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November 8, 2002

Michael Lesar, Chief
Rules Review and Directives Branch
Division of Administration Services
Office of Administration
U.S. Nuclear Regulatory Commission
Washington, DC 20555

**RE: Louisiana Energy Services pre-application
requests**

Dear Mr. Lesar:

Attached please find the comments of the Tennessee Environmental Council (TEC) regarding the proposed uranium enrichment facility to be sited in Hartsville, TN. The comments address the various requests made by Louisiana Energy Services (April 30, 2002) regarding licensing considerations that the Nuclear Regulatory Commission will take into account when an application is filed for the enrichment facility.

TEC staff compiled these comments with the assistance of Mr. David Proano. We appreciate your attention to our concerns, and you may contact me with any further questions about these comments.

Thank you in advance for your review of the attached document.

Sincerely,

Will Callaway
Will Callaway
Executive Director

Attachment: Five (5) pages

Template = ADM-013

E-RTDS = ADM-03
Call = T. Johnson
(TOS)

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Rules and Directives
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Louisiana Energy Services Uranium Enrichment Plant Licensing - Proposed Hartsville, TN, Facility

No Action Alternative

Prior Administrations have moved forward with the nuclear arms reductions called for in START I and II. With full implementation of START I and II and the potential ratification of START III, an opportunity exists to remove numerous nuclear warheads from the U.S. and former Soviet Union arsenals.

In this event, the blending down of highly enriched uranium would provide supplemental fuel supplies that should accommodate the needs of the domestic nuclear power industry for decades to come. Also, according to the Office of Environmental Management, the Department of Energy has 7,379 metric tons of surplus low enriched uranium, 17,204 metric tons of natural uranium and 175 metric tons of highly enriched uranium. Use of these stockpiles would supplement domestic supplies to meet the needs of the nuclear power industry.

Non-proliferation is a priority goal of U.S. foreign policy, and contractual agreements to acquire as much highly enriched uranium from foreign sources would be steps to advance that goal. However, expansion of the uranium enrichment industry in the U.S. might serve as a disincentive for further reductions if the excess fuel supplies deflate market prices.

Finally, on June 18, 2002, the Department of Energy signed an agreement with USEC guaranteeing shipments from Russian warheads. Energy Secretary Spencer Abraham said of the accord, "With this agreement America accomplishes two very important goals, ensuring our domestic capacity to produce fuel for our commercial nuclear reactors and meeting important nuclear nonproliferation goals by accepting enriched uranium from Russia." This counters the LES argument about the need for greater domestic supply.

Alternative sources of enriched uranium for fuel supplies should be available because of successful arms reductions negotiations and existing uranium stockpiles. This manner of generating low enriched uranium is highly preferable to the enrichment of uranium ore — a process that causes many additional environmental consequences.

The LES request to require no further consideration of the "no action alternative" should be denied.

Financial Qualifications

1. *Construction of the facility shall not commence before funding is fully committed. Of this full funding (equity and debt), the applicant must have in place before constructing the associated capacity: (a) a minimum of equity contributions of 30 percent of project costs from the parents and affiliates of the partners; and (b) firm commitments ensuring funds for the remaining project costs*
2. *The applicant shall not proceed with the project unless it has in place long term enrichment contracts (i.e. 5 years) with prices sufficient to cover both construction and operating costs, including a return on investment, for the entire term of the contracts.*

First, it has been suggested that many of the domestic utilities involved in this proposal will no longer be party to the facility once licensing is complete. All corporations or private entities associated with LES and the specific application before the NRC should remain liable for any and all activities at the proposed Hartsville facility, in perpetuity, regardless of the limits of their initial involvement.

Second, because LES is not an operating company with any reliable history, there is great concern among residents that it would abandon the project should the market for enriched uranium prove unprofitable. In that case, were the facility operating, there is a good chance LES would leave Hartsville and Tennessee with a contaminated site and an extensive accumulation of depleted uranium.

The history of uranium enrichment in the United States has left a legacy of on-site storage of depleted uranium. With no other plan available, we believe LES will resort to on-site storage as well.

LES should be required to post a bond for clean up and remediation in an amount no less than \$1 billion. This figure closely matches the cost estimates for management and recovery of existing depleted uranium stockpiles at other DOE sites (Department of Energy report prepared by Lawrence Livermore National Laboratory, September 1997). This bond should be posted prior to the NRC granting a license to the applicant.

The LES request to limit financial qualifications to the operation and management of the plant should be denied.

