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Date: Mon, Nov 8, 2004 4:13 PM
Subject: LES Docket No. 70-3103/New Mexico Environment Department Comments on Draft EIS

9/17/04
69FR56104
(20)

Attached for filing are the comments of the New Mexico Environment Department on the draft Environmental Impact Statement for the Proposed National Enrichment Facility in Lea County, New Mexico prepared by NRC Staff.

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U.S. NUCLEAR REGULATORY COMMISSION
In the Matter of LOUISIANA ENERGY SERVICES, LP
Docket No. 70-3103-ML Official Exhibit No. 35
OFFERED by: Applicant/Licensee Intervenor NIRS/PC
NRC Staff Other
IDENTIFIED on Witness/Panel G. Rice
Action Taken: ADMITTED REJECTED WITHDRAWN
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Mail Envelope Properties (418FE162.CB3 : 17 : 40115)

Subject:	LES Docket No. 70-3103/New Mexico Environment Department Comments on Draft EIS
Creation Date:	Mon, Nov 8, 2004 4:09 PM
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November 8, 2004

By electronic mail (nrcrep@nrc.gov) and mail

Chief, Rules Review and Directives Branch
Division of Administrative Services
United States Nuclear Regulatory Commission
Mailstop: T6-D59
Washington, DC 20555-001

Re: NMED Comments on Draft EIS for LES - Docket Number 70-3103

Dear Chief of the Rules Review and Directives Branch:

The New Mexico Environment Department (NMED) hereby submits its comments on the draft Environmental Impact Statement (EIS) for the Proposed National Enrichment Facility in Lea County, New Mexico prepared by Nuclear Regulatory Commission (NRC) Staff. NMED submits comments on the sections in the draft EIS concerning impacts on waste management, ground water, surface water, and air quality and concerning radiological impacts.

Waste Management

Louisiana Energy Services, LP (LES) proposes to store the depleted uranium that will be generated by its proposed facility for up to the thirty-year life of the facility. LES has put forth various strategies for final disposition of the depleted uranium, but final disposition of uranium byproduct cylinders still remains uncertain. Storage of the depleted uranium for up to thirty years, or longer, and the uncertainty of a disposition pathway represent an unacceptable risk to the citizens of New Mexico and to our environment.

Ground Water and Related Issues

1. As proposed in the draft EIS, the leachate from the septic system may result in contaminant transport in the alluvium up to two miles off site, where the waters may pose a threat of contamination to an ephemeral drainage or to aquifers as recharge. If this scenario or any other ground water contamination occurred, abatement would be required under the New

Mexico Water Quality Act and water quality regulations.

NMED is currently reviewing LES's application for a discharge permit under the New Mexico Water Quality Act and water quality regulations. If LES's application is not protective of ground water, the operation and design of the septic system may require modification prior to NMED approval of the discharge permit to prevent ground water contamination and discharge to an ephemeral drainage.

2. Page xxi, lines 44-49 and page xxii lines 1-5. Infiltration is expected from septic and storm water detention basin. This section states that water will perch on the Chinle layer and that there would be limited transport because of upward flux to the root zone. Later, however, the draft EIS defines the limited transport as potentially off-site contamination for approximately 2 miles. These sections are inconsistent between themselves. *See* comments 17, 18, and 19.

3. Table 1-2, page 1-12. As a clarification, the New Mexico Water Quality Act applies to permitting prior to construction, during operation, closure, post-closure and abatement, if necessary. Also, all monitor wells would require a permit from the New Mexico Office of the State Engineer.

4. Page 2-2, lines 26-31. As a clarification, there is ground water at approximately 220 feet and 600 feet and ground water has the potential for localized occurrences in the alluvium at approximately 30 to 50 feet (as indicated on page 3-35 lines 41-74). Because these waters have total dissolved solids less than 10,000 milligrams per liter, all of the ground water is subject to protection under New Mexico Water Quality Control Commission Regulations, 20.6.2 NMAC.

5. Page 2-14, lines 19-25 and Figure 2-10. LES should provide a comprehensive water balance to illustrate projected water supply, demand and losses. It would be easiest to evaluate a single figure each for the construction phase and the operational phase.

6. Page 3-26, lines 33-36 and page 3-29, Table 3-8. The "Cretaceous Age" Antlers Formation is an error when compared to the Table 3-8 because the Antlers Formation is Tertiary Age. If the following is the correct interpretation, the sentence should be rewritten to explain the evidence of a reverse fault in Triassic Beds. There was no fault displacement through the younger Antlers Formation. Currently, the sentence is unclear because a clause modifies Triassic beds and not the fault.

7. Page 3-26, Figure 3-16. The geologic cross section provided in Figure 3-16 is based on another report, the July 2004 LES environmental report. The EIS should address how many drilling locations were used to draw the cross section; whether there is a plan map that shows the control points for the cross section; whether the dune sands recharge areas are located to the north and south of the proposed site; and how close will the cut and fill construction (maximum 13 feet deep) be to the Ogallala Formation.

