

February 4, 2005

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
)	
LOUISIANA ENERGY SERVICES, L.P.)	Docket No. 70-3103
)	
(National Enrichment Facility))	ASLBP No. 04-826-01-ML
)	

NRC STAFF OUTLINE OF PROPOSED KEY DETERMINATIONS FOR
CONTENTIONS EC-1, EC-2, EC-4, AND EC-7

NIRS/PC Contention EC-1

Basis (A):

- Expert A. Toblin: The Staff provided an explanation of how it determined the dimensions of any perched water bodies which could form at the alluvium/Chinle interface, the flow rates rates of such bodies and the potential discharge locations of such bodies in both its interrogatory responses and in its prefiled direct testimony

Basis (B)

- Environmental Report, Experts G. Harper, A. Toblin: This basis relates to two basins designed to collect and hold liquid at the site:
 - One is the Treated Effluent Evaporative Basin or TEEB. This would contain uranium-bearing effluent and is designed to be a double-lined basin with a leak detection system between the liners. The system minimizes the possibility the possibility of leakage.
 - The other is the Stormwater Detention Basin which will contain stormwater runoff and blowdown from the cooling tower and the heating boiler.
- Expert A. Toblin: Leakage of these types of liners has been know to occur; however the possibility of leakage can be minimized by proper installation and adherence to industry standards. LES has committed to utilize proper installation of liners.
- Expert A. Toblin: While it is possible that the liners in these basins will leak, it is not possible to predict the probability or frequency of leakage with any degree of certainty.
- Expert A. Toblin: In the event that leakage occurs, it is possible that the water could saturate the clay underlying the basin, and then enter the alluvium/Chinle interface where it would mix with water from the stormwater detention basin and septic systems or

evapotranspire. However, the impacts from this water would not be of significant environmental concern due to the commitment by LES to properly install liners, the design of the basins, the properties of the clay layer underlying the basins and the fact that the basins will be dry for a significant part of the year.

Basis (C)

- DEIS, Expert A. Toblin: In the DEIS the Staff determined that no precipitation discharge is present in the vadose zone.
- Expert A. Toblin: This conclusion was based on a review of the results of 14 borings taken at the proposed NEF site. One boring log shows moisture described as "slight" at a depth of 6 to 14 feet. A second boring log shows that clay at the top of the Chinle formation was described as moist. The remaining borings found no moisture.
- Expert A. Toblin: The findings of moisture in the two borings are isolated occurrences and do not indicate that precipitation recharge is present at the site.

Basis (D)

- Expert A. Toblin: There is no evidence which indicates that faults are present beneath the proposed NEF site.
- Expert A. Toblin: Even if faults are present, they do not necessarily form fast flow paths for transport of water. Further, faults within this type of soil are subject to closure over time due to swelling of the surrounding clay.
- Expert A. Toblin: The rate at which water flows through soil or rock is referred to as permeability.
- Expert A. Toblin: The permeability of the soil beneath the proposed NEF is very low, as found in a large number of measurements taken at and in close proximity of the site.
- Expert A. Toblin: Based on the low permeability measurements at the site, the absence of any known faults beneath the site, and the results of a geological investigation of the nearby WCS site of a recently discovered fault.

Basis (E)

- Expert A. Toblin: Stormwater runoff at the proposed would be expected to contain contaminants typical of industrial facilities.
- Expert A. Toblin: In addition, it is possible that stormwater runoff could contain contaminants from spills or accidents. However, the potential contamination from such incidents will be minimized by planned spill prevention control and countermeasures.
- Expert A. Toblin: The substances referred to by NIRS/PC - PAHs are organic substances found in most petroleum products and can enter the environment through, for example, emissions from generator or motor vehicles. These can be present in normal highway and

- parking lot runoff.
- Expert A. Toblin: The presence of these substances will be monitored through the stormwater monitoring program regulated by the State.

