROPOSED PROJECT, AS REQUIRED BY NEPA.

As a threshold matter, the Draft EIS is fatally flawed because it was prepared without consultation of major federal agencies that not only have expertise in the environmental issues raised by the proposed licensing of the CEC facility, but whose own policy goals and programs could be significantly and adversely affected if the CEC facility is built and operated. Accordingly, the Draft EIS should be withdrawn, submitted to all appropriate agencies for consultation, and resubmitted to the public for comment at the appropriate time.

Requirements of NEPA

NEPA, 42 U.S.C. §§ 4321 - 4370c, requires a systematic, interdisciplinary approach to assessing the environmental impacts of a proposed federal action, culminating in the preparation of a detailed environmental impact statement which is subject to public comment. See 42 U.S.C. § 4332(2)(A) & (C). An important part of NEPA's systematic and interdisciplinary approach is consultation by the agency proposing the action with other federal agencies.

Specifically, NEPA mandates that "[p]rior to making any detailed statement [of environmental impacts], the responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved." 42 U.S.C. § 4332(2)(C) (emphasis added). Reflecting this NEPA mandate, NRC regulations require that:

To the extent sufficient information is available, the draft environmental impact statement will include . . .

an analysis of significant problems and objections raised by other Federal, State, and local agencies . . . .

10 C.F.R. § 51.71(b); see also 40 C.F.R. § 1500.5(b) (Council of Environmental Quality NEPA regulations, which are binding on all agencies, require the NRC to "emphasiz[e] interagency cooperation before the environmental impact statement is prepared, rather than submission of adversary comments on a completed document").

Adopting a systematic and interdisciplinary approach early in the course of preparing a draft environmental impact statement is essential to serve NEPA's twin goals of informed agency decisionmaking and public participation. Early consultation allows the agency in charge of the project (the NRC) to "obtain all views from interested agencies and thereby ensure an intelligent assessment of the 'significance' of the project's environmental impact." Simmans v. Grant, 370 F.Supp. 5, 19 (S.D. Tex. 1974). Early consultation also affords the public a meaningful opportunity to review and comment on the collective assessment of the project by the government. This opportunity for public comment is critical because it facilitates "'widespread discussion and consideration of the environmental risks and remedies associated with the pending project," thereby augmenting an informed decisionmaking process." LaFlamme v. FERC, 852 F.2d 389, 398 (9th Cir. 1988), quoting Warm Springs Dam Task Force v. Gribble, 621 F.2d 1017, 1021 (9th Cir. 1980) (per curiam).

However, during the course of preparing the Draft EIS for the CEC, such consultation did not take place with all of the appropriate federal agencies. The Department of Energy, the Environmental Protection Agency headquarters in Washington, D.C., the Department of State, and the Department of Transportation -- agencies that have significant information and/or interests bearing on NEPA matters at issue in this licensing proceeding -- were not part of any consultation process in the drafting of the Draft EIS.<sup>3</sup>

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<sup>3</sup> The Draft EIS indicates that Science Applications International Corporation was the principal preparer of the Draft EIS and "relied heavily" on information submitted by the applicant, Louisiana Energy Services, with input from the NRC staff and the Louisiana Department of Environmental Quality. Draft EIS at xxviii. The only other reference to consultation with federal agencies lists the National Weather Service Station in Shreveport, Louisiana and the Region VI office of EPA, but there is no indication that the "consultation" with these latter two agencies was significant. Draft EIS at 7-1.

## Department of Energy

The Department of Energy ("DOE"), an agency that has directed operations at enrichment facilities for decades, obviously should have been consulted regarding the CEC enrichment facility proposed by LES. The DOE clearly has expertise regarding a wide range of issues pertaining to such facilities. For example, had DOE been consulted, it could have provided meaningful input on the need for the proposed facility. DOE's November 1993 edition of "World Nuclear Capacity and Fuel Cycle Requirements 1992" (DOE/EIA-0436(93) at p. 28) states unequivocally that "[t]he enrichment services market is highly competitive with capacity far in excess of annual requirements." Through various tables and projections, this document makes clear that through at least the year 2010, there is no need for additional uranium enrichment capacity anywhere in the world. The availability of enriched uranium in the U.S. will also be greatly increased by its proposed importation from Russia. See discussion of State Department, below.

Furthermore, if there is no need for the facility, then the "no action" alternative, which NEPA requires to be considered (40 C.F.R. § 1502.14 (d)), emerges as the best alternative. See also, Chelsea Neighbor Association v. United States Postal Service, 389 F.Supp. 1171, 1181 (SD NY 1975) (noting that a proper NEPA analysis requires consideration of all alternatives, including "total abandonment" of the project).

In addition, DOE is currently attempting to discern whether an "agreement for cooperation" between the United States and the foreign governments who are partners in the LES partnership is required under the Atomic Energy Act ("AEA"), 42 U.S.C. § 2153, prior to licensing the proposed facility. (Congressman John D. Dingell, Chairman of the House Subcommittee on Oversight and Investigations of the Committee on Energy and Commerce has also launched an investigation of this matter; see exhibit "2", which is a letter dated October 21, 1992 from Congressman Dingell to DOE.)

The AEA requires such an agreement where classified information relating to nuclear materials production will be shared with foreign governments, and the agreement must be approved by both the Congress and the President. The AEA also specifically states that all such agreements must provide for the protection of the "environment from radioactive, chemical or thermal contamination . . . ." 42 U.S.C. § 2153e.

DOE insight on this critical environmental and national security issue is clearly relevant to the Draft EIS. Should DOE determine that such an agreement is required (as CANT believes it

is), then it is premature to proceed with the preparation of an environmental impact statement before the terms of the agreement -- including provisions pertaining to environmental protection -- are even reached.

Finally, and as discussed more fully below, DOE is currently grappling with the immense problem of permanent disposal for all of the DUF6 generated by various operations of the United States government. Clearly, comments from DOE regarding a new source (the CEC) of even more DUF6 are germane to assessing the environmental impacts of the proposed CEC facility.

#### Department of State

The Department of State, one of the agencies entrusted with the national security of this country, should have been consulted regarding the CEC enrichment facility proposed by LES. The Department of State clearly has expertise regarding a wide range of national security issues which come into play at facilities (especially foreign-dominated facilities<sup>4</sup>) which enrich uranium. (For example, the "agreement for cooperation" issue discussed above.) These national security issues must be considered as part of the draft EIS process. NRC regulations require that all effects -- "environmental and other" -- of a proposed action be assessed. 10 C.F.R. § 51.71(d).

Furthermore, the Department of State has actual and/or potential access to documents relevant to the possibility that Urenco Ltd., (the foreign corporation that owns the LES partner that will have operating control of the proposed facility), may have been involved in the transfer of critical nuclear technology to Iraq. (The International Atomic Energy Agency is currently investigating this matter.) Accordingly, the Department of State may well be in a position to comment upon whether a licensee with such close ties to Urenco Ltd. is in fact qualified to operate a nuclear facility in the United States.

The Department of State is also involved in negotiating the purchase of highly enriched uranium from Russia, to be blended down into low enriched uranium, for use in U.S. nuclear reactors. This additional large supply of enriched uranium will be in direct competition with the proposed CEC.

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<sup>4</sup> According to attachment D of the "LES Project Financial Plan" at page 3, Urenco Investments, which will have majority operating control of the CEC, is a wholly owned subsidiary of Urenco Ltd. which in turn is owned in equal shares by the United Kingdom, the Netherlands, and West Germany.

#### Department of Defense, CIA, and National Security Council

The proposed licensing of the CEC also raises national security concerns, on which the U.S. defense agencies -- the Department of Defense, the CIA and National Security Council, should have been consulted, since the purpose of importing large quantities of enriched uranium is to reduce the quantity of weapons-grade uranium in Russia. The licensing of CEC, which would be a competitor for purchasers of enriched uranium, would have a direct impact on this national security objective. Thus, the Department of Defense should have been consulted before the Draft EIS was issued.

#### Environmental Protection Agency

The Environmental Protection Agency ("EPA") in Washington D.C., the chief agency entrusted with environmental matters in this country, should have been consulted regarding the CEC enrichment facility proposed by LES. The EPA clearly has expertise regarding a wide range of environmental issues which pertain to the proposed facility, beyond the rather straightforward issue of air and water permits (which Region VI of the EPA did handle). For example, EPA headquarters just recently concluded a major study, which involved extensive public participation, on uses and effects of Hydrogen Fluoride ("HF"), including uranium hexafluoride ("UF6").<sup>5</sup> Those responsible for conducting this study should have been consulted about the consequences of having yet another major producer (the proposed CEC facility) of UF6 and HF in this country.

In addition, the EPA has an Office of Environmental Equity that clearly should have been consulted regarding the proposed siting of the CEC facility in the midst of two African-American communities. As noted earlier, the Louisiana Advisory Committee to the U. S. Commission on Civil Rights has published a report on the struggle for environmental equity in Louisiana, specifically noting that EPA should monitor the communities of Forest Grove and Center Springs.

#### Department of Transportation

Operation of the CEC may involve the manufacture and transportation of large quantities of hydrofluoric acid as a result of LES' tails disposal plan. Yet, the Draft EIS provides no indication that the NRC Staff has consulted with the federal

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<sup>5</sup> U.S. Environmental Protection Agency, "Hydrogen Fluoride Study, Final Report, September 1993, EPA550-R-93-001," Report to Congress, Section 112NG Clean Air Act Amendments.

Department of Transportation ("DOT") regarding potential adverse environmental risks and impacts associated with HF transportation, and ways those impacts can be minimized or avoided. The NRC should be required to consult with the DOT regarding transportation hazards associated with HF and other chemicals to be transported to or from the CEC.

In short, the Draft EIS should be withdrawn, submitted to all appropriate agencies for consultation, and resubmitted to the public for comment at the appropriate time.