Tails Disposition

For the foregoing reasons, Section 3113 of the USEC Privatization Act constitutes a "plausible strategy" for the treatment of depleted uranium tails generated by a U.S. commercial uranium enrichment facility. On this basis, the Commission's initial hearing order should explicitly reflect the conclusion that this statutory provision constitutes the required "plausible strategy" for disposing of the depleted tails that would be created by a uranium enrichment facility. As a result, no further consideration of this issue would be required by the Licensing Board.

LES contends that the Department of Energy will take possession of the depleted uranium produced at the facility and that this "plausible strategy" should suffice with no further consideration by the Licensing Board. This is the most reprehensible of the LES requests.

Radioactive waste — of all categories — continue to be unsolved problem for the nuclear power industry. Decades and billions of dollars have been spent working on permanent repositories, reprocessing and other waste management plans with minimal progress.

LES should be required to submit a very detailed waste management plan that should include at least the following:

1. On-site storage plan for any interim holding of waste
2. Specific destination of all waste and contractual agreements for transfer
3. Transportation plans and maps for removal of waste
4. Financial guarantees (bond valued at a minimum of \$1 billion) for waste removal and remediation of the site
5. Guarantees to the state of Tennessee that no waste (depleted uranium) will remain on site after the centrifuge facility ceases operation

Tennessee recently sought action against the Department of Energy to require it to remove all depleted uranium from the Oak Ridge facility. An agreement has been reached to remove that accumulated waste by 2009. The people of Tennessee do not want this type of waste in our state, whether from past production or any future production.

LES has stated that the "tails will not remain in Trousdale County, nor in Tennessee." The company must show a detailed plan as to how it will meet this pledge.

Should LES not provide a comprehensive plan for removal, it should be required to submit a new license application as a hazardous waste storage facility as defined by 40 CFR, parts 264 and 265 to establish minimum national standards for the management of hazardous waste.

The LES request to find DOE's future acceptance of the waste as a "plausible strategy" should be denied.

Environmental Justice

Proposal 1: With regard to the issue of racial discrimination in siting a facility, the evaluation of this issue shall be limited to whether there is direct evidence of racial discrimination in the siting criteria employed by the applicant. Absent such evidence, no further consideration of this issue is required. This determination will be made based upon a review of the specific criteria employed by the applicant. No further inquiry into the application of the criteria will be required.

Section 2.2 of Executive Order 12898, 59 Fed. Reg. 7629 (Feb. 16, 1994), requires federal agencies to *ensure* that agency programs, policies, or activities do not have the effect of subjecting persons to discrimination because of race, color, or national origin. This section of the Order compels the NRC to deny issuing a license where the applicant has used race, color, or national origin as a criterion for selecting the prospective site. Granting a license to an applicant who has considered the race, color, or national origin of the persons or communities around the prospective site has the practical effect of subjecting those persons or communities to discrimination by the NRC.

Anti-discrimination laws, such as Title VII of the Civil Rights Act of 1964 (USCS §§ 2000e et seq.), have historically been difficult to enforce because of the evidentiary hurdles involved in establishing racial discrimination. The Supreme Court has recognized and attempted to overcome those evidentiary hurdles in Title VII suits by shifting the burden of proving that hiring decisions were not based on race, color, or religion onto the employer once the former or prospective employee advances prima facie evidence to suggest discrimination. *See McDonnell Douglas Corp. v. Green*, 411 U.S. 792 at 802 (1973) (affirming reversal of the dismissal of a former employee's Title VII claim and, in remanding matter for trial, instructing the lower court on the allocation of the burden of proof). This burden shifting acknowledges the practical reality that direct evidence of discrimination in the employment context is seldom, if ever, found because employers are highly unlikely to document or disclose any inappropriate considerations made in hiring decisions. Similarly, it is difficult to imagine that an applicant would actually make a record or an admission of the use of discriminatory criterion in site selection. Thus, if discrimination has played a role in site selection, indirect evidence, such as the low-percentage of minorities in similar sites that were considered but not selected or a poorly documented site selection process, will more than likely be the only signal that the applicant has improperly considered factors such as race, color, or religion. Where the indirect evidence of discrimination is compelling, the NRC should shift to the applicant the burden of demonstrating that it has chosen the proposed site for clearly legitimate reasons.

Furthermore, given the limited resources of the NRC Staff, it is impractical for the NRC to conduct the type of investigation that is likely necessary to uncover direct evidence of discrimination. Thus, any inquiry by the NRC into racial discrimination would

effectively be dead from the onset, given the impracticality of such a full-scale investigation as well as the improbability that LES would voluntarily provide direct evidence that it used discriminatory criteria in the site selection process. Under the LES proposal, not only would the NRC be limited to reviewing criteria supplied by LES itself, but also the NRC would be restricted from evaluating whether those criteria were appropriately applied in the site selection process. The NRC has a responsibility not to tie its hands on this important matter; rather, the NRC should take into account all applicable evidence in making sure that the applicant has not made improper racial or ethnic considerations in site selection.