Relief Requested:

- Board ruling that the Staff has provided an adequate explanation of how it determined the dimensions of any water bodies which could result from leakage from the stormwater detention basin and septic leach fields, flow rates and discharge areas.
- Board ruling that the DEIS need not contain a specific estimate of the probability or frequency of leakage through liners of the TEEB or the stormwater detention basin given the absence of a means to reliably predict these factors and that the DEIS contains an adequate analysis of the potential fate of water which leaks from those basins.
- Board ruling that the conclusion in the DEIS that no precipitation discharge is present in the vadose zone is adequately supported.
- Board ruling that the conclusion in the DEIS that low permeability exists in the Chinle formation is adequately supported.
- Board ruling that the DEIS adequately considers the environmental impacts of contaminants which may be present in stormwater runoff, such as PAHs and other organics and contaminants from spills and accidents.

NIRS/PC Contention EC-2

- Expert A. Toblin: NRC has determined effects of projected NEF water use on water levels and long-term productivity of Hobbs well field and Lea County Underground Water Basin.
- Expert A. Toblin: Impacts would be SMALL (pre-filed direct testimony at p. 4).
 - Used finite-difference numerical computer model to determine effects of projected NEF water use (pre-filed direct testimony at p. 5).
 - Simulated pumpage both with and without proposed NEF and compared results to determine impacts would be small.
 - In year 2040, Hobbs well field saturated thickness without NEF usage is 38.2 feet (pre-filed direct testimony at p. 6).
 - In year 2040, Hobbs well field saturated thickness with NEF usage is 37 feet (pre-filed direct testimony at p. 6).
- A. Toblin EC-2 direct testimony explaining water supply impact determinations rectifies deficiency alleged in EC-2.
- Relief Requested: Board ruling that the Staff, through the analysis in the DEIS and additional analysis presented in direct testimony in this proceeding, has adequately considered the potential impacts of the proposed facility on water supplies.

NIRS/PC Contention EC-4

- Expert D. Palmrose: Impacts of conversion of DUF_6 were taken into account in the Staff's Environmental Impact Statement.
 - Staff analyzed DOE environmental review documents related to the conversion facilities which are being constructed for the conversion of DUF_6 at the Portsmouth, Ohio, and Paducah, Kentucky sites. (Palmrose Pre-filed Direct Testimony at 5).
 - DOE initially prepared the Programmatic Environmental Impact Statement (PEIS). (Palmrose Pre-filed Direct Testimony at 5-6).
 - PEIS considered a particular process for U_3O_8 in which the DUF_6 would be converted to U_3O_8 and concentrated HF. The HF product of this process would be in liquid, or aqueous, form. (Palmrose Pre-filed Direct Testimony at 6).
 - One option considered and analyzed in the PEIS for the management of HF was converting the aqueous HF to anhydrous HF by distillation. (Palmrose Pre-filed Direct Testimony at 6-9).
 - The analysis performed by DOE in the PEIS presents a thorough analysis of impacts of a conversion facility using an as yet to be commercially established distillation process to produce anhydrous HF. (Palmrose Pre-filed Direct Testimony at 11-12).
 - A more specific analysis would require knowledge of the specific processes which would be used to perform the distillation process and the specific site at which the facility would be constructed. (Palmrose Pre-filed Direct Testimony at 11-12).
 - The PEIS was a preliminary step in developing a strategy to manage the DUF_6 inventory at its two uranium enrichment facilities at Paducah, Kentucky and Portsmouth, Ohio. (Palmrose Pre-filed Direct Testimony at 5).
 - Site-specific evaluations of the environmental impacts associated with aqueous HF and CaF_2 conversion product sale and use were prepared for the Paducah and Portsmouth sites. (Palmrose Pre-filed Direct Testimony at 9-10).
 - In analyzing the impacts of a private conversion facility, Staff assumed that for conversion of DUF_6 to U_3O_8 , the impacts would be similar to those for the Portsmouth and Paducah facilities. Accordingly, the Staff used the values from the DOE analyses in reaching conclusions regarding the expected impacts in Section 4.2.14.3 of the DEIS. (Palmrose Pre-filed Direct Testimony at 10).
- Due to the lack of specific information it is not possible to quantify all of the impacts of a process that produces anhydrous hydrofluoric acid.
 - One can draw only generic conclusions regarding potential impacts. (Palmrose Pre-filed Rebuttal Testimony at 2).