2.) THE DRAFT EIS IS INCONSISTENT WITH THE UNDERLYING PURPOSE OF NEPA BECAUSE IT ENTIRELY FAILS TO FULLY AND FAIRLY IDENTIFY, DISCUSS AND WEIGH THE ENVIRONMENTAL IMPACTS OF THE PROPOSED FACILITY

Substantively, the Draft EIS is fundamentally and fatally flawed because it is inconsistent with the underlying purpose of NEPA, which is to provide decisionmakers and the public with a full and fair discussion of all environmental consequences of a proposed action, and to fairly balance the costs and benefits of the proposed action.

[EIS's] shall provide full and fair discussion of significant environmental impacts and shall inform decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment.

40 C.F.R. § 1502.1. In describing the impacts of the proposed action, the environment to be affected must be defined and accurately described. 40 C.F.R. § 1502.15. Once the impacts and the environment to be affected by the proposed project are fully identified and discussed, an appropriate "weighing of the merits and drawbacks" -- the costs and benefits -- of the proposed action must be done. 40 C.F.R. § 1502.23. And the information provided in the course of preparing a draft EIS under these mandates must be of "high quality." 40 C.F.R. § 1500.1(b).

However, as set forth more fully below, the Draft EIS for the proposed CEC facility fails in each of these respects: numerous impacts of the proposed facility are entirely omitted from the Draft EIS, and other impacts are discussed inadequately; the environment to be affected by the proposed CEC facility is not accurately described; and many costs of the proposed project are either not considered at all or else are underestimated while purported benefits are overestimated. Given these fundamental shortcomings, "high quality" information regarding impacts of the proposed action clearly has not been provided, as required by NEPA.



In short, the information contained in the Draft EIS is so inadequate that it precludes meaningful analysis by the public. Accordingly, a revised draft EIS must be prepared for public comment pursuant to 40 C.F.R. § 1502.9(a).

The following are the most serious omissions or inadequacies in the Draft EIS discussion of environmental impacts:

A.) As discussed more fully below in section "3", one of the most serious inadequacies of the draft EIS is the failure to discuss the two communities potentially most affected by the proposed CEC, Forest Grove and Center Springs. These residential areas are next door to the site for the proposed facility -- all within a radius of two miles, and thus must be included in the description and analysis of "the affected environment."

B.) As discussed more fully below in section "4", the draft EIS does not adequately discuss the need for the proposed CEC facility.

C.) As discussed more fully below in section "5", the draft EIS does not discuss at all the nature and environmental impacts and costs of LES's proposal for ultimate disposition of the tons of depleted uranium ("DUF6") to be generated by the proposed CEC facility, i.e., the conversion of the DUF6 to triuranium oxide ("U308"). Nor does the Draft EIS indicate where LES plans to ship the U308, or what the environmental impacts and costs of disposing of it will be.

D.) The Draft EIS fails to provide any specific information regarding where LES will ship its other waste products.

The Draft EIS should identify the landfills to which its non-hazardous waste will go, and should confirm that these landfills have adequate capacity to handle the LES waste. Otherwise, waste could pile up on the LES site.

The Draft EIS should also identify where it intends to ship hazardous wastes, and should confirm that LES has contracts with hazardous waste disposal firms adequate to ensure full shipment of all hazardous wastes generated. Otherwise, hazardous wastes could pile up on site, posing unanalyzed threats to the environment, including public health and safety.

The effects of shipment of hazardous and non-hazardous wastes to offsite locations should be analyzed in the Draft EIS, including transportation and other possible releases to the environment (i.e. through incineration, leaching through landfills, etc.) This analysis should compare such possible releases with the no action

alternative. Although such possible releases may not directly affect the Claiborne Parish area, they clearly would affect the environment generally.

The Draft EIS should also identify where LES intends to ship its "low-level" radioactive waste. Currently, only one "low-level" radioactive waste dump exists which could take LES waste: the Barnwell facility in South Carolina. However, this facility is scheduled to close in Jun. 1994, and, at this writing, it does not appear that any other dump will be sited and completed to take its place in the near future. According to the current "compact" structure, LES waste would go to a disposal site in Nebraska. However, there has been little progress in siting, much less constructing, a radioactive waste dump there. In fact, the state of Nebraska and local governments have been actively throwing up road blocks to a possible dump in that state, and it is by no means certain that any radioactive waste dump will be built there. The NRC has advised its licensees to prepare for on-site storage of radioactive waste for the foreseeable future.<sup>6</sup> The Draft EIS should be rewritten to reflect this uncertainty, and to indicate LES' plans for radioactive waste storage on-site should there be no disposal capacity available.

LES projects the generation of about 450 kilograms of mixed waste (both radioactive and hazardous) annually. There currently is no disposal facility for mixed waste in the U.S. (other than for the incineration of various scintillation vials and other limited waste streams). Nor are any disposal sites currently contemplated, to the best of our knowledge. The Draft EIS should identify where it intends to ship mixed waste, if it intends to do so, and should provide contractual evidence that this waste will be accepted by a licensed facility. If LES is unable to do so, the Draft EIS should reflect how LES will store mixed waste on-site and should make clear that LES must receive all necessary mixed-waste storage permits.

E.) The Draft EIS fails to adequately discuss transportation of feed and product materials.

The Draft EIS acknowledges that approximately 2 truck loads of UF6 will travel on local roads daily and thus travel through local

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<sup>6</sup> Proposed Rule, 10 CFR Parts 30, 40, 50, 70, and 72; RIN 3150-AE22; "Procedures and Criteria for On-Site Storage of Low-Level Radioactive Waste, Federal Register, February 2, 1993, Vol. 58, No. 20; pp. 6730--6740. This proposed rule is currently pending before the NRC Commissioners for final action.

communities. However, the communities that the trucks will travel through are not identified, although they presumably include Center Springs, Forest Grove, Homer, Minden, and others. No indication is given as to whether the road network off the Interstate highway is adequate for these large trucks. No indication is given as to the total number of miles these trucks are expected to travel, nor of an accident rate per 1,000 miles -- which would give an indication of how many accidents these trucks might experience during the lifetime of this facility. The Draft EIS should discuss any impacts that would arise should expansion of roads in this community be necessary.

These truckloads will come from (or go to) locations at least 500 miles away, according to the Draft EIS. Truck travel at such a great distance creates a significant potential for accidents. Further, the Draft EIS does not analyze the potential effects of this additional truck traffic on pre-existing truck traffic in the local area, specifically with regard to trucks carrying highly flammable oil from a nearby refinery.

The LES site is at the outer reaches of LES' own stated goal of 600 miles from feed suppliers and fuel fabrication locations. The closest facility is 500 miles, the next closest is 580 miles, and the next closest 1,100 miles. Thus, another site closer to either a feed supplier or fuel fabrication facility might have been more appropriate. Yet this is not discussed as an environmental cost, nor was it factored into the choice of alternate sites. The Draft EIS should have considered both additional accident impacts and relative emissions of greenhouse gases for various proposed sites for the plant.

The Draft EIS does not indicate the frequency of transportation of hazardous materials other than UF6, other than to indicate that such transportation will exist. These transportation expectations should be made explicit as they may affect road use planning and environmental concerns.

The Draft EIS does not make reference to the fact that LES contemplates bringing in partially completed or fully constructed centrifuges from Europe by air. Indeed, the Draft EIS suggests that there will be little or no air traffic as a result of LES. The affect of these numerous air shipments should be analyzed.

F.) The Draft EIS fails to adequately discuss traffic and transportation impacts in general.

A review of the draft EIS at pages 2-10 and 2-11 indicates that during the five (5) year construction phase of the project, an increase of 502 to 703 daily trips to the site are projected.

During plant operations, the traffic will increase by an estimated 190 to 200 daily roundtrips. Draft EIS at 4-29. However, the draft EIS fails to identify the area to be affected by the increased traffic, or consider environmental consequences of the increased traffic, such as noise, impacts on air and water quality, safety considerations, and travel time delays.

Furthermore, the draft EIS states that the CEC will create only one additional injury per year and no fatalities as a consequence of the transportation of feed and product material. Draft EIS at 4-35. Once again, the draft EIS's data is inadequate. Feed and product material vehicles are a small fraction of the total additional traffic which will be traveling to and from the site. NRC's analysis must include data and analysis of all potential accidents involving all vehicles driven to and from the site. In addition to the feed and product vehicles, vehicles and trucks driven by construction workers, operation employees, vendors and suppliers must be included.

The Draft EIS also omits data concerning existing road conditions and existing traffic volume. It is impossible for either the NRC or the public to determine the type, condition, or capacity of the roads leading to and from the site from the data contained in the draft EIS. Therefore, neither the NRC nor the public can perform the necessary analysis to determine whether or not these roads are adequate for the projected traffic increase.

G.) The draft EIS omits information regarding and analysis of the CEC's socio-economic impact upon the region's municipal volunteer fire departments. The draft EIS states that fire protection analysis is unnecessary because LES will provide its own fire protection system. Draft EIS at 4-19. However, an on-site fire protection system does not erase other impacts that will be felt by the region's municipal volunteer fire departments. Additional fire and rescue personnel and equipment will be needed to contend with injuries which will result from the increased traffic transporting hazardous and radioactive materials to and from the site.

H.) As discussed more fully below in section "6", the draft EIS does not discuss at all the nature and environmental impacts of the actual coolant to be used at the proposed CEC facility.

I.) The Draft EIS states that the cleared site area, which includes the existing Parish Road #39 and right of way, will be under "controlled access" for isolation reasons. Draft EIS at 2-2. However, the Draft EIS omits any information concerning existing water, electric, gas, cable, and telephone lines located on existing Road #39 which will likely have to be relocated if access

to the road is to be controlled. And the Draft EIS does not address the environmental and socio-economic impacts of such a relocation upon Forest Grove and Center Springs.

J.) The draft EIS omits any information or analysis of impacts resulting from the construction of two 115 kilovolt overhead power lines, such as the condemnation of property. It also fails to provide adequate data and analysis concerning the environmental impacts of the construction, maintenance, and operation of these lines over twenty-nine (29) miles of Claiborne Parish. In fact, the Draft EIS data is so inadequate that it does not even indicate the location of these proposed power lines.

