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Subject: Docket No. 70-3103, Attn-Anna Bradford

Attached comments on NUREG 1790,
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Attention: Anna Bradford

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Add A. Bradford (AHB1)

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January 7, 2005

Chief, Rules Review and Directives Branch
Division of Administrative Services, Office of Administration
U.S. Nuclear Regulatory Commission
Mail Stop T6-D59
Washington, DC 20555-0001

RE: Docket No. 70-3103; NUREG 1790, Draft Environmental Impact Statement for the Proposed National Enrichment Facility in Lea County, New Mexico

Dear Sirs:

I am submitting the following comments on the Draft Environmental Impact Statement in the above captioned matter. Please enter these comments into the official record of the proceeding.

Rather than taking issue with a long list of specific problems in the Draft EIS, I will confine my comments to two areas of the analysis that are particularly significant. These areas are: I) The Institutional Environment & Cumulative Impacts and II) The Physical Environment. Although these problem areas are interactive, for the sake of simplicity, I will treat them separately.

I) THE INSTITUTIONAL ENVIRONMENT AND CUMULATIVE IMPACTS

In the analysis of the institutional context in which the DEIS takes place, there are several problems that affect the selection of facts deemed relevant to the license application and that condition the argument used by NRC to justify its approval of the LES/NEF project. These problems reflect the influence of relationships among legal and regulatory institutions (e.g. NRC, DOE and other "persons" authorized to represent the public at federal, state and local levels of government) and self-interested corporations and individuals (e.g. LES, WCS, ATLI and other "persons" that represent private economic, political or cultural goals). Problems occur in a wide range of issues relevant to the DEIS such as:

* conflict of interest when public "persons" (e.g. NRC, Sen Dominici, etc.) become interdependent with private interests (e.g. ATLI, Urenco, Westinghouse, WCS, etc.)

* failure to identify negative impacts ("opportunity costs") of taxpayer-supported revival of a moribund nuclear power industry at the expense of emerging industries in the renewable energy sector (wind, solar, geothermal, etc.)

* inability to discern disparate impacts on geographic regions with relatively high ratios of disadvantaged populations versus benefits that accrue to already privileged groups in national and international contexts

* the DEIS' frequent shifts of focus between various levels of analysis (local, regional, state, national, global, etc.) without accounting for problems ignored when shifting from one level to another

* contradictions regarding the relevance of terrorism/espionage to the DEIS [e.g. finding that these issues are "...speculative and simply too far removed from the

natural or expected consequences of agency action," (DEIS, Appendix A, p. 19) versus the imposition of censorship due to fears of terrorists with access to public documents, including the DEIS]. Because of NRC's ambivalence evidenced in these contradictions, the license proceeding should be halted until a consistent policy can be defined. Terrorism is either a significant threat and relevant for inclusion in the discussion of potential environmental impacts, or it is not relevant, and NRC's censorship of public documents due to security concerns should be rescinded.

Although these issues are examples of problems that permeate the entire analysis of institutions in the DEIS, I will not address them in detail in these comments.

However, within the DEIS' analysis of the institutional environment, there are two topics in the discussion of waste disposition that demand scrutiny. These issues are: A) The definition of depleted uranium as Class A low-level radioactive waste; and B) The discussion of Option 1(b) (and Option 2) regarding uranium byproduct disposal. The final EIS should not be issued without extensive revisions of these two topics.

A) Definition of Depleted Uranium As Class A Low-Level Radioactive Waste

In several places, the DEIS asserts that depleted uranium (both uranium hexafluoride, @2-27, lines 38-41, and triuranium octaoxide, @2-31, lines 15-19) is a Class A low-level radioactive waste (DEIS, @2-29, insert, lines 1-19). This assertion is based upon language in 10 CFR, Part 61.55(a), which is the default provision for unclassified wastes. The determination should be thoroughly explained and justified by NRC before the license procedure continues. Although the same declaration was made in the EIS for LES' Claiborne Enrichment Center application, it has never been supported by NRC analysis commensurate with its significance.