- DOE has compiled the most complete, available environmental analysis for anhydrous hydrofluoric acid management and the associated impacts in the PEIS. (Palmrose Pre-filed Rebuttal Testimony at 2).
- There is no basis or support for NIRS/PC's assertion that based on experiences at the uranium plant near Fernald, Ohio, that impacts of lower scrubber efficiency should be assessed in the impacts of the deconversion facility.
 - The example of the scrubber efficiency at Fernald is not appropriate for comparison to hydrofluoric acid scrubbers since the operating conditions are different. (Palmrose Pre-filed Rebuttal Testimony at 6).
- NIRS/PC's assertion that the impacts of UO_2 must be analyzed relative to those of a conversion process to U_3O_8 , is beyond the scope of this contention and basis.
 - The basis of EC-4 which defines and limits the contention asserts that LES has chosen to focus its planning for a private conversion facility on a process involving anhydrous hydrofluoric acid, a process different from that used at the DOE plants. Furthermore, the basis states that the EISs for the DOE plants do not consider the impacts of the distillation process chosen by LES to generate AHF, nor the safety aspects of such operation, nor the impacts of sale, transportation, and use of AHF.
 - NIRS/PC attempts to use the rebuttal testimony of Dr. Makhijani to amend contention EC-4, and seeks to raise new issues outlining an additional alternative for consideration.
 - Dr. Makhijani alleges that the Staff's DEIS is deficient in failing to analyze the impacts of a conversion process to UO_2 , alleging that this would be a more stable waste form for disposal.
 - This issue, which was not raised in Dr. Makhijani's pre-filed direct testimony or the Staff's rebuttal testimony, falls outside the scope of the contention as defined and limited by the basis.
- Relief requested: Finding that the DEIS discussed the environmental impacts of the construction and operation of a conversion plant for DUF_6 waste.

NIRS/PC Contention EC-7

- Expert R. Nevin: The ER presents a reasonable projection of future supply and demand for enrichment services based on current indicators, showing a very close balance of supply and demand after 2010.
- The indicators relied on are WNA and EIA forecasts, both of which are generally accepted as reliable indicators.
- The ER forecast for demand is actually conservative when compared to the WNA forecast, reflecting conservative assumptions regarding new nuclear power capacity.
- The ER supply forecast is reasonable based on announced plans to build new centrifuge facilities and to close old diffusion facilities and assuming the continuence of of the HEU agreement.
- The evaluation of domestic supply and demand for enrichment services demonstrated that demand exceeded supply, indicating a need for additional domestic supply.
- The projected supply and demand for enrichment services, the industry experience of LES, and the contracts already in place, shows that LES can and will enter the market.
- Relief Requested: Board finding that (1) the ER contains a reasonable projection of enrichment supply and demand, (2) the ER conclusions with regard to supply and demand are supported by global projections in the ER and domestic projections in the DEIS, and (3) the supply and demand projections, industry and experience of LES and the existence of contracts for the NEF output demonstrate that LES will be able to enter the market.

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CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF OUTLINE OF PROPOSED KEY DETERMINATIONS FOR CONTENTIONS EC-1, EC-2, EC-4, AND EC-7 " in the above-captioned proceedings have been served on the following by deposit in the United States mail; through deposit in the Nuclear Regulatory Commission's internal system as indicated by an asterisk (*), and by electronic mail as indicated by a double asterisk (**) on this 4th day of February, 2005.

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