K.) As discussed more fully below in section "6", the Draft EIS erroneously states that Freon R-11 will be banned for use by the year 2000. However, Freon R-11 will be banned January 1, 1996, well before the CEC construction is completed.

L.) As discussed more fully below in section "7-C", the Draft EIS fails to address and analyze the potential conflicts between the proposed CEC facility and existing land use plans, acts, and policies.

M.) The Draft EIS completely omits discussion of the unacceptable safety risks posed by the design of the CEC, all as set out in CANT's Contentions L, M, N, and O which are attached hereto as exhibits 3, 4, 5, and 6, respectively, which are incorporated herein by reference.

N.) The data and analysis in the Draft EIS regarding flood risk is entirely inadequate. The Draft EIS (1) omits the location of the 100 year floodplain and any other floodplain; (2) omits the location of the anticipated flooding, (3) does not provide adequate data and analysis of the potential flood risk, and (4) is deceptive, contradictory, fragmented, and fails to collectively present the data and analysis needed to adequately assess the potential flood risk for the proposed facility.

The NRC did not include the location of the 100 year flood plain in its Draft EIS as it stated it would in its Summary Report on the environmental impact scoping process: "The EIS will address the CEC site environment and characteristics which will include the site relation to the floodplain." Summary Report at 12.

The Draft EIS admits that "Claiborne Lake is a man-made lake created for flood control by the damming of Bayou D'Arbonne in 1966" (Draft EIS at 3-23), thus suggesting that there have been flooding problems in this area in the past. The Draft EIS also states that "flooding can be expected near the site." (Draft EIS at

3-46) (emphasis added), but the NRC omits any definition of "near" and omits any identification of the location of the flooding it predicts will occur during hurricanes ("flooding can be expected near the site" during hurricanes). Draft EIS at 3-46. In addition, the site contains an area of wetlands which consist of soils "subject to frequent flooding." Draft EIS at 3-27. The Draft EIS also admits that flooding could occur "at the site [as] . . . a result of local intense precipitation" (Draft EIS at 4-27) (emphasis added). But because the Draft EIS is so vague on details, there is no way to tell if the flooding will occur in the area surrounding LES property; on LES property, or at the actual CEC site, and whether or not this predicted flooding is within or beyond the 100 year floodplain -- which is of significant concern since the CEC will not be flood-proofed. (Draft EIS at 2-29).

In addition to the above inadequacies, the NRC has provided inadequate flood risk related data in its Draft EIS. The NRC states that flooding from the maximum level of intense local precipitation will reach a mere 3.5 inches below the Class I structures facility yard. Draft EIS at 4-27. This maximum high is based upon historical data recorded for a mere twenty-nine (29) years, 1951-1980. Draft EIS at 3-47. The NRC's flood risk data must include the maximum high for all recorded history, including the last fourteen (14) years in order to adequately determine the true flood risk posed by precipitation.

In short, the NRC must provide the data concerning historical and existing flood risk and flood controls for the area and incorporate such into its flood risk analysis and include mitigation measures taken to prepare for the predicted flooding.

O.) The Draft EIS' discussion of potential accident scenarios at the proposed CEC is deficient because it does not evaluate all reasonably foreseeable UF6 accident scenarios.<sup>7</sup> Table 4.19 lists 25 "UF6 accident scenarios," as identified by the NRC in a 1984 study. Draft EIS at 4-56. The Draft EIS rules out four of these scenarios, on the ground that "[d]ue to differences in equipment and operations," they are "unlikely to occur at CEC." Id. It also claims that cylinder overheating is prevented by the design of the autoclaves, and limiting transporter fuel inventory to prevent overheating by fire immersion. Draft EIS at 4-65. This leaves 20 accident scenarios to be evaluated. But the Draft EIS does not evaluate these accidents. Instead, it evaluates a much smaller list of seven other accident scenarios, whose relationship to the accident scenarios listed in Table 4.19 is unclear. Thus, the

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<sup>7</sup> NEPA requires that the NRC must consider all reasonably foreseeable accidents, even low probability accidents.

Draft EIS' evaluation of accident risks is completely inadequate to inform the public as to the actual dangers posed by the proposed CEC.

P.) The Draft EIS does not address the issue of whether the CEC will be allowed to use recycled uranium as feedstock. If the license does not forbid the use of recycled uranium, the Draft EIS must evaluate the environmental impacts of processing this type of feedstock. In particular, the EIS must assess the environmental impacts of technetium-99 in airborne and waterborne emissions from the plant, and the consequent potential for environmental contamination. The Draft EIS must also consider the environmental consequences of the increased radioactivity of recycled uranium, as well as the environmental issues raised by contamination of recycled uranium with plutonium and fission products other than technetium-99. The effect of recycled uranium on decommissioning costs should also be evaluated.

All of these serious risks, which essentially pertain to the issue of nuclear proliferation, must be discussed in the Draft EIS. CANT's chief concerns stem from the fact that the advanced technical design of the enrichment cascades at the proposed CEC would render the facility particularly vulnerable to unauthorized production of highly enriched uranium, from which nuclear bombs could be fabricated. The advanced Urenco-design cascades are non-transparent and include complicated piping arrays and modern efficiency features that permit functional cascade rearrangement by simple manipulation of valve controls, as well as rapid evacuation of centrifuge equipment. A major concern is that several inside personnel could collude to illegally produce highly enriched uranium by means of a credible scenario which would leave insufficient clues for reliable detection.

Highly enriched uranium illegally produced at the Claiborne Enrichment Center could be sold on the black market or directly to terrorist groups or foreign countries, for manufacture of nuclear weapons. Such an event would be a major cost to society. The Draft EIS should be revised to discuss those risks and reliable means by which risk of significant illegal production of highly enriched uranium at the Claiborne Enrichment Center could be reduced to a low level.

Q.) And finally, the Draft EIS underestimates and ignores several costs of the proposed enrichment facility, whereas it overestimates and biases given benefits. This overestimation and underestimation appears to be systematic in such a way as to bias readers in favor of the proposed enrichment plant.

For example, in the Draft EIS's cost-benefit analysis, numerous consequences were neither quantified and costed nor added to the cost-benefit -- such as the facility's health effects,<sup>8</sup> safety hazards, associated increases in nearby drug trafficking, and the worsening of the economic burdens on the lowest economic groups of persons living near the facility. Rather, such effects were discussed briefly and qualitatively and then excluded from the cost-benefit analysis.<sup>9</sup>

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<sup>8</sup> The Draft EIS underestimates health and safety costs and risks in numerous areas. The Draft EIS ignores the cumulative effect of radiological releases by virtue of its failure to calculate actual probabilistic estimates for this risk and instead dismissing it. (Draft EIS at 4-66). Similarly, the Draft EIS admits repeatedly that the facility may not be economical (Draft EIS at 4-75, 4-80, 4-81), yet never provides any analysis of the way that uneconomical operations typically drive plant operators to take short cuts with respect to safety. Indeed, the admissions that the plant may be uneconomical should serve as a "red flag" to anyone who believes that health and safety regulations are likely to be followed, particularly in a situation where there are no profits to fund health and safety expenditures at the facility. The admission that the plant "will continue to operate under almost any scenario" (Draft EIS at 4-82) suggests that past experience with safety violations at other U. S. nuclear facilities will be repeated at the Homer plant, and that even environmental regulations or uneconomical operations will be ignored by CEC operators. Moreover, given that the NRC will review the facility monitoring program only once each year, there is reason to believe that the Draft EIS has underestimated the actual health and safety risks likely to occur if the plant is built.

<sup>9</sup> The Draft EIS is replete with instances where a careful reading of the provided data suggests significant environmental costs, but the drafters of the EIS fail to properly analyze the data and recognize such costs. For example, the DEIS acknowledges that there will be large hazardous materials releases to nearby Bluegill Pond, which admittedly (Draft EIS at 3-23) flows into Cypress Creek, which flows into Beaver Creek, which flows into Lake Claiborne. There is thus a direct pathway for liquid hazardous materials to end up in Lake Claiborne, a man-made lake created for recreational, and, eventually, drinking water purposes. It is essential that this lake remain as free as possible of chemical and radioactive contaminants. Operation of the CEC, however, would entail release of a variety of contaminants. For example, operation would result in the release of approximately 3030 grams (nearly seven pounds) of hydrofluoric acid per year into Bluegill



For example, cumulative costs associated with radiological pollution, including health and safety-related effects on the workers at the facility, are not included in the cost-benefit analysis, just as various classes of catastrophic accidents are ignored both in the safety assessment and in the cost-benefit analysis. Such omissions clearly indicate that the Draft EIS is far below the standards of probabilistic risk assessment (PRA) typically employed to assess proposed facilities, and totally undercut the reliability of the Draft EIS.

Another instance of underestimation pertains to groundwater contamination. The Draft EIS notes, for example, that groundwater contamination is a possibility from the proposed plant (Draft EIS at 4-69), yet the Draft EIS provides no quantitative determination either of the groundwater risk or its associated probabilities and consequences. Nevertheless, the risk is likely to be substantial. Ninety percent of the 127 Department of Energy nuclear-related facilities have contaminated groundwater that exceeds regulatory standards by a factor of up to 1,000, and virtually every state in which a nuclear-related facility exists has criticized the federal government for not stopping health and safety deficiencies resulting from failure to obtain independent site monitoring. (Kristin Shrader-Frechette, Burying Uncertainty (University of California Press: Berkeley, 1993.) Hence current U. S. experience with nuclear facilities suggests both that the groundwater risk at the proposed CEC facility could be quite high, and consequently that the qualitative Draft EIS judgments underestimate it. Because no PRA was done, and the drafters of the EIS ignore the probabilistic groundwater risk, they draw vague, qualitative conclusions about its low magnitude and therefore appear to underestimate another real risk of the facility.

