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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

February 3, 2005 (11:38am)

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

**REVISED PREFILED REBUTTAL TESTIMONY OF
ROGER L. PEERY, LEN R. STOKES AND TIMOTHY WOOMER
ON BEHALF OF LOUISIANA ENERGY SERVICES, L.P. REGARDING
CONTENTION NIRS/PC EC-2 ("IMPACT UPON WATER SUPPLIES")**

I. WITNESS BACKGROUND

Q1. Please state your name, occupation, employer, and responsibilities relative to the licensing of Louisiana Energy Services, L.P.'s ("LES") proposed National Enrichment Facility ("NEF").

A1. I, Roger L. Peery ("RLP"), am employed as Chief Executive Officer and Senior Hydrogeologist at John Shomaker & Associates, Inc. in Albuquerque, New Mexico, where I am responsible for managing a variety of hydrogeological and water resources evaluations. I was hired by LES to serve as an expert witness on hydrogeological and water resources issues in this proceeding. A full statement of my professional qualifications was included with LES's initial prefiled testimony in this proceeding, submitted on January 7, 2005.

I, Len R. Stokes ("LRS"), am an independent consultant and the founder and President of Progressive Environmental Systems, Inc. ("PES") in Capitan, New Mexico. I provide professional consulting and project management services on water resources, wastewater, and environmental permitting matters. I was hired by LES as an expert witness on

water resources issues. A full statement of my professional qualifications was included with LES's initial prefiled testimony in this proceeding, submitted on January 7, 2005.

I, Timothy M. Woomer ("TMW"), am the Director of Utilities for the City of Hobbs, New Mexico. I am responsible for managing and supervising the water production, water distribution, wastewater collection, wastewater treatment, GIS/GPS mapping, billing and warehousing divisions of the City of Hobbs. A full statement of my professional qualifications was included with LES's initial prefiled testimony in this proceeding, submitted on January 7, 2005.

Q2. What is the purpose of this rebuttal testimony?

A2. (RLP, LKS, TMW) The purpose of this rebuttal testimony is to address specifically the written direct testimony of George Rice regarding Contention NIRS/PC EC-2 in this proceeding. We have reviewed Mr. Rice's testimony, as submitted on behalf of Nuclear Information and Resource Service and Public Citizen ("NIRS/PC") on January 28, 2005, in its entirety. We show how the issues raised by Mr. Rice were previously addressed in our initial direct testimony in this proceeding. We also provide some additional responses to those issues in view of an additional claim made by Mr. Rice. In general, as we concluded previously, LES and the NRC Staff have performed a complete and adequate assessment of the potential environmental impacts of the proposed NEF on water supplies.

II. **RESPONSE TO CLAIMS MADE IN THE PREFILED DIRECT TESTIMONY OF NIRS/PC WITNESS GEORGE RICE**

Q3. Please summarize the major opinions and conclusions stated by NIRS/PC witness George Rice in his prefiled direct testimony relative to Contention NIRS/PC EC-2.

A3. (RLP, LKS, TMW) In his direct testimony regarding Contention NIRS/PC EC-2, Mr. Rice states that:

The water used at the proposed [NEF] would be pumped from the Hobbs well field (Lea County Underground Water Basin, Ogallala Aquifer). Groundwater in the Lea County Underground Water Basin is being pumped at a rate faster than it is being recharged. In the DEIS, NRC compares the water use of the proposed facility to the amount of water stored in the Ogallala Aquifer in the entire State of New Mexico. This comparison is not relevant or useful. The effects of the NEF's water use would be confined to the portion of the Ogallala Aquifer near the Hobbs well field, not the Ogallala in the entire state. LES and NRC have not determined how pumpage for the proposed facility would affect water levels and the long-term productivity of the Hobbs well field or the Lea County Underground Water Basin. The long-term effects of water use by the NEF could be estimated by simulating pumpage from the Hobbs well field both with, and without, the additional pumpage required for the proposed NEF.

See "Direct Testimony of George Rice on Behalf of Nuclear Information and Resource Service and Public Citizen" (January 28, 2005), at 2-3. These statements represent the entirety of Mr. Rice's "substantive" direct testimony relative to Contention NIRS/PC EC-2.

Q4. Do agree with Mr. Rice's conclusion that "LES and NRC have not determined how pumpage for the proposed facility would affect water levels and the long-term productivity of the Hobbs well field or the Lea County Underground Water Basin"?

A4. (RLP, LKS, TMW) No. We fully addressed this issue in our prefiled direct testimony of January 7, 2005. *See* "Prefiled Testimony of Rod M. Krich, George R. Campbell, Roger L. Peery, Len R. Stokes, and Timothy Woomer On Behalf of Louisiana Energy Services, L.P. Regarding Contention NIRS/PC EC-2 ("Impacts Upon Water Supplies") (hereinafter "LES Direct Testimony on NIRS/PC EC-2"). In fact, we responded to this exact assertion (which also appears in the amended version of Contention NIRS/PC EC-2) in Answer 48 of our direct testimony. *See* LES Direct Testimony on NIRS/PC EC-2, at 26-29. For the reasons stated therein, we concluded that that the potential impacts of the NEF's projected water usage on current and future water supplies – whether viewed relative to (1) the Hobbs well field, (2) the

Lea County Underground Water Basin (the portion of the Ogallala aquifer within Lea County), or (3) the entire New Mexico portion of the Ogallala Aquifer – are very small and have been adequately evaluated by LES and the NRC Staff.

Q5. Does Mr. Rice provide any scientific/technical data or analysis to substantiate his claims?

A5. (RLP, LKS, TMW) No, Mr. Rice provides no data or analysis to support his conclusion. For the most part, Mr. Rice merely repeats assertions contained in the contention itself. The only new piece of information presented