The enrichment process identifies the U-235 isotope as its product and the U-238 isotope as a byproduct. Depleted uranium radionuclides are primarily U-238, which eventually decay into other radioisotopes, and finally into a stable isotope of lead-206. However the half-life of U-238 is 4.46 billion years, which means, in practical terms, that depleted uranium will always be radioactive. Uranium-238 can also be converted to plutonium-239, the "fissile" isotope of plutonium that is used in weapons. Furthermore, the specific activity of depleted uranium, measured in nanocuries per gram, is much greater than the activity of transuranic wastes (including wastes of plutonium), and DU is comparable to TRU wastes in the amount of radiation that is emitted in decay (Institute for Energy and Environmental Research, <www.ieer.org>).

Although there are differences between depleted uranium and transuranic waste, there are enough similarities in their potential hazards that they should be subject to similar disposal methods. The NRC's default declaration that DU is a Class A low-level radioactive waste is misleading and should be revisited before waste disposition policy is defined for a uranium enrichment facility. The DEIS is setting a dangerously low standard of environmental protection when it assumes that shallow land burial of depleted uranium byproduct will have no significant impact upon the environment (for 4.5 billion years?). In fact, the NRC acknowledges the potential for problems with DU disposal as Class A low-level waste in its discussion of potential impacts at 4-58, lines 30-32. "Final disposal of large quantities of depleted uranium at a licensed facility could require additional environmental impact evaluations depending on the location of the disposal facility and quantity of depleted uranium to be deposited." However, such re-evaluations should be preceded by a thorough revision of NRC standards for DU disposal issued prior to a license for the LES/NEF project.

B) Discussion of Option 1(b) (and Option 2) Regarding Uranium Byproduct Disposal

Related to the issue of byproduct classification is the DEIS discussion of disposal options. Specifically, the discussion of disposition Option 1(b) contains some false assertions that are particularly significant in light of NRC's declaration that depleted uranium is Class A low-level waste. The DEIS contains errors of fact regarding the legal and regulatory environment of Waste Control Specialists. It also fails to identify the probability that WCS will be able to store, process and dispose of all radioactive, hazardous and mixed waste generated at the proposed NEF. In other words, the DEIS fails to evaluate the fact that waste generated by LES in Lea County, New Mexico may never leave the vicinity (although its disposition may be in Texas, not in New Mexico).

Waste Control Specialists currently is licensed by the Texas Department of State Health Services (formerly the Texas Department of Health) to process and store low-level radioactive waste (Classes A, B, C, greater-than-class-C and sealed sources) and mixed hazardous and radioactive waste. Contrary to the DEIS (@3-3, lines 32-33), the license does not currently include 11e(2) byproduct waste. WCS has requested two amendments to its current license, one for storage and processing of 11e(2) material (now being stored in Fernald, Ohio), and one for the disposal of this material. The amendment requests will probably be granted this spring.

WCS is also licensed by the Texas Commission on Environmental Quality (formerly Texas Natural Resource Conservation Commission) to dispose of hazardous waste and Naturally Occurring Radioactive Material. In addition, the company has applied to TCEQ for a license to dispose of low-level radioactive waste and mixed waste. The license will allow WCS to dispose of low-level waste from the Texas-Vermont Interstate Compact and to open an adjacent site for "federal facility waste." On page 2-32, the DEIS asserts that LES/NEF could not dispose of its waste at either the Compact facility (lines 31-35) or at the federal facility (lines 43-45). If depleted uranium is considered Class A low-level waste, the DEIS is wrong on both counts.

The Texas-Vermont Compact states: "The comission may:...Enter into an agreement with any person, state, regional body, or group of states for the importation of low-level radioactive waste into the compact for management or disposal, provided that the agreement receives a majority vote of the commission..." [TX-VT Compact, Article III, Sec. 3.05(6)]. The definition of "person" includes any "...individual, corporation, partnership or other legal entity, whether public or private" [TX-VT Compact, Article II, Sec. 2.01(14). Because of this Compact "loophole," both Louisiana Energy Services and the Department of Energy may contract with the Compact Commission (six of whom will be from Texas, one from Vermont) to dispose of low-level radioactive waste at the Compact facility. There is no statutory limit on the volume or activity of waste that can be received (limits apply only to Vermont), and the facility may receive either uranium hexafluoride or triuranium octaoxide, if they are considered low-level waste.