The drafters of the EIS likewise claim that "minimal" releases of radioactive waste are expected during decontamination of the facility (Draft EIS at 4-71), yet the Draft EIS provides no PRA and no quantitative determination either of this risk or its associated probabilities and consequences. Indeed, full decontamination of a facility like the CEC has never been accomplished, so positing low risks from such an action are largely hypothetical. One important indicator that the postulated decontamination risks are greater than those postulated in the Draft EIS is the fact that the Draft EIS estimates the cost of decontamination to be approximately \$518

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Pond. Other releases include about 178 pounds of hydrochloric acid/year; more than 26 pounds of ammonium Hydroxide/year; and a wide variety of other contaminants including uranium and lead. The negative economic impacts of such discharges on a recreational community should be examined.

million, even though other independent experts, estimating the cost of decontamination for other existing U. S. enrichment facilities, have said that the cost is either unknown or may be as high as \$8 billion for one plant. (United States Congress, National Energy Strategy (Part 2), Hearings Before the Subcommittee on Energy and Commerce, House of Representatives, 102nd Congress, first session, U.S. Government Printing Office: Washington, D.C. (1991) at 194). Also, because no enrichment facility has been completely decontaminated, there are certain to be hidden, unexpected costs. These unexpected costs are likely to encourage greater risks (caused by efforts at cost control), causing decontamination costs and risks to accelerate further.

In short, given the fact that the proposed enrichment plant is likely not to be profitable, exclusion of broad classes of costs suggests that the facility may be massively uneconomical, once one calculates the social costs of inequities and environmental burdens such as those just listed.

Not only does the Draft EIS appear to underestimate the facility costs because it excludes many factors, but its cost-benefit analysis attributes benefits to the project in the face of overwhelming evidence that the proposed CEC facility cannot succeed economically, and is likely to be bankrupt before the end of its license term. As discussed more fully in the "Need" section below (Section "4"), given the lack of any growth in the commercial nuclear power industry, and the current glut of enriched uranium which will only increase with the coming importation of uranium from Russia, the CEC's economic prospects are uncertain at best. Indeed, the Draft EIS acknowledges that the plant "may not prove to be economical." (Draft EIS at 4-75.) The Draft EIS asserts that even if the plant does not prove to be economically viable, it will "likely be operated for its lifetime" because operating costs are low compared to fixed costs. The prospect that the proposed CEC facility may be hanging on by a thread, without profits to adequately fund essential safety or environmental protection measures, can hardly be considered a "benefit."

For instance, once the CEC begins to operate, the entire plant will be contaminated, and thus a huge liability for ultimate cleanup will be incurred. If LES is in marginal financial condition, who will pay for this cleanup? This question will arise whether the CEC closes early or survives the entire 30-year license terms without amassing sufficient revenues to fund cleanup. A lesson should be taken from the Portsmouth gas diffusion plant, which closed shortly after it began operating, and must now be cleaned up, without the prospect of sufficient funding from the licensee. The purpose of the Draft EIS should be to anticipate such an easily foreseeable occurrence and discuss the potential

consequences before they happen. Yet, the Draft EIS says nothing about the potential economic costs of cleanup if the CEC does not prove to be a viable enterprise. Nor does it discuss mitigative measures for avoiding this situation, such as requiring LES to set aside adequate funds for decommissioning the entire plant in advance of licensing. (See Limerick Ecology Action v. NRC, 869 F. 2d 719 (3rd Cir. 1989) (requiring consideration of mitigative measures in NRC environmental impact statements.))

Thus, not only does the Draft EIS ascribe highly questionable economic benefits to the CEC, but it fails to analyze how CEC's doubtful financial viability could turn the plant into an enormous environmental and financial liability. This failing, which by itself violates NEPA's requirement for full disclosure, is all the more egregious because, given the otherwise adverse impacts of the project on the surrounding community, a full and fair appraisal of both the lack of need for this facility and the economic risks associated with its operation would have tipped the cost-benefit analysis away from licensing of the CEC.

The Draft EIS also claims that many secondary economic effects will arise from the wages and construction associated with the facility, as a result of more money being pumped into the nearby Louisiana region (Draft EIS at 4-76 through 4-79). These secondary economic benefits are limited, however, and may even be outweighed by associated negative impacts. For instance, most of the facility-related benefits will go to the middle and not lower economic classes (Draft EIS at 4-79), crime will increase as a result of the facility (Draft EIS at 4-75), drug trafficking will increase (Draft EIS at 4-80), and property values will increase, but not in areas affected by drugs and crime (Draft EIS at 4-80). If the economic benefits of the facility cause greater social inequities, more drug trafficking, and more crime, the "hidden economy" of the underworld may divert potential secondary benefits of the facility into crime-related activities rather than into strengthening the economy. In other words, if the regional economic infrastructure cannot utilize the secondary economic benefits associated with new construction and higher employment from the CEC, then these monies could be diverted by criminal networks to create secondary economic burdens. Meanwhile, explicit and increased government expenditures will be required to deal with problems exacerbated by the CEC.

Because the additional and serious costs of drug trafficking, increased crime, exacerbated inequities, and so on, were never quantified and costed, it is clear that the Draft EIS has underestimated the social costs associated with the facility and overestimated alleged secondary economic benefits. Indeed, there may be an excess of secondary economic burdens. The presumed

positive cost-benefit ratio in the Draft EIS is the product of numerous qualitative, vague, and subjective judgments, rather than the result of a comprehensive quantitative analysis. The presence of such extreme social costs as a result of the proposed plant suggests that standard multipliers for secondary economic benefits ought not be used, as they have been in the Draft EIS, and indeed that such standards for economic consequences, in the CEC case, may actually function as divisors for secondary economic benefits.

Apart from alleged secondary consequences, many of the claimed primary economic benefits allegedly deriving from the proposed facility are highly questionable. For example, the Draft EIS asserts (without evidence and without any quantification) that "for CEC most goods and services (excluding the centrifuges and related extremely specialized equipment) can probably be procured within the state" (Draft EIS at 4-75). If builders of the facility would guarantee that particular amounts of specific kinds of goods and services will be obtained within the state, then it would be reasonable to claim these goods and services as part of the benefits of the facility. Otherwise, such benefits are purely hypothetical, particularly in the light of the educational, social, financial, and industrial problems of the region and the state, problems that could undercut their provision of goods and services.

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In summary, the NRC has failed to provide the public with "high quality" information regarding the proposed project as required by 40 C.F.R. § 1500.1(b), has failed to adequately describe the affected environment as required by 40 C.F.R. § 1502.15, has provided incomplete and erroneous information regarding the affected environment, has failed to appropriately balance the costs and benefits of the proposed project, and thus has entirely failed to adequately describe the environmental effects of the proposed project as required by 40 C.F.R. § 1502.16(d). Accordingly, a revised Draft EIS must be prepared and made available for public comment pursuant to 40 C.F.R. 1502.9(a).

3.) THE DRAFT EIS IS INADEQUATE BECAUSE IT FAILS TO DISCUSS ANY IMPACTS OF THE PROPOSED FACILITY ON THE ADJACENT COMMUNITIES OF FOREST GROVE AND CENTER SPRINGS.

CANT specifically pointed out in its Contention J (attached hereto as exhibit "7", and incorporated herein by reference) that the proposed CEC facility would have negative economic and sociological impacts on the African-American communities of Forest Grove and Center Springs. CANT members in attendance at the EIS scoping meeting held in 1991 reiterated such concerns. See "Environmental Impact Statement Scoping Process Summary Report"

("Summary Report") at 16-18. In a September 1993 report, the Louisiana Advisory Committee to the U.S. Commission on Civil Rights found that many "black communities [in Louisiana] are disproportionately impacted" by environmental problems, and specifically warned that "[t]he U.S. Environmental Protection Agency should monitor the communities of . . . Forest Grove and Center Springs."<sup>10</sup> Yet nowhere does the Draft EIS discuss any impacts of the proposed CEC facility on these two communities, much less the disparate impacts of locating the facility in these minority communities.

Forest Grove, founded in 1866, is just 1.25 miles from the proposed site, and Center Springs, founded in 1910, is just one quarter mile from the proposed facility. To exclude these historic communities from the Draft EIS is, in and of itself, a fatal omission that renders the Draft EIS entirely useless. No meaningful analysis of the impacts of a proposed action can possibly be done if the most directly affected communities are not considered in the discussion of such impacts.

NEPA's mandate with respect to a full and fair consideration of all effects and impacts of a proposed action is broad. All direct and indirect "aesthetic, historic, cultural, economic, social [and] health" impacts must be analyzed. 40 C.F.R. § 1508.8 The "human environment" that must be considered in a NEPA review is defined "comprehensively." 40 C.F.R. § 1508.14. Accordingly, all of the direct and indirect effects of the proposed CEC facility on the communities of Forest Grove and Center Springs must be thoroughly assessed in a revised Draft EIS, including the disparate impacts of siting the proposed facility in these minority communities.

As CANT pointed out in Contention J, the siting of the proposed facility follows a national pattern of locating facilities that generate hazardous waste in communities of color -- a pattern that falls under the rubric of what has come to be described as environmental racism. The CEC facility is proposed for a state where the percentage of African-Americans is two and a half times greater than the percentage of African-Americans in the nation. The percentage of African-Americans in Claiborne Parish is four times greater than the percentage of African-Americans in the country. And the percentage of African-Americans in Forest Grove and Center Springs is 100% and 98%, respectively. See attached

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<sup>10</sup> "The Battle For Environmental Justice in Louisiana . . . . Government, Industry and the People", September 1993 at 63 (Finding 1) and 67 (Recommendation 8), attached hereto as exhibit "1".

comments to this Draft EIS prepared by Dr. Robert D. Bullard at p. 6 ("Bullard comments") (exhibit "8") which CANT incorporates herein by reference.

As noted in the Bullard comments, many facility siting decisions like the CEC siting decision distribute the costs of the proposed facility in a regressive pattern, providing disproportionate benefits for individuals who fall at the upper end of the socioeconomic spectrum, while ignoring disproportionate costs on individuals who fall at the lower end of the spectrum.

In addition, the Draft EIS also fails to address many other impacts and concerns of the residents of Forest Grove and Center Springs.