8. Page 3-27, lines 15-19. The EIS should provide an explanation of the petroleum resources and exploration holes on the proposed LES site. Improperly sealed or abandoned drill

holes would provide conduits for contamination. The EIS should address whether there are any existing or former well locations for petroleum within the proposed site boundary.

9. Page 3-27, lines 41-47. The EIS should address whether the dunes and alluvial deposits are part of a recharge area for shallow or deep aquifers southward from the site.

10. Page 3-32, lines 19-22. Net evaporation is cited as 65 inches per year. The EIS should address whether design measures considered the concentration of salts and other contaminants in basins and ponds.

11. Pages 3-34 and 3-35. The State of New Mexico regulates ground water with total dissolved solids concentrations less than 10,000 milligrams per liter. The shallow ground water occurrences or perched zones on adjacent properties are considered ground water if there are usable quantities of water even though the aquifer may be of limited horizontal or vertical extent. Also, some shallow ground water zones may recharge other aquifers or discharge to ephemeral drainages.

12. Page 3-35. The statement, "Field investigation and computer modeling were used to show that no precipitation recharge occurs (i.e., rainfall seeping deeply into the ground) in thick, desert vadose zones with desert vegetation", may conflict with subsequent paragraphs. For example, the draft EIS identifies thick vadose areas with deep percolation, in particular episodic recharge events in ephemeral drainages without vegetation (e.g., Monument Draw), on sand dunes or seasonally when less evaporation or transpiration occurs during the winter. NMED agrees that evaporation and transpiration have the potential to affect water in the vadose zone to a depth of a few to even tens of feet, however there are site specific conditions and seasonal variations that create exceptions to the effects of evaporation and transpiration.

13. Page 3-37. The draft EIS states that there are no wells within one-mile of the site, but then states that the nearest municipal supply wells are 20 miles to the north of the site. The EIS should address, however, how close the nearest domestic and livestock wells are to the site. In this regard, NRC Staff should consult with the Office of the State Engineer to determine the nearby wells because that office has records of such wells.

14. Page 3-42, Table 3-11. According to the draft EIS, the total dissolved solids (TDS) concentration of 2,500 milligrams per liter (mg/L) is less than the combined concentrations for chloride and sulfate of 3,800 mg/L. However, the TDS concentration cannot be less than the sum of the concentrations reported for the individual parameters. Field pH and laboratory results for sodium, potassium, magnesium, calcium, alkalinity (bicarbonate and carbonate) should be included in future analysis.

15. Pages 3-42 and 3-43, Table 3-11. The existing regulatory standard for uranium in New Mexico ground water is 0.030 mg/L, not 0.005 mg/L. The existing regulatory standard for copper in New Mexico ground water is 1.0 mg/L, not NS (no standard).

16. Page 4-12, lines 35-43. To avoid any confusion with the term "geosynthetic" liner,

NMED recommends use of "synthetic liner." A High Density Polyethylene (HDPE) or similar synthetic liner will be required. Some geosynthetic liners have bentonite or other clays without an adequate HDPE thickness. Clay was mentioned as the topmost layer above the synthetic liner. The Treated Effluent Evaporative Basin (TEEB) is expected to be dry 1 to 8 months during the year. Drying will cause the clay layer to crack and reducing its effectiveness as a barrier to flow. The clay may offer resistance to ultraviolet (UV) ray damage to a synthetic liner, while some synthetic liners are UV resistant. As the process water dries and when salts dissolve again, the water contaminants in the TEEB will become more concentrated. The EIS should consider impacts from the concentration of salts and other contaminants in basins and ponds.

17. Page 4-13. The Site Stormwater Detention Basin is predicted to infiltrate and form a perched aquifer in the alluvium above the Chinle Formation. The resultant episodic recharge events may cause some ground water to migrate 2 miles down gradient and discharge at Custer Mountain or southeast of Monument Draw. LES must monitor the alluvial material for both ground water quality and the water levels to determine if the water is present or may move off site. A system of alluvial dry wells will be necessary to serve as an early detection system in case the preventive measures fail to eliminate or detect all leaks.

18. Page 4-14. The septic system may form a perched aquifer along with the stormwater that could have off-site impacts. The septic system should be consistent with NMED Ground Water Quality Bureau Guidelines for Design Criteria, Operation and Maintenance. Given the potential impacts cited, it may be necessary to consider an alternate design to reduce the potential formation of a perched ground water and contaminant transport off site.

