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USNRC

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

February 4, 2005 (11:57am)

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

In the Matter of:

Louisiana Energy Services, L.P.

(National Enrichment Facility)

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Docket No. 70-3103-ML

ASLBP No. 04-826-01-ML

**OUTLINE SUMMARY OF LES POSITION
ON NIRS/PC EC-1: IMPACTS UPON GROUND AND SURFACE WATER**

In accordance with the Board's Memorandum and Order (Memorializing and Ruling on Matters Raised in conjunction with August 3, 2004 Conference Call and Setting General Schedule for Proceeding) of August 16, 2004, following is the outline summary of Louisiana Energy Services, L.P.'s position on NIRS/PC EC-1 – Impacts Upon Ground and Surface Water.

NIRS/PC Argument: The work performed by LES and the NRC Staff is deficient, insofar as they have neither performed investigations necessary to properly characterize existing groundwater conditions, nor performed investigations necessary to determine how the proposed facility will affect groundwater in the future.

- The geology and hydrogeology of the site vicinity are well understood as a result of prior site investigations and studies performed at sites in proximity to the proposed NEF site (e.g., WCS, Lea County Municipal Landfill, and AVLIS sites) (Harper-Peery Direct, Answer 18; LES Exhibit 3).
- Cook-Joyce, Inc. ("CJI") performed additional field investigations at the NEF site and site vicinity on behalf of LES to supplement, where necessary, information about regional or site-specific conditions (Harper-Peery Direct, Answer 18)

NIRS/PC Argument: LES has not adequately evaluated the hydraulic properties of the “shallow materials” or “alluvium” beneath the NEF site.

- Extensive hydrogeological data collected at and near the NEF site do not suggest that saturated conditions exist in the alluvium beneath the NEF site. Zones of saturation observed in the alluvium near the NEF site are limited and intermittent (Harper-Peery Direct Testimony, Answer 38).
- The shallowest occurrence of a continuous saturated zone beneath the NEF is at approximately 220 feet below ground surface (Harper-Peery Direct, Answer 23).
- The limited moisture observed in two soil boring samples likely represented some “residual” moisture, attributable to the moisture storage capacity of the soil in the unsaturated zone. It did not reflect the existence of saturated conditions, as confirmed by CJI and MACTEC (Harper-Peery Direct Testimony, Answer 39).
- There is no need to measure specifically the hydraulic properties of the “alluvium or other shallow materials underlying the site,” whether by field methods or laboratory measurements (Harper-Peery Rebuttal, Answer 7).
- Given their thickness and low permeability, the Chinle Formation sediments (*i.e.*, “red beds”) that lie beneath the alluvium are more important from a hydrogeologic standpoint insofar as they inhibit potential downward migration of groundwater (Harper-Peery Direct, Answers 23-24).
- High evaporation/evapotranspiration and soil moisture storage capacity limit infiltration and migration of water beneath the NEF site. Recharge of saturated zones by waters originating at the site surface does not appear to be occurring (Harper-Peery Rebuttal, Answers 8-10).

NIRS/PC Argument: LES and NRC Staff have not adequately evaluated the possibility that fractures may act as “fast flow paths” and rely on “restricted” permeability data.

- Extensive permeability and hydraulic conductivity data obtained from the WCS, Lea County Municipal Landfill, and NEF do not suggest that fractures are present (Harper-Peery Direct, Answer 24).
- The confined nature of the various water-bearing zones beneath the NEF site, and the very large hydraulic head differences between these zones,

strongly suggest the lack of "fast flow" paths (Harper-Peery Direct, Answers 24, 36, and 61; Harper-Peery Rebuttal, Answer 13).

- It is unlikely that any fractures beneath the NEF site would form interconnected or continuous zones that extend hundreds of feet vertically downward (Harper-Peery Rebuttal, Answer 13).
- The August 2004 WCS investigation confirms that any fractures or joints present in the Chinle "red beds" are not acting as potential migration pathways ((Harper-Peery Rebuttal, Answer 16).
- The potential for "cross-formational flow" at the NEF site is low (Harper-Peery Rebuttal, Answer 24).

NIRS/PC Argument: LES and the NRC Staff have not evaluated how site stormwater runoff and discharges to the site basins will affect groundwater.

- Given the low precipitation and high evapotranspiration rates in the site vicinity, the low-permeability of the near-surface soils, and the tendency of these soils to hold non-evapotranspired moisture in storage, infiltration of water from the Stormwater Detention Basin and septic leach fields is expected to be negligible.
- The Staff's analysis of the potential movement of "perched water bodies" along the alluvium/Chinle interface is highly conservative and concludes that any potential impacts would be negligible. This analysis includes conservative calculations of the dimensions of these perched water bodies, their flow rates, and their potential discharge locations (Harper-Peery Direct, Answer 51).
- LES will install the TEEB and UBC Storage Pad Stormwater Detention Basin liners by manufacturer-certified installers and in accordance with project specifications and applicable New Mexico Environment Department guidelines. The TEEB will be double-lined and have a leak detection system (Harper-Peery Direct, Answer 57).
- Water balance analyses show that these basins are likely to dry for a substantial portion of the year. Further, any potential contaminants within these basins are expected to be within applicable regulatory limits and present no significant environmental concern (Harper-Peery Direct, Answers 28-29).

NIRS/PC Argument: LES does not have adequate groundwater monitoring and stormwater monitoring programs.

- LES has proposed specific and adequate groundwater and stormwater monitoring programs that will be conducted with all applicable Federal/State requirements (Harper-Peery Direct, Answers 44, 62).

LES Conclusion: The potential for NEF operations to have adverse impacts on water resources is very low in view of the lack of any surface waters, the high degree to which the site hydrogeology has been characterized, LES's proposed treatment of effluents prior to discharge and use of other preventive measures designed to preclude contamination of effluents and site runoff, LES's proposed use of engineered basins/systems to collect facility discharges and runoff, favorable site hydrogeological conditions, and LES's proposed environmental monitoring programs.

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In the Matter of:)	Docket No. 70-3103-ML
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Louisiana Energy Services, L.P.)	ASLBP No. 04-826-01-ML
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(National Enrichment Facility))	

CERTIFICATE OF SERVICE

I hereby certify that copies of the "OUTLINE SUMMARY OF LES POSITION ON NIRS/PC EC-1: IMPACTS UPON GROUND AND SURFACE WATER"; "OUTLINE SUMMARY OF LES POSITION ON NIRS/PC EC-2: IMPACT UPON WATER SUPPLIES"; "OUTLINE SUMMARY OF LES POSITION ON NIRS/PC EC-4: IMPACTS OF WASTE STORAGE"; and "OUTLINE SUMMARY OF LES POSITION ON NIRS/PC EC-7 NEED FOR THE FACILITY" in the captioned proceeding have been served on the following by e-mail service, designated by **, on February 4, 2005 as shown below. Additional service has been made by deposit in the United States mail, first class, this 4th day of February 2005.

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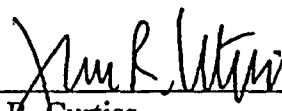
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