A.) For instance, there is no discussion of the impacts that the proposed project will have on the property values of those who live closest to the proposed facility -- or on the habitability of such property in the event that the radioactive waste from the facility remains on site, as is the case with numerous enrichment facilities all across the United States.

B.) The NRC excluded consideration of a majority of the local communities' wells in its definition of the affected environment and in its analysis of the environmental consequences of the construction and operation of the CEC. First, the LES did not provide a more detailed survey on water usage as the NRC ordered in its Summary Report on the EIS scoping process. "The NRC will require a more detailed survey from LES on the water usage in the vicinity of the site." Summary Report at 14. A more detailed survey was required because LES indicated prior to issuance of the Summary Report that there were only 11 shallow wells in the vicinity of the proposed facility being used for household purposes, in contrast to a local resident who indicated that there were at least 40 such wells. But the Draft EIS lets LES entirely off the hook, dismissing this important matter simply by stating that "LES was not able to confirm this figure." Draft EIS at 3-33. The number of such wells is an objective fact that can and must be determined, and then analyzed in the context of the proposed project.

Secondly, the Draft EIS makes it abundantly clear that the NRC has not performed any analysis concerning the CEC's impact upon the surrounding private wells -- whatever the number of such wells may be. "LES estimates that the lowering of the shallow aquifer will not likely extend beyond CEC property boundaries and will not affect offsite wells to any significant degree (LES, 1993b and 1992h)." (Emphasis added.) Draft EIS at 4-5. It is the NRC's responsibility to make this determination; the NRC cannot merely

rely upon the unsupported conclusions made by the applicant -- much less an applicant that does not even know the number of residential wells in the first place.

C.) The draft EIS is woefully inadequate with respect to its discussion of the relocation of Parish Road #39 by the Claiborne Parish Police Jury. The draft EIS states that Parish Road #39 will be relocated from its present location to west of the proposed JEC site by the Claiborne Parish Policy Jury. Draft EIS at 2-2. However, the NRC has excluded the location of the relocated road from its description of the affected environment and omitted data and analysis concerning the environmental consequences of this relocation upon the Forest Grove and Center Springs communities. First, the NRC omits any data regarding the socio-economic impacts of this road relocation upon the Forest Grove and Center Springs communities such as the cost of construction and maintenance of the road. In fact, the NRC omits the construction costs of relocating Parish Road #39 in its cost-benefit analysis. Draft EIS at 4-81. Moreover, the draft EIS fails to identify this affected environment or provide data and analysis concerning the impacts to the environment of the clearing of timberland, grading, construction, operation, traffic, and maintenance of the relocated road, even though the NRC previously indicated that the draft EIS would address the environmental impacts of rerouting Parish Road #39. See Summary Report at 20.

Furthermore, there are two streams which cross the proposed right of way of the relocated road. The draft EIS does not include data and analysis concerning the effects of the relocation of the road upon these surface waters and any impact of the relocated road upon Bluegill Pond and its use as the site for the plant's liquid waste stream. The draft EIS so ignores the impacts of the facility upon these communities that it omits any data and analysis pertaining to a scenario under which Parish Road #39 is not relocated, i.e., whether the existing road is adequate for use by heavy trucks carrying radioactive and hazardous waste.

D.) The draft EIS erroneously depicts Claiborne Parish property (Parish Road #39) in the Forest Grove and Center Springs communities as owned by LES in Figures 2.1, 3.2, 3.13, 3.14, 3.15, 4.1, 4.2, 4.3, 4.4, 5.1, 5.2, and 5.3. The applicant cannot own this Parish road connecting the Forest Grove and Center Springs communities unless it has been abandoned, which it has not. The new ("relocated") Parish Road #39 planned to accommodate LES would not be completely located on LES property. Therefore, the parish government must acquire this land through eminent domain. The draft EIS fails to identify or analyze the socio-economic impacts associated with the abandonment of the existing Parish Road #39 and

the acquiring of a portion of the relocated road through eminent domain.

If Claiborne Parish attempts to take land by eminent domain, additional socio-economic impacts will be suffered by the citizens of Center Springs and Forest Grove as well as all Parish taxpayers. The draft EIS fails to analyze -- or even mention -- these impacts, such as displacement, loss of property, and cost of eminent domain proceedings.

E.) The draft EIS fails to adequately discuss traffic and transportation impacts of the proposed facility on Forest Grove and Center Springs. A review of the draft EIS at pages 2-10 and 2-11 indicates that during the five (5) year construction phase of the project, an increase of 502 to 703 daily round trips to the site are projected. During plant operations, the traffic will increase by an estimated 190 to 200 daily round trips. Draft EIS at 4-29. However, the draft EIS fails to identify the area to be affected by the increased traffic, or adequately consider the environmental consequences of the increased traffic, such as increased noise, air and water quality impacts, safety considerations, and travel time delays. The NRC does not even include Parish Road #39 as part of the affected environment in its traffic analysis. Draft EIS at 3-120.

In short, the exclusion of these two communities in the Draft EIS's description of the affected environment, and omission of any analysis of impacts on the communities of Forest Grove and Center Springs makes it impossible for the public to meaningfully comment on the Draft EIS. Accordingly, a revised Draft EIS must be prepared for public comment pursuant to 40 C.F.R. § 1502.9.

4.) THE DRAFT EIS PROVIDES INADEQUATE INFORMATION AND ANALYSIS REGARDING THE NEED FOR THE PROPOSED FACILITY. AS A RESULT, ITS EVALUATION OF THE "NO ACTION" ALTERNATIVE IS FATALY INFIRM.

One of the key considerations in an environmental impact statement on the licensing of a nuclear facility is whether it is needed. As the Appeal Board has held with respect to the need for commercial power reactors, absent a demonstrable "need" for the material to be produced, "justification for building a facility is problematical." Duke Power Co. (Catawba Nuclear Station, Units 1 and 2), ALAB-355, 4 NRC 397, 405 (1976). See also Public Service Company of New Hampshire (Seabrook Station, Units 1 and 2), ALAB-471, 7 NRC 47, 509 n. 58 (1978), Energy Research and Development Administration, CLI-76-13, 4 NRC 67, 76-77 (1976). In this case, where the NRC admits that the economic viability of the CEC is questionable, the Draft EIS's discussion of the need for the facility -- i.e., the "no action" alternative -- is all the more



important. However, the Draft EIS' discussion of this pivotal issue is grossly deficient, uninformed and inaccurate.

The Draft EIS relies on LES-submitted materials from the pro-nuclear Energy Resources International to support its belief that there will be increased need for enrichment services. However, independent observers do not agree with this assumption, and it is contradicted by significant developments which are ignored by the Draft EIS.

According to the U.S. Department of Energy, to whom the Draft EIS was not submitted for review, there is more than enough uranium enrichment capacity presently existing to service the world's needs through at least 2010. "World Nuclear Capacity and Fuel Cycle Requirements 1993; DOE/EIA-0436(093), November 1993. Further, even this report is highly and unrealistically optimistic about the prospects of a nuclear power resurgence in the U.S. The likelihood that there will ever be another nuclear plant built is slim; the likelihood that so many will be built that they will need new enrichment services is even slimmer. Even if there is to be a large second nuclear generation, it would make sense to build ancillary facilities, such as the LES plant, after that generation is committed to. There is no sense in permitting the creation of new pollution in the United States, especially when, according to LES, they can build their enrichment facility, if one should ever be needed, much more quickly than a reactor can be built.

More reasonable projections, which are supported by numerous Wall Street analysts (Prudential, Moody's, etc., in various copyrighted documents -- for example "Nuclear Power--A Current Risk Assessment," Moody's Special Comment, April 1993), are that there will be fewer than 90 U.S. nuclear plants by the year 2000, and the pace of decommissioning will accelerate at that time. Thus, instead of a growing market (and it is our understanding that LES will be limited by its license to the U.S. domestic market), the far greater likelihood is that there will be a quickly declining market.

There is also no need to construct a new uranium enrichment facility in the United States in light of the very large quantities of low enriched uranium that will soon appear on the U.S. market as a consequence of the large-scale dismantlement of nuclear warheads from the arsenals of the United States and the former Soviet Union.

The Draft EIS contains no mention of the vitally significant fact that the United States and Russia have recently concluded a legal agreement, known as the United States-Russian HEU Agreement, whereby Russia will sell to the United States low enriched uranium which is derived from approximately 500 tons of Soviet weapons-

grade highly enriched uranium; the low enriched uranium will be suitable for use in nuclear reactor fuel. According to the agreement, the shipments of low enriched uranium from Russia to the U.S. will begin in 1994 and will be completed in about 20 years.

The quantity of low enriched uranium to be purchased by the United States from Russia (in accordance with the HEU Agreement) is equivalent to approximately two times the total quantity of enriched product that would be produced at the proposed CEC facility over its entire 30-year lifetime, were it to operate. Furthermore, U.S. stockpiles of weapons-grade highly enriched uranium are estimated at between 500 to 600 tons,<sup>11</sup> which would be sufficient to satisfy possible residual market need during the next two decades.

Moreover, Russia has disclosed that, contrary to prior non-Soviet estimates, the amount of weapons-grade highly enriched uranium from former Soviet Union stockpiles is about 1250 tons, two and one-half times as much as the 500-ton quantity pertinent to the U.S.-Russian HEU Agreement.<sup>12</sup> Purchase by the U.S. of even more enriched uranium from former Soviet weapons stockpiles than the HEU Agreement calls for is not only possible, but likely, as this would further post-Cold War efforts by the United States to stimulate extensive near-term dismantlement of the nuclear weapons arsenals of the former Soviet Union. Such additional purchases (beyond those called for in the HEU Agreement) would release even more enriched uranium into the U.S. market. Thus, quantities of enriched uranium released from dismantled U.S. and former Soviet Union nuclear weapons into the U.S. market would be sufficient to displace any previously anticipated need for operation of the CEC before the year 2015.