19. Page 4-14, lines 13-22. Having no ground water users within 2 miles down gradient today does not ensure that there will be no users in the future. Whether there are current users or not, the ground water on- and off-site is protected under the New Mexico Water Quality Act and water quality regulations. Therefore, any on- or off-site ground water contamination would have to be abated under New Mexico water quality regulations. The off-site water movement may recharge other aquifers or discharge to surface water of the United States, which includes ephemeral drainages.

20. Page 4-15, lines 42-43. The term "nonrenewable water source" may not be appropriate for an aquifer that has the potential to receive recharge or recover from reduced demand. Due to local and regional demands for water, the Ogallala aquifer has been mined faster than the recharge rate.

21. Page 4-60, lines 16-24. During the decommission plan development and implementation, LES must involve NMED to ensure that closure activities meet state regulations in addition to the NRC requirements.

22. Page 6-8, lines 40-42. LES reports that effluent concentrations for the TEEB will be 0.225 mg/L for uranium. This uranium concentration will rise by evaporation. The EIS should evaluate the concentration by evaporation.

23. Page 6-13, lines 6-10. LES will likely be required by NMED to add three alluvial wells, which will be completed in the alluvium at the top of the Chinle to monitor any leakage or changes in water quality from the ponds or septic system. The alluvial wells should be monitored quarterly for water levels and would be sampled when water is present.

24. Page 6-16, lines 17-22. The NMED Ground Water Quality Bureau (GWQB) discharge permit will likely require annual sampling of the septic system for TKN, nitrate, total dissolved solids and chloride.

25. Page 6-17, line 11. Ground water sampling and analyses for the GWQB discharge permit will also include major ions (e.g., Cl, SO_4, TDS, F, Na, Ca, Mg, K) and field parameters of electrical conductance, temperature and pH.

26. Page 6-19, lines 20-37. From the meteorological station, the precipitation measurements may provide some additional means to verify the adequacy of stormwater pond designs and management in a timely fashion. For example, rainfall events above 0.25 inch would trigger a visual inspection for the proper functioning of the site stormwater systems and evaporation pond.

Surface Water

1. The United States Environmental Protection Agency (USEPA) requires National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) coverage for storm water discharges from construction projects (common plans of development) that will result in the disturbance or re-disturbance of one or more acres, including expansions, of total land area. Because the project, as described in the draft EIS, exceeds one acre (including staging areas), it will require appropriate NPDES permit coverage prior to beginning construction. Small construction projects (one to five acres) may be able to qualify for a waiver in lieu of permit coverage. *See* Appendix D in CGP.

Among other things, the Construction General Permit requires that a Storm Water Pollution Prevention Plan (SWPPP) be prepared for the site and that appropriate Best Management Practices (BMPs) be installed and maintained both during and after construction to prevent, to the extent practicable, pollutants -- primarily sediment, oil, grease and construction materials from construction sites-- in storm water runoff from entering waters of the United States. The permit also requires that permanent stabilization measures, e.g., revegetation and paving, and permanent storm water management measures, e.g., storm water detention or retention structures as described in the draft EIS and velocity dissipation devices, be implemented post construction to minimize, in the long term, pollutants in storm water runoff from entering these waters. In addition, permittees must ensure that there is no increase in sediment yield and flow velocity from the construction site, both during and after construction, compared to pre-construction, undisturbed conditions. *See* Subpart 9.C.1 in CGP.

EPA requires that all "operators" obtain NPDES permit coverage for construction projects. *See* Appendix A in CGP. Generally, this means that at least two parties will require permit coverage: the owner/developer of the construction project who has operational control over project

specifications (LES in this case) and the general contractor who has day-to-day operational control of those activities at the site, which are necessary to ensure compliance with the storm water pollution prevention plan and other permit conditions. It is possible that other "operators" will require appropriate NPDES permit coverage for the project.

The CGP was re-issued effective July 1, 2003. *See* Federal Register, Vol. 68, No. 126, July 1, 2003, p. 39087. The CGP, Notice of Intent (NOI), Fact Sheet, and Federal Register notice can be downloaded at http://epa.ctgusa.com/npdes/stormwater/cgp.cfm.

2. Once all associated construction activities are terminated and final stabilization is achieved, the facility may require coverage under the NPDES multi-sector general permit (MSGP). Proposed industrial activities at the completed facility may fall under Sector F, Chemical and Allied Products, as described in the MSGP. *See* Federal Register, Vol. 65, No. 210, October 30, 2000. In addition, regulatory requirements for each sector are additive if a facility engages in more than one industrial activity as identified in the MSGP.

The EIS states that LES is in the process of deciding whether to submit a "No Exposure Certification for Exclusion from NPDES Storm Water Permitting." While EPA makes this exclusion available to most industries that may otherwise require permit coverage under the MSGP, such an exclusion is rarely granted for facilities of the size proposed in the EIS.