Since the NRC is under a duty to ensure that agency actions do not have a discriminatory effect, the NRC should be compelled to make every reasonable effort to ascertain that the applicant has not selected a proposed site because of the race, color, or national origin of the surrounding persons or communities. Limiting the discrimination inquiry to instances of direct evidence would frustrate the purpose of E.O. 12898 and unnecessarily restrict the ability of the NRC to make a reasonable effort to ensure that agency actions do not promote or cause discrimination.

Proposal 2: An evaluation of disparate impact shall only be required if: (a) the percentage of minorities or low-income households within the total population residing in the area of assessment is greater than 20 percentage points above the corresponding percentage total for the state or (in the case of minority population county); or (b) the percentage of minorities or low-income households in the area of assessment is greater than 50 percent of that area's total population or households.

For purposes of evaluating whether an agency action has a disparate impact on minority or low-income segments of the population, the NRC has utilized percentage guidelines that identify those populations. While these guidelines are practical and useful, it is essential that the NRC proceed carefully in setting those guidelines in order to ensure a fair and realistic disparate impact analysis.

The LES recommendations for minority and low-income household percentage thresholds are inadequate and flawed for several reasons. First of all, LES recommends that the NRC adopt a 20 percentage point standard while overlooking the fact that the NRC has used a 10 percentage standard for disparate impact analysis in several states, including North Carolina, South Carolina, Georgia, Maryland, Virginia, Delaware, as well as the District of Columbia. See U.S. NUCLEAR REGULATORY COMMISSION, Generic EIS for License Renewal of Nuclear Plants, Calvert Cliffs Nuclear Power Plant, Section 4.4.6 (Oct. 1999); U.S. NUCLEAR REGULATORY COMMISSION, Generic EIS for License Renewal of Nuclear Plants, Oconee Nuclear Station, Section 4.4.6 (Dec. 1999). Second, LES further attempts to subvert a meaningful disparate analysis by recommending that the NRC compare the percentage of minorities in the assessment area to the total population in the county and not the state as is customary in NRC reviews. This is an important distinction because minority populations tend to be concentrated

instead of being evenly distributed across the state; thus, counties with minority populations will usually have a significantly greater percentage of minorities than the percentage of minorities on a statewide level. In light of the distribution pattern of minorities, it is less likely that the percentage of minorities in the assessment area will exceed a percentage threshold if the comparison is made to the total minority percentage in a county instead of the total minority percentage in the state. Adopting the LES recommendation provides an incentive for applicants to target counties with a larger minority population with the hope that the percentage of minorities in the assessment area, when compared to the county levels, will not exceed any set values.

Finally, and perhaps most significantly, limiting the disparate impact analysis to instances where minority populations exceed preset thresholds disregards the fact that projects often have a disparate impact on minority and low-income individuals or communities because of the unique socio-economic and cultural characteristics of those individuals or communities. In other words, just because the minority or low-income population in an assessment area is relatively small does not necessarily mean that the individuals in those populations are free from disproportionate impacts. For example, lower income individuals are less able to afford an automobile and thus may shoulder a greater burden than the rest of population where the building or operation of a facility requires the closing of a road between those individuals' homes and centers of commerce or culture. Wealthier individuals, better able to afford automobiles, are impacted to a lesser degree in this situation because it is less burdensome for those individuals to drive the alternative, longer route than it is for the lower-income individuals to walk the longer route. In another example, where a nuclear facility lowers the value of surrounding properties, lower income individuals are disproportionately impacted because they are less able to afford moving to a new location.

These examples illustrate the need for the NRC to consider whether minority and low-income groups will be disproportionately impacted by the construction and operation of nuclear facilities because of socio-economic or cultural distinctions. Indeed, in the environmental justice section of four recent environmental impact statements for the license renewal of nuclear plants, the NRC has recognized that socio-economic and cultural distinctions may lead to disparate impacts. See U.S. NUCLEAR REGULATORY COMMISSION, Generic EIS for License Renewal of Nuclear Plants, Calvert Cliffs Nuclear Power Plant, Section 4.4.6 (Oct. 1999); U.S. NUCLEAR REGULATORY COMMISSION, Generic EIS for License Renewal of Nuclear Plants, Oconee Nuclear Station, Section 4.4.6 (Dec. 1999); U.S. NUCLEAR REGULATORY COMMISSION, Generic EIS for License Renewal of Nuclear Plants, Arkansas Nuclear One, Section 4.4.6 (April 2001); U.S. NUCLEAR REGULATORY COMMISSION, Generic EIS for License Renewal of Nuclear Plants, Edwin I. Hatch Nuclear Plant, Section 4.4.6 (May 2001). In those statements, the NRC examines whether low-income or minority populations have any distinct practices or characteristics, such as a dependence on subsistence agriculture or local fisheries, that could give rise to disparate impacts, regardless of whether those populations exceed a preset threshold. Adopting the all-or-nothing approach recommended by LES ignores this crucial aspect of disparate impact analysis.