Thus, the costs to society of approving the proposed action would be enormous, not only because there is no need for the facility, but because operation of a new uranium enrichment facility in the United States during the coming two decades would directly compete with incentives for near-term deep reductions in U.S. and Russian nuclear weapons arsenals. With the end of the Cold War, there is worldwide anticipation that nuclear warheads can soon be dismantled on a large scale. But obstacles to marketing enriched uranium that is derived from nuclear weapons could promote

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<sup>11</sup> David Albright, Frans Berkhout, and William Walker, "World Inventory of Plutonium and Highly Enriched Uranium, 1992," Oxford University Press (1993) at pp. 47-53.

<sup>12</sup> Statement by Minister Viktor N. Mikhailov of Minatom in the October 1993 NUKEM Market Report at p. 28.

continued stockpiling of nuclear warheads that would otherwise be dismantled. Thus, marketability of weapons-derived enriched uranium must take priority over construction of a new uranium enrichment facility in the United States. In short, operation of the CEC in the near future could kill market-based incentive that is essential for near-term large-scale dismantlement of nuclear weapons arsenals.

The Draft EIS also mischaracterizes the potential affect of the proposed CEC facility on the U. S. Nuclear enrichment market, and does not characterize the no-action alternative correctly. Indeed, the statement that "The rejection of the proposed action would prevent the introduction of well proven and energy efficient technology into the USA market" (Draft EIS at 2-37), is not true. Such technology could be introduced at an appropriate time in the future.

It is also disingenuous for the Draft EIS to state that "worldwide enrichment services are expected to increase by approximately 37%" by the year 2000. None of this projected increase, as previously discussed, is very likely to take place in the United States -- the only country in which LES can sell its services, according to our understanding of the terms of its proposed license. Every projection is that a decrease in need for enrichment services will be evident by 2000. Some more optimistic scenarios may project an increase after that date, presuming new nuclear plants are built in the United States, but there is no solid evidence that any new nuclear reactors will be built; given current knowledge, the Draft EIS must reflect that reality and assume a declining, rather than expanding market.

The Draft EIS also identifies LES' current competitors as Urenco and Eurodif. This makes no sense, since Urenco is, in fact, the major stockholder in LES and likely would be the majority holder if the plant ever were built. Urenco cannot compete with itself. Eurodif, which barely sells in the U.S. market, could perhaps be a competitor. Urenco cannot.

The Draft EIS also fails to identify LES' actual major competitor -- the wholly domestic, unionized, taxpayer-created U.S. Enrichment Corporation ("USEC").

The Draft EIS also fails to acknowledge that the proposed CEC facility will compete with enrichment plants having unionized workforces (i.e., Paducah, Kentucky and Portsmouth, Ohio), in all likelihood causing job displacement and unemployment in those communities. The Draft EIS should have evaluated the socioeconomic impacts on existing enrichment plant workers, of licensing a privately, nonunionized competitor during a uranium glut.

Finally, LES would not, as the Draft EIS states, either reduce dependence on foreign enrichment services (it would increase dependence since LES is foreign dominated), help to improve the net foreign trade balance (it would hurt the balance -- since any profits ultimately would accrue to the foreign corporation Urenco), and it would retain lower-paid, less secure non-union jobs, as opposed to union jobs at USEC.

Accordingly, the Draft EIS must be withdrawn and rewritten to reflect LES' foreign domination and competition with the domestic USEC.

5.) THE DRAFT EIS IS INADEQUATE BECAUSE IT FAILS TO ADDRESS THE IMPACTS, COSTS, AND BENEFITS OF ULTIMATE DISPOSAL OF DUF6 TAILS, OR THE CUMULATIVE AND GENERIC IMPACTS OF DUF6 TAILS DISPOSAL.

The proposed CEC facility would generate 3,830 metric tons of radioactive waste (depleted uranium hexafluoride -- "DUF6") each year, which LES claims would be stored on site for 15 years. However, the Draft EIS nowhere discusses how, exactly, this dangerous waste would be stored, other than to note that it would be in cylinders. This paucity of information about the environmental impacts of storing such material on site is woefully inadequate. The environmental effects and increased accident risk associated with corrosion of cylinders over 15 or more years should be explicitly evaluated.

Further, the Draft EIS notes that, commencing 15 years after production of enriched uranium at the proposed CEC facility, the DUF6 will be converted to triuranium oxide (U3O8). Draft EIS at 2-31. However, the Draft EIS contains no information whatsoever regarding the nature and environmental impacts of the process for converting DUF6 to U3O8, or the impacts of permanently disposing of these U3O8 tails. Given this utter lack of information, it is also impossible to determine from the Draft EIS the basis for the NRC's estimate that tails disposal will cost \$12.6 million/year. Draft EIS at 2-31. In any event, the NRC does not even appear to have factored the \$12.6 million estimate into its cost-benefit analysis. See Draft EIS § 4.5.

Moreover, the NRC has failed to evaluate the cumulative and generic impacts of adding to the huge (and growing) national inventory of DUF6 tails, for which the U.S. government has yet to identify an acceptable means of disposal. The NRC, in consultation with the Department of Energy, should be required to evaluate these impacts before LES can be licensed to produce more DUF6.

NEPA requires an EIS to be comprehensive and assess all reasonably foreseeable, cumulative impacts of a proposed project.

This "cumulative-impacts analysis" required under NEPA must address reasonably foreseeable future actions, such as the impacts of ultimate disposal of DUF6 tails from the proposed CEC facility. 10 C.F.R. § 1508.7. The analysis must:

consider (1) past and present actions without regard to whether they themselves triggered NEPA responsibilities and (2) future actions that are 'reasonably foreseeable,' even if they are not yet proposals and may never trigger NEPA-review requirements.

Fritiofson v. Alexander, 772 F.2D 1225, 1245 (5th Cir. 1985) (citations omitted; emphasis added.) See also Sierra Club v. Sigler, 695 F.2d 957, 970 (5th Cir. 1983) (quoting Scientists' Institute for Public Information, Inc. v. Atomic Energy Commission, 481 F.2d 1079, 1092 (D.C. Cir. 1987)). In this case, conversion to U308 and disposal of the enormous quantity of tails to be generated at the CEC could have significant impacts on the environment. Yet, in flagrant violation of NEPA, the Draft EIS for the CEC contains virtually no information about this aspect of the operation of the CEC.<sup>13</sup>

For instance, the Draft EIS does not identify or discuss the process by which LES intends to convert DUF6 to U308. Depending on the type of process chosen by LES, conversion of DUF6 to U308 could have significant adverse environmental impacts and costs. France is the only country which currently converts DUF6 to U308. The French process generates as a byproduct large quantities of hydrofluoric acid (HF), an extremely toxic and corrosive chemical. Given its chemical properties, long-term storage of HF could pose more severe environmental and health hazards than long-term storage of DUF6. Yet, the Draft EIS says nothing about this potentially significant environmental impact of DUF6 conversion.

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<sup>13</sup> While the Licensing Board has ruled that the NRC has no regulatory requirement for a concrete plan for the disposal of DUF6, the Commission does require LES to have a "plausible strategy" for tails disposition. LBP-91-41, Slip op. at 9 (December 19, 1991). As discussed above, NEPA also requires the evaluation of all reasonably foreseeable consequences of the NRC's licensing action, which includes disposition of a huge quantity of depleted uranium tails. Thus, now that LES has identified conversion to U308 and offsite disposal as its ultimate disposition strategy, NEPA requires the NRC to evaluate the environmental impacts of such conversion and tails disposal, and to include those impacts in its cost-benefit analysis.

Moreover, it is doubtful that the HF generated by DUF6 conversion would be marketable. The HF generated by the French process is slightly contaminated with uranium. Although the French government is able to market its HF, there is little chance that contaminated HF would be salable in the United States. See Uranium Enrichment Organization, "The Ultimate Disposition of Depleted Uranium" (Oak Ridge National Laboratories: 1990). Another reason that the marketability of HF in the United States is questionable is because there is already a large supply of HF and decreasing production of chlorofluorocarbons may slow demand. Schneil Pulishing Co., "Chemical Profiles: Hydrofluoric Acid" (1992).

The Draft EIS also fails to identify the means for long-term storage of U3O8, or evaluate its environmental impacts. Thus, it is completely impossible to determine where the storage will take place, whether new excavation or construction is required for the storage, what type of containment is to be used for the storage, the effectiveness of containment, or the impacts of the storage facility on the surrounding environment and community. The NRC cannot ignore these reasonably foreseeable and potentially significant impacts, which would be directly caused by the licensing and operation of the CEC.

Finally, in violation of NEPA, the Draft EIS fails entirely to address the cumulative or generic impacts of LES' proposal to add over 100,000 tonnes of DUF6 tails to the existing national inventory from other uranium enrichment plants. As of 1993, the United States government and private companies have accumulated about 500,000 tonnes of DUF6, for which the government has no identifiable means of permanent disposal. This DUF6 is sitting in corroding canisters at DOE enrichment plants and other facilities. Over a year ago, the NRC Staff "recogniz[ed] that the total volume of waste to be generated for the LES Claiborne Enrichment Center is part of a much larger national inventory." Thus, the NRC stated that "LES DU tails disposition may be addressed as part of the national inventory disposal scheme." Letter from John W. N. Hickey (NRC) to W. Howard Arnold (LES) (September 22, 1992) (exhibit "9").

Yet, the Draft EIS completely fails to address critical questions regarding the generic and cumulative impacts of LES' proposed method for waste disposal.<sup>14</sup> For instance, it fails to discuss the national capacity to convert DUF6 to U3O8, and whether LES will compete with government facilities for that capacity. The Draft EIS also fails to identify any locations where the U3O8 will

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<sup>14</sup> The DEIS does not even state why the NRC Staff apparently no longer considers that disposition of the CEC tails should be addressed as part of the national inventory disposal scheme.

be disposed of, or to discuss whether such sites are limited, and whether they should be used for disposal of the existing inventory of U308. It also fails to consider the environmental impacts of transporting HF, the highly dangerous byproduct of DUF6 conversion to U308.<sup>15</sup>

These issues should be addressed in a generic environmental impact statement by the NRC and the DOE. At the very least, the NRC should have consulted DOE regarding the potential cumulative impacts of DUF6 generation by the CEC on the DOE's program for disposing of the national inventory. Thus, the NRC should be required to prepare a revised Draft EIS which evaluates, after consultation with the DOE, the cumulative and generic impacts of permitting LES to generate a substantial additional quantity of DUF6. Thereafter, the public can comment in a meaningful fashion regarding this aspect of the proposed facility.

6.) THE DRAFT EIS PROVIDES INADEQUATE INFORMATION AND ANALYSIS OF THE COOLANT WHICH WILL ACTUALLY BE USED AT THE PROPOSED FACILITY.

According to the draft EIS, the CEC will rely for cooling purposes on the use of trichlorofluoromethane (CFC1<sub>3</sub>) (also known as "Freon R-11" or "CFC-11"), an ozone-depleting chemical which the Environmental Protection Agency has banned after January 1, 1996. However, the proposed CEC facility would not be in operation until after the date of the ban. Thus, LES must substitute a new, legal coolant for CFC-11.

Any substitute coolant chosen by LES should be identified in a revised draft EIS, with an analysis of the environmental impacts of the coolant, and a explanation of how or whether the new coolant affects other factors in the plant's design, such as centrifuge design, calculations of expected uranium emissions, and the type of lubricants that must be used. Thereafter, the public can then meaningfully comment on this important aspect of the proposed facility.

Such an analysis and explanation are required because the design of a uranium enrichment plant depends in part on the thermodynamic and other physical and chemical properties of the specific refrigerant that is used in the centrifuges. Unless the substitute refrigerant is an exact match for the relevant physical and chemical properties of CFC-11, the substitution of another

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<sup>15</sup> As discussed above in section "1", the NRC violated NEPA in failing to consult with the U.S. Department of Transportation regarding the environmental impacts of HF transportation.

coolant may necessitate changes in the plant's design. For instance, the rate of flow of uranium hexafluoride through each centrifuge, or alternatively, the dimensions of the centrifuge, depends in part on the thermodynamic properties of the coolant. The type of lubricant used in the cooling system also depends in part on the composition of the coolant. If the coolant and lubricants are not matched, this could cause premature deterioration of the coolant and degradation of the equipment.

The type of coolant used in the centrifuges may also affect the levels of the plant's radioactive emissions to the environment. During the enrichment process, some coolant leaks into the centrifuge chamber containing uranium hexafluoride (UF<sub>6</sub>). Some emissions of both coolant and uranium hexafluoride occur when these two materials are separated. Thus, the amount of emissions to the environment may change as a result of a change in refrigerant. In order to control increased emissions as a result of a change in refrigerants, LES may also need to change the design of the process for separating the coolant from the uranium hexafluoride locations.

7.) THE DRAFT EIS FAILS TO PRESENT THE NATURAL AND SOCIAL SCIENCE DATA UPON WHICH THE AGENCY HAS MADE ITS REQUIRED ANALYSIS OF ENVIRONMENTAL CONSEQUENCES PURSUANT TO 40 C.F.R. §§ 1502.1, 1502.16.

The Draft EIS fails to provide the required data and corresponding inventories which would demonstrate that the NRC has made the necessary environmental analyses required pursuant to 40 C.F.R. §§ 1502.1 and 1502.16. Much of the Draft EIS is very vague, and numerous conclusions are unsupported by actual data.

The natural and social science data to be used is outlined in § 1502.16 and "[it] forms the scientific and analytic bases for the comparisons under §1502.14 (alternatives including the proposed action). 40 C.F.R. § 1502.16. This information is the basis upon which the proposed action and various alternatives to the proposed action are to be evaluated and ranked, as required pursuant to 40 C.F.R. §1502.14.

Since the information and corresponding inventories provided in NRC's Draft EIS are insufficient and at times erroneous, and the Draft EIS evaluates and discusses the effects and significance of only one alternative, meaningful analysis of the proposed action, as well as the proposed action in comparison to alternative actions, cannot be performed as required under the CEQ regulations.



The data requirements of 40 C.F.R. §1502.16, which the Draft EIS for the proposed CEC facility does not satisfy, are discussed individually in paragraphs A-F, below.

A. The Draft EIS fails to provide natural science data regarding direct and indirect effects pursuant to 40 C.F.R. § 1508.8, 1502.16.

The Draft EIS does not include adequate natural science data regarding the direct and indirect effects of the proposed CEC facility as required pursuant to 40 C.F.R. 1502.16, 1508.8. As discussed more fully above in paragraphs A through Q of section "2", the NRC has failed to provide adequate natural science data regarding the proposed CEC's direct and indirect effects.

In summary, the Draft EIS entirely omits or provides erroneous or inadequate natural science data regarding the direct and indirect effects of the project as they pertain to: (1) the Forest Grove and Center Springs communities; (2) conversion of DUF6 to U308; (3) the actual coolant to be used; (4) relocation of Parish Road #39; (4) increased traffic and vehicles transporting hazardous and radioactive materials; (5) level of service of existing transportation systems; (6) public utility relocation, and (7) power line construction, operation, and maintenance.

B. The Draft EIS fails to address social and psychological impacts of the proposed action and fails to provide social science data and analysis regarding such direct impacts pursuant to 40 C.F.R. §1508.8, 1502.6 and 1508.14.

Social science data and analysis regarding sociological and psychological impacts of a proposed action are required in an EIS. NEPA regulations define "effects" and "impacts" to include such social effects and impacts. 40 C.F.R. § 1508.8. See also 40 C.F.R. § 1508.14 ("social" impacts to be addressed in an EIS). An interdisciplinary approach to analyzing such impacts is required:

Environmental impact statements shall be prepared using an inter-disciplinary approach which will insure the integrated use of the natural and social sciences  
. . . . The disciplines of the preparers shall be appropriate to the scope and issues identified in the scoping process.

40 C.F.R. § 1502.6.

An appropriate approach to analyzing such impacts is contained in "Guidelines and Principles for Social Impact Assessment" ("Guidelines Document") published by the International Committee on Guidelines and Principles for Social Impact Assessment, dated December 14, 1993, attached as exhibit "10". This Guidelines Document provides the first comprehensive guidelines to assist EIS drafters in fulfilling their obligations under NEPA and NEPA regulations.

This Guidelines Document defines social impact assessment "in terms of efforts to assess or estimate, in advance, the social consequences that are likely to follow from specific policy actions . . . , and specific government actions (including buildings, large projects. . . ), particularly in the context of the U.S. National Environmental Policy Act or NEPA." This document provides a thorough and workable methodology for conducting the social impact analysis required under the NEPA regulations.

The NRC has failed entirely to define and describe the direct social science effects of the proposed project upon the residents of Forest Grove and Center Springs, who will suffer the greatest negative environmental and psycho-social impacts. CANT's Contention J (attached as exhibit "7" and incorporated herein by reference) addressed the proposed CEC's negative economic and sociological impacts on the communities of Forest Grove and Center Springs, such as the impacts discussed more fully in paragraphs A through E of section "3," above. Nevertheless, the Draft EIS ignores these impacts. Accordingly, the NRC must revise the Draft EIS, and in doing so it should utilize the methodology set forth in the Guidelines Document.

C. NRC'S Draft EIS fails to address and analyze the potential conflicts between the proposed CEC facility and existing land use plans, acts, or policies pursuant to 40 C.F.R. §1502.16.

The NRC failed to comply with CEQ regulations by inadequately identifying existing land uses in the affected area, and omitting any mention of, or data concerning, existing land use controls, comprehensive plans, or policies for the area surrounding the proposed site. The regulations provide that EIS's "shall" include discussions of:

possible conflicts between the proposed action and the objectives of Federal, regional, State, and local . . . land use plans, policies and controls for the area concerned.

40 C.F.R. § 1502.16. The minimal analysis in the Draft EIS is

inadequate both in its description and analysis of land use in the affected area.

The description of surrounding predominate land use, according to the Draft EIS at 3-115, is forestland, agriculture, and pastureland -- with absolutely no mention of residential land use as a predominant land use even though the residential communities of Forest Grove and Center Springs sit next door to the proposed site. While the NRC has carefully recorded the number of acres dedicated to agriculture, the location of six cattle ranches, and the size of the largest cattle herd within the five mile radius of the site, it has omitted the amount of acreage dedicated to residential land use (as well as the acreage for all land uses other than agricultural<sup>16</sup>), the location of dwellings, the number of dwellings, and the number of human beings within a five mile radius of the site.

The analysis of environmental consequences to surrounding land use is even worse. Abandoning the five mile radius which was used in describing surrounding land use, the Draft EIS limits its analysis of environmental consequences to the area within LES's property line! Accordingly, the identification and analysis of the existing land use in the affected area is inadequate, erroneous, and incomplete.

Furthermore, the NRC has failed to identify or analyze the gas pipeline corridor as it indicated it would in the Summary Report. "The EIS will describe and assess pipeline corridors and the construction precautions and mitigation, as appropriate." Summary Report at p. 20. There is no such discussion anywhere in the Draft EIS. And figure 3.26 from the Draft EIS, which purports to depict land use in the vicinity of the CEC, fails to indicate any gas pipelines at all, when in fact there are thirty-one active oil and gas wells and four distribution pipelines located within a five mile radius of the proposed site. Draft EIS at 3-118.

Finally, the Draft EIS fails to identify any federal, state, regional, or local, zoning land use plan(s), comprehensive plan(s), or economic development plan(s) for the region. However, the town of Homer has both a comprehensive plan and zoning ordinance. To fully comply with the CEQ regulations, an analysis of potential

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<sup>16</sup> Unless the acreage for these other land uses and their corresponding percentages are identified, it is not possible to discern what the predominant land use is actually is, much less meaningfully comment on the NRC's analysis of land use in the affected area.

conflicts between the proposed facility and existing land uses and zoning ordinances must be performed by the NRC and included in a revised Draft EIS.