Air Quality

1. This project is proposed to be located in Lea County, which is currently considered to be in attainment of all state and national ambient air quality standards. The draft EIS, p. 3-20, states incorrectly that there have been no instances where particulate matter has exceeded National Ambient Air Quality Standard (NAAQS), as monitored by NMED. This is not correct. An exceedance of the NAAQS for particulate matter 10 microns or less in diameter (PM_{10}) has been recorded in Hobbs, New Mexico. NMED is currently developing a Natural Events Action Plan (NEAP) for Lea County. The NEAP will require Best Available Control Measures (BACM) to minimize blowing dust from anthropogenic sources. The EIS, therefore, should address how BACM will be employed at the facility.

2. In addition to the NAAQS, New Mexico has state ambient air quality standards that are outlined in Title 20, Chapter 2, Part 3 of the New Mexico Administrative Code (20.2.3 NMAC). The EIS should address these standards and whether these standards will be met. Table 3-6 should be expanded to include the state standards for hydrogen sulfide (H_2S), total reduced sulfur (TRS), and total suspended particulate (TSP).

3. The EIS does not address requirements of 20.2.72 NMAC, Construction Permits, regarding minor source permitting and the state toxic air pollutants program. State regulated air toxics should be identified and, as applicable, emissions quantified.

4. Any requirements under 20.2.73 NMAC, Notice of Intent and Emission Inventory Requirements, should also be addressed.

Radiological Exposure

1. Regarding Section C.4.2 of Appendix C: The probabilities of occurrence should be calculated and indicated for each of the accident scenarios discussed in Section C.4.2 of Appendix C. Doing so would better communicate to the reader the likelihood of such occurrences, allowing the reader to determine whether said occurrences and associated consequences are acceptable.

2. Regarding Subsection 4.2.13 of Section 4 "Environmental Impacts" and Subsection C.4.3 of Appendix C "Dose Methodology and Impacts": No remediation measures are itemized, discussed, and assessed that would mitigate long-term exposures resulting from the hydraulic rupture of a UF_6 cylinder postulated in Subsection 4.2.13 of Section 4 "Environmental Impacts or Subsection C.4.3 of Appendix C "Dose Methodology and Impacts." Neither are such remediation measures itemized, discussed, or assessed in the LES license application. However, the possible rupture of a UF_6 cylinder discussed in Subsection C.4.2.2 of the draft EIS estimates 7 latent cancer fatalities (LCF). Given the severity of consequences resulting from such a cylinder rupture, planning is necessary for timely remediation to minimize public radiation dose and adverse biotic effects. Recommended actions, anticipated costs, and funding sources should be itemized and discussed in the EIS. Finally, the environmental impacts from such a remediation project should also be discussed and assessed.

Miscellaneous

1. Page xxii, lines 5-6. Delete 'the' and 'territory' from "...Hobbs water supply system would constitute a small portion of the aquifer reserves from the New Mexico territory." The sentence would read, "...small portion of the aquifer reserves from New Mexico."

2. Page 1-10, lines 37-48. The first reference, "New Mexico Environment Department/Water Quality Bureau," should be to "New Mexico Environment Department/Drinking Water Bureau" and the second reference to "New Mexico Environment Department/Ground Water Quality Bureau."

3. Page 3-17, lines 17-25. The EIS should address what measures will be in place to prevent windborne transport of concentrated salts and other contaminants from the evaporation and storm water retention basins.

4. Page 3-27, lines 3-11. Earthquakes in the vicinity of the site are cited as being isolated, small clusters of low- to moderate-sized events. The EIS should address what magnitude seismic events are considered low- to moderate-sized events.

5. Page 4-53, lines 1-27. LES cites a cylinder management program to limit exterior corrosion at Paducah, Kentucky; Portsmouth, Ohio; and Oak Ridge, Tennessee sites. The EIS should address whether the cylinder management program considers climatic differences (e.g., evaporation that may concentrate corrosive salts, heat that may increase reaction rates) at Eunice, New Mexico.

6. Page 5-5, lines 5-7 and lines 29-31, and page 5-6 lines 3-4. The recommended frequency of annual inspections appears appropriate for the detailed inspections. The EIS should address the frequency of visual inspections. Under the current description, only the annual inspection would trigger additional inspections. The EIS should address whether there would be inspections following large diameter hail, lightning or other severe weather events at the facility.

7. Page 8-1, lines 26-47 and page 8-2, lines 1-8. According to the list of agencies and persons consulted, NMED and Office of the State Engineer were not contacted. These state agencies would be appropriate to contact in the development of an EIS, which evaluates impacts to the water quality and quantity.

8. Page C-25, lines 13-21. LES should mention a specific magnitude of earthquake used for the design basis.

Thank you for considering the comments of the New Mexico Environment Department.

Please feel free to contact me if you have any questions regarding our comments.

Sincerely,

Tannis L. Fox
Deputy General Counsel

cc: Governor Bill Richardson
Ron Curry, Secretary, NMED