Proposal 3: When examining populations in the area of assessment of a proposed facility for disparate impact, the applicant and/or Staff need only use those U.S. Census data that are most readily available to it. No further supplementation of those data is required.

The U.S. Census data is the building block of evaluating what populations will be impacted; but by no means is the Census data sufficient in itself to provide an accurate and realistic assessment of disparate impacts. For the same reasons stated above, disparate impacts are often the product of distinct socio-economic or cultural factors inherent in some minority or low-income individuals and communities. A few very general inferences may be made from knowing that a certain population is "Hispanic" or "low-income," as the Census data provides, but that data is wholly inadequate when it comes to predicting how the construction and operation of a nuclear facility will impact certain populations and communities. For example, the Census data will fail to tell the NRC that individuals in a low-income community walk to church on a certain road every Sunday, or that the proposed site is actually on religiously sacred land. Often, the disparate impact is in the details. The NRC has recognized that Census data is insufficient to make an informed decision about the potential disparate impact of a proposed facility. Again, in the four recent environmental impact statements for the license renewal of nuclear plants, the NRC has supplemented the census data with field inquiries to local planning departments and/or social service agencies. *See Id.* In addition, the NRC staff in those applications made an effort to identify disproportionate impacts that were location-dependent (like religiously sacred land) or arose from an unusual dependence on certain resources or practices (fishing, hunting, subsistence farming, etc.), information that is not likely found in Census data. Those efforts by the NRC are again an implicit recognition that disproportionate impacts are often inextricably linked to the unique socio-economic and cultural characteristics of a minority or low-income population. Furthermore, the Census data may not be sufficiently specific or appropriately configured to signal a potential disparate impact. The size and shape of the census blocks may make it impossible for the NRC to adequately examine potential impacts on smaller and/or irregularly distributed populations. For example, the population living along a route used to transport hazardous materials to and from a nuclear facility is uniquely impacted because of the risk that a vehicle accident may expose that population to those materials. Due to the irregular distribution of homes along a transportation corridor, the Census data may fail to indicate whether that population has a significant number of minority individuals or low-income houses. Supplemental data would be necessary in this case to identify, and it is hoped, mitigate any potential disproportionate impact on minority or low-income populations.

Proposal 4: Any assessment of disparate impact on a minority or low-income population within the area of assessment shall be performed for that population as a whole; subgroups within the larger population shall not be evaluated.

This LES proposal essentially prevents the NRC from taking into account the potential impact of a proposed facility on individuals within the minority or low-income populations that would be especially susceptible to actual or potential harms resulting from the operation or construction of the facility. One such group of susceptible individuals would be the children within a low-income or minority population. Choosing to disregard impacts specific to a subgroup, such as children, means ignoring the link between those subgroups and the greater minority or low-income population. A project that leads to an increase in the number of sick children in a certain population, for example, will undoubtedly place a greater burden on the population as a whole, as parents, teachers, and community leaders must take difficult steps in order to mitigate the pressures created by those sicknesses. The burden that a greater number of sick children places on the entire population, however, will be difficult if not impossible to predict without first looking at the children subgroup in order to understand how that specific subgroup will be affected by the proposed facility.

Other subgroups of individuals within a population that should be evaluated separately include the elderly and those individuals especially susceptible to health problems because of a lack of access to health care facilities, among others. A realistic disparate impact assessment necessarily includes an analysis of groups within the larger population, and how the impacts on those groups will impact the larger population.

Proposal 5: Due to the low risks of facility operation, the geographic area of assessment for disparate impact purposes for a Part 70 facility shall be equal to or less than a 4-mile radius from the center of the site. If the facility is located within city limits, the required area of assessment shall be no greater than a radius of 0.6 mile from the center of the site.