B.) THE DRAFT EIS FAILS TO PROVIDE IDENTIFICATION AND ANALYSIS OF ACTION ALTERNATIVES PURSUANT TO 40 C.F.R. § 1502.14.

The Draft EIS fails to adequately discuss reasonable alternatives to the proposed project as required under 40 C.F.R. §1502.14, and also fails to provide adequate reasons for rejecting alternatives.

This section is the heart of the environmental impact statement. Based on the information and analysis presented in the sections on the Affected Environment (§1502.16) and the Environment Consequences (§1502.16), it should present the environmental impacts of the proposals and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decisionmakers and the public.

40 C.F.R. § 1502.14 (emphasis added).

The draft EIS merely contains a single action alternative (the applicant's development plan) and the "no-action" alternative. The NRC's discussion of the single action and the no-action alternatives (which itself is flawed, since it is based upon incomplete and erroneous data concerning the affected environment and impacts on the affected environment, all as set forth above), fails to analyze the differences between the environmental impacts of these two alternatives and other action alternatives as required under NEPA regulations.

And there are alternatives to the proposed action. For example, the Draft EIS should have included discussions of the status of alternative non-nuclear energy sources (e.g., solar, wind, geothermal), and alternative nuclear energy sources (e.g., thorium-232 fission reactors (see Ivars Peterson, "Accelerator Route To Nuclear Energy," Science News Vol. 145 (January 1, 1994) at p. 12). In addition, it should have considered the alternative of completing development of the atomic vapor laser isotope separation technology and building a plant based on it. A demonstration plant has been built at Lawrence Livermore National Laboratories, but the DOE has not done an EIS on it. Energy consumption per SWU in the atomic vapor enrichment technology is considerably lower than the proposed centrifuge plant. In light of the lack of urgency in the need to build a uranium enrichment plant, the Draft EIS should have

considered the wisdom of waiting to develop this more promising technology.

The Draft EIS should also have considered conversion of Russian highly enriched uranium to low enriched uranium as an alternative to the proposed CEC facility. As discussed above, such a program has significant benefits in the reduction of nuclear arms. Moreover, it would not have one of the major environmental costs associated with the proposed CEC facility -- generation of large quantities of DUF6.

In addition to omitting a discussion of action alternatives, the NRC omitted adequate discussion of the reasons for eliminating all other action alternatives. Under 40 C.F.R. § 1502.14, the NRC is required to:

Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.

40 C.F.R. §1502.14 (emphasis added). The NRC merely states that "The no-action alternative is the only alternative considered in the Draft EIS." Draft EIS at xviii. This clearly does not constitute the required discussion of the reasons for all other alternatives being eliminated.

And finally, because the Draft EIS does not include an action alternative other than LES's development plant, the Draft EIS obviously does not adequately describe the environmental effects of all reasonable alternatives, as also required under the NEPA regulations. An EIS must provide "the environmental effects of alternatives . . . . The comparisons under §1502.14 will be based upon this discussion." 40 C.F.R. §1502.16(d).

In short, the NRC has not complied with the NEPA regulations<sup>17</sup>, and therefore the Draft EIS must be revised to include a complete and accurate description and analysis of the environmental effects of alternatives, as well as a description of the reasons for eliminating such alternatives.

#### 9.) THE DRAFT EIS INADEQUATELY DISCUSSES ALTERNATIVE SITES FOR THE PROPOSED ACTION

The criteria used by the NRC Staff for the regional screening of potential uranium enrichment facility sites are so irrational,

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<sup>17</sup> Council on Environmental Quality, 40 C.F.R. §§ 1500-1508.

arbitrary, and improper as to completely undermine the credibility of the NRC's site selection process. It is all too clear that, rather than designing objective and reasonable criteria for the purpose of assisting a choice among genuine alternatives, the NRC chose the site first and then selected an arbitrary set of criteria that would lead inevitably to that choice.

First, the 600 mile radius as a site selection criteria is completely arbitrary. There are no supporting studies or data to indicate why this odd number was selected. If a goal is to reduce transportation accidents, certainly a lesser distance would make more sense. Few people would consider more than 500 miles "near expected major feed suppliers and product receivers," especially when most product receivers are well over 1,000 miles away.

It appears that the 600 mile radius must have been chosen after the fact, since the most likely reasons LES decided to locate in Louisiana are that it is a non-union state and it happens to be represented by Sen. Bennett Johnston of Louisiana, whose former chief of staff, Charles McBride, was LES' lobbyist. There is indeed no reason whatsoever to believe that LES ever looked at sites outside Louisiana, and Figure 2.10 acknowledges that only northern Louisiana was included in the final study area.

Furthermore, it seems that a siting criterion of a "right-to-work" state, which would ensure a non-union workforce, is improper and discriminatory. While it may be acceptable for a private business to explicitly choose to operate in a non-union state, it is not acceptable for a business which relies upon a federal license for its operations to require a non-union workforce. Further, it is well-known that manufacturing unions are, on the whole, composed disproportionately of minorities. A "right-to-work" requirement thus is inherently discriminatory. Finally, it is disingenuous for the Draft EIS to state that LES "requires a source of workers who are capable of operating the plant efficiently and safely" and then establish a siting criterion which discourages employment of members of the Oil, Chemical and Atomic Workers union (OCAW) who may be the only people in the country so qualified. There is no way this can be looked upon as a "benefit" in the Draft EIS.

The Draft EIS also rules out the entire state of North Carolina as a potential site, based on the estimated peak acceleration of earthquakes in excess of 0.49%. Draft EIS at 2-46. However, the Draft EIS does not explain why this earthquake risk would be unacceptable for a uranium enrichment facility, and yet was considered acceptable for a much more dangerous and earthquake-vulnerable type of facility, the Shearon Harris nuclear power

plant. It appears that earthquake risk is only a factor when the NPC is seeking a reason to avoid considering a genuine alternative.

Another siting criterion on page 2-43 of the Draft EIS identifies Northern Louisiana as desirable because it is located in the Louisiana Power & Light service area, noting that LP&L is an LES partner. In fact, however, officials of LP&L have testified in public hearings in Baton Rouge that LP&L intends to leave the partnership if and when a construction permit is granted. Thus, LP&L will not be an LES partner during any meaningful time period, and thus, this is not a valid siting criterion.

Furthermore, Northern Louisiana is at the very edge of the "attractive" zone, for transportation of feed and product material. This cannot be considered a siting plus, as many other potential sites are far better for transport considerations.

And although LES would likely appreciate the numerous tax breaks that would come their way by siting in Louisiana, the Draft EIS fails to discuss other possible tax breaks in other locations.

Beyond these peculiarities, it is abundantly clear that the discussion of alternative sites in the Draft EIS is inadequate. The Draft EIS screening process found three potential sites (LeSage, Prison, Emerson) suitable for detailed analysis (Draft EIS at pp. 2-50 through 2-56). However, all three qualified sites were located within the same Louisiana community, with two sites located less than 5 miles from each other (Draft EIS at p. 2-51). Thus, it is specious to suggest that these locations are different alternative sites, when, in fact, they are nothing more than different places within the same site that will be affected by the proposed action.

Furthermore, the Draft EIS blatantly admits that "the staff and LES analyzed only the LeSage site in detail. If the impacts at the site were unacceptable, alternative sites would have been considered in greater detail" (Draft EIS at 2-55). Thus, assuming that the three locations actually constitute "alternative sites," still only one of them was analyzed to the degree necessary to determine its ultimate acceptability. This means that alternative sites were not analyzed in detail and compared for ultimate acceptability as required under NEPA. Thus, a revised draft EIS which adequately considers and discusses alternative sites must be prepared for public comment.

10.) THE DRAFT EIS IS INADEQUATE BECAUSE THE NRC OMITTED INCLUSION OF THE SCOPE DETERMINED IN THE SCOPING PROCESS PURSUANT TO 40 C.F.R. § 1502.9.

As discussed more fully above, the NRC's omittance of the many issues determined to be within the scope of the Draft EIS and to be analyzed in depth in the Draft EIS pursuant to 40 C.F.R. § 1501.7(a)(2) violates the CEQ regulations which require that:

Draft environmental impact statements shall be prepared in accordance with the scope decided upon in the scoping process. The lead agency shall work with the cooperating agencies and shall obtain comments as required in part 1503 of this chapter.

40 C.F.R. §1502.9(a) (emphasis added).

The NRC has either omitted or inadequately addressed numerous significant issues previously determined by the NRC to be included in the Draft EIS and contained in the Environmental Impact Statement Scoping Process Summary Report, November 1991. Therefore, a revised draft EIS must be prepared to include in depth analysis of all the issues contained in the NRC's Summary Report.

11.) THE DRAFT EIS IS SO INADEQUATE THAT IT PRECLUDES MEANINGFUL ANALYSIS. ACCORDINGLY, A REVISED DRAFT EIS MUST BE PREPARED FOR PUBLIC COMMENT PURSUANT TO 40 C.F.R. § 1502.9(a).

For all of the foregoing reasons, and pursuant to 40 C.F.R. § 1502.9(a), the Draft EIS is fatally flawed, and must be revised:

If a draft statement is so inadequate as to preclude meaningful analysis, the agency shall prepare and circulate a revised draft . . . .

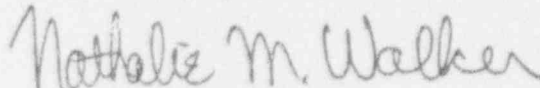
Due to the inadequate, erroneous, and incomplete data gathered and inventoried in the preparation of the Draft EIS; the fragmented, insufficient, and sometimes lacking analysis in the Draft EIS; and the failure of the NRC to provide evidence supporting its analysis and conclusions, the current draft of the EIS utterly precludes meaningful analysis by the public of several potential environmental impacts of the proposed CEC facility.



Mr. John W. N. Hickey  
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Thus, the NRC must prepare and submit a revised Draft EIS for circulation, review, and comment pursuant to 40 C.F.R. § 1502.9 in order to afford the public an opportunity to meaningfully analyze the potential impacts of the proposed CEC facility.

Very truly yours,



Nathalie M. Walker