If the Department of Energy takes possession of the uranium hexafluoride byproduct from LES (DEIS, 4-50, insert, lines 9-43), it can deal directly with the Compact facility license holder (i.e. Waste Control Specialists) to use the "federal facility waste disposal facility," adjacent to, and simultaneously licensed with, the Compact facility. Texas law regarding "federal facility waste" requires only that DOE have "responsibility" for its disposal, not that it must have been generated by DOE at a federal facility. "'Federal facility waste' means low-level radioactive waste that is the responsibility of the federal government under the Low-Level Radioactive Waste Policy Act, as amended by the Low-Level Radioactive Waste Policy Amendments Act of 1985 (42 U.S.C. Sections 2021b-2021j)" and "'Federal facility waste disposal facility' means a facility for the disposal of federal facility waste licensed under Section

401.216" [Texas Health & Safety Code, Sec. 401.2005, (4) & (5)].

If DOE assumes responsibility for LES' uranium hexafluoride byproduct, and the DU byproduct is Class A low-level radioactive waste, then WCS may receive the waste for storage, processing and/or disposal at the "federal facility waste disposal facility." The byproduct material may be received for direct disposal, or for processing to the more stable triuranium octaoxide form, then disposal. However, the federal facility waste disposal facility is subject to statutory limits on the volume of waste that it may receive for disposal.

The Compact facility license holder (WCS) may only dispose of six million cubic yards (162 million cubic feet) of low-level radioactive waste at the federal facility waste disposal facility, adjacent to the Compact facility (which has no such limits). By comparison, the Compact facility that was proposed for Sierra Blanca, Texas would have been limited to less than two million cubic feet (i.e. cubic FEET) of capacity. The currently proposed federal facility has approximately eighty times the capacity of Sierra Blanca, and the capacity of the proposed Compact facility is limited only for Vermont. The federal facility limit is initially set at three million cubic yards (300,000 cu. yds. of which may be Class B & C waste), but the totals are doubled after five years of operation [TH&SC, 401.216(a), (b), & (c)].

The facility is also authorized to receive Class A low-level waste with "high radiation levels," so long as it uses the disposal method prescribed for Class B & C waste (i.e. in reinforced concrete containers, or containers that are comparable to reinforced concrete) [TH&SC, Sec. 401.218(b) & (c)]. Apparently, Class B & C volume limits do not apply to Class A waste with "high radiation levels." This may allow burial of DUF6 cylinders without further processing, but would certainly accommodate burial of triuranium octaoxide.

Although WCS does not currently have a permit for a depleted uranium byproduct conversion facility (converting uranium hexafluoride to triuranium octaoxide), it would require only an amendment to its license for processing and storage, rather than a separate permit. A conversion facility amendment to its current license for storage and processing would provide one more path by which DEIS Option 1(b) could be met by WCS. Because of these problems in the DEIS analysis of waste disposition, the NRC should completely re-evaluate its position on this crucial topic.

In fact, it is reasonable to assume that WCS would seek amendments to its license for processing to allow it to develop facilities for fuel fabrication and several other functions that NRC licenses. There are existing activities (Waste Isolation Pilot Plant, about 45 miles west of Eunice, NM) and activities proposed [Modern (plutonium weapons) Pit Facility, near the WIPP site] that may potentially interact with the LES/NEF and WCS. In addition, Andrews County has a history of aggressively pursuing high-risk projects (e.g. designation as the high-level radioactive waste site and the site of the superconducting supercollider), and WCS has a long-standing ambition to attract a wide range of waste-related industries (e.g. a complex array of hazardous waste facilities and the effort by USEC to develop an AVLIS uranium enrichment project in 1998-1999).

This pattern of development associated with WCS/Andrews and southeast New Mexico suggests that it is unreasonable to assume that the proposed LES/NEF would not have cumulative impacts far beyond the level proposed in the DEIS, Section 4.4, pages 4-65 to 4-68. For this reason, the NRC should also re-evalute the potential for cumulative impacts of the proposed LES/NEF.

II) PHYSICAL ENVIRONMENT

The need for revision of the DEIS analysis of the institutional environment and its cumulative impacts is compounded by problems with the DEIS description of the physical environment, primarily with site geology and meteorology. The DEIS does not give sufficient attention to potential effects of extreme weather conditions (e.g. high winds, tornados, flash floods, high heat) on operations and transportation related to the proposed LES/NEF. Furthermore, the Hobbs, NM rainfall data used as a basis for other parts of the analysis (DEIS, 3-13, Table 3-3) contain anomalies that raise questions. Although the data cover almost ninety years of measured rainfall, half of the maximum monthly measurements have occurred in the last twenty years, and three quarters of the minimum measurements occurred in the first ten years of record-keeping. Either the rainfall at the site has been increasing at an alarming rate, or earlier record-keeping was faulty and should not be used to calculate "average" rainfall.

Rainfall measurements are significant because they influence interpretations of surface and near-surface hydrology. Drainage patterns at the site trend to the west and south, toward Monument Draw, which runs parallel to the border between Texas and New Mexico. Monument Draw is above the western edge of the subsurface Central Basin Platform, the structure that describes the eastern rim of the Deleware Basin and the Capitan Reef. Monument Draw, and the LES/NEF site's connection to the West Platform area beneath Monument Draw constitute a significant problem in the DEIS analysis.

Although the DEIS identifies several facts about area geology that should be explored more fully, it assumes that chemical and radiological pollutants in airborne emissions and leachate will not affect the regional environment. However, pollutants from the facility may travel long distances in the air, regardless of surface wind conditions, and fast flow paths for water may undermine reliance on root system uptake and evapotranspiration as mitigation for water contaminants. And if the potential for disposal of depleted uranium near the site is considered, longer term factors of site geology take on new significance.

Descriptions of local geology may be interpreted to suggest that the Ogallala Aquifer is at risk, and despite the DEIS' assurance to the contrary, this is a valid concern. Yet there is another view of geological processes that is also plausible, but it directs concerns for water contamination to the south, beneath Monument Draw and along the West Platform Fault Zone. This is a well-known area of interconnected faults that has proven to be a prolific source of oil and gas production.

Hydrocarbon production is thought to be the cause of the area's frequent seismicity (Luo, et.al., 1991), but the DEIS' assertion that oil and gas production is the only cause of seismic activity is contradicted by other geologists (Sanchez, 1992; Hill, 1996). The 1992 earthquake at Eunice (magnitude 5.0) was probably tectonic in origin, and the presence of oil and gas deposits may be as much an effect of seismicity, as a cause. In addition, there are many dissolution features (fissures, sink holes, beccia pipes, etc.), also associated with hydrocarbon, salt, and sulfur resources that accompany karst formation and increased probability of fast flow paths (DuChene & McLean, 1989; Hill, 1992). Furthermore, the use of secondary oil recovery methods, such as waterfloods, may also interact with site geology to accelerate water in unpredictable ways ("well blowouts") through hydrologic systems (Silva, 1996). Although oil deposits are much deeper than the water bearing formations at issue, the presence of thousands of wells and numerous fault pathways that connect widely separated strata makes the hydrology of the site impossible to characterize without more extensive data.

Unfortunately, the DEIS sheds no light on the potential for water to move through the

NEF and WCS sites. Water may enter local surface and groundwater systems from rainfall, water pumped to the surface for operations, perched lenses connected by preferred pathways such as faults and fractures, or wells connecting strata that are otherwise separated. Because there are known faults in the area, and the site is located above the West Platform Fault Zone, a detailed study of potential pathways should be completed before a final EIS is issued. In addition to polluting the Ogallala Aquifer, water from the site may reach the Pecos River Valley surface water, groundwater from the Capitan Reef formation, and possibly other sources of fresh water in Texas.

CONCLUSION

In conclusion, I respectfully request that these comments be entered in the record of this proceeding and that the Nuclear Regulatory Commission either reject the license application as inadequate or conduct a thorough revision of the EIS before continuing.

Sincerely,

Richard Simpson
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Austin, TX 78711

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