LES attempts to restrict the disparate impact analysis by proposing to severely narrow the required area of assessment on the unfounded assumption that the facility is "low risk." Given that the likely size of the proposed site is about 500 acres, limiting the analysis to an area within four miles of the center of site would mean that a significant portion of the assessment area would be within the site itself. Not only does this configuration make little sense because persons or communities will not be found within the site borders, but also an assessment area delineated in such a manner may likely skew the statistical data on the presence of minorities and low-income households. A more realistic and accurate analysis would begin the geographic assessment area at the outer edges of the proposed site and would not prematurely limit the assessment area based on an assertion that the facility is "low risk." LES proposes an even smaller area of assessment if the site is to be situated in a city. The shrinking of the assessment area is in direct contrast with the fact that in a city more people will be situated closer to the edges of the facility, and in a city, the site itself will likely be smaller than in the countryside, effectively pushing a greater number of people closer to the risks located within the facility.

The LES assertion that the facility is "low risk" should not escape the scrutiny of the NRC. It is important to note that LES, as the applicant, has a vested interest in calling the facility "low risk" and thus having a shrunken geographic area of assessment for

disparate impact purposes. Our concern is that the recommended geographic area of assessment is based on convenience to LES and not on hard scientific data. Before a facility is automatically designated as "low risk," the NRC should investigate all the risks involved in the operation and construction of the facility, without failing to take into account the likelihood that uranium tailings will be stored on site for years, decades, or centuries to come.

Another major failure of the LES proposal is the omission of any kind of consideration of disparate impacts along the roads that will be used to transport materials to and from the proposed facility. Communities and individuals situated along corridors designated for the transportation of hazardous and radioactive materials face a greater risk of being exposed to those materials because of transportation accidents. Of all the possible incidents related to the operation of the proposed facility that could impact the surrounding communities, transportation accidents may not only be the most likely to occur, but they may also be the most unpredictable and uncontrollable incident since they could occur anywhere along the transportation corridor and, in some places, at a considerable distance from any emergency services. Therefore, it is essential that an analysis of disparate impacts on minority or low-income populations include an assessment of the populations along the transportation corridors.

In order to adequately assess disparate impacts along transportation corridors, the NRC would need to develop an appropriate and practical strategy for such an assessment. The first step in the strategy would be to identify the risks involved in transporting hazardous and radioactive material to and from the proposed facility. This risk analysis would also include an analysis of how much of an extra burden such risks place on persons and communities living along the transportation corridor. The next step would be an identification of transportation corridors. The NRC could request that LES propose transportation routes to and from the proposed facility and provide the criteria used in selecting those routes. Those criteria can then be examined to ensure the applicant is making appropriate considerations in choosing the routes. Next, the NRC would need to gather the necessary information on the race, culture, and economic conditions of the persons and populations living along the route. Finally, the NRC would need to make an analysis of whether minority or low-income persons or populations living along the corridor face a disproportionate impact from the transportation of hazardous and radioactive materials.

A practical disparate impact analysis along the transportation corridor requires that the NRC limit the area of assessment along the corridor. The length of the corridor to be assessed (the distance from the site) needs to be long enough to make a realistic assessment but short enough to make that assessment feasible. The length should be set by considering factors such as the amount of material that will be transported along the routes, the type of roads that will be used, and the density of the population along the corridors. Similarly, the breadth of the corridor to be assessed (the distance from the road) would also need to be based on factors such as risk, road type, and density of the population.

Proposal 6: If the applicant proposes to locate its facility upon a site with existing industrial activity or which has previously been, or is currently being, used for nuclear-related activities, and it is determined that impacts upon a subject population must be assessed, assessment of the significance of those impacts shall focus only upon the additional impacts that the newly licensed facility will cause relative to any current impacts.

The NRC has only recently begun to make environmental justice a consideration in the licensing of nuclear facilities. Most nuclear facilities and sites in the U.S. have been licensed and permitted with no consideration of racial discrimination or disparate impacts on minority and low-income populations; however, the NRC, in an effort to incorporate environmental justice concerns into the regulation of nuclear facilities, now requires an environmental justice assessment in order to renew the license for the operation of nuclear plant. The LES recommendation, however, impedes the incorporation of environmental justice concerns into nuclear regulation by proposing to grandfather-in past and current impacts of nuclear-related activities by only requiring an assessment of *additional* impacts. The NRC should not allow past environmental injustices to proceed under the guise of a new, if not altogether different, nuclear activity.

In the past several years, the NRC has made an important and significant effort to advance environmental justice concerns in the arena of nuclear regulation. Adopting the LES proposals would be a giant step in the wrong direction. If built, the plant proposed by LES will have real effects on the people and communities of Hartsville and the surrounding area for many years to come. Those people, and those communities, deserve a fair, appropriate, and reasonable review of the environmental justice concerns in the siting of a nuclear facility in their neighborhoods.

The LES request to limit the parameters of the environmental justice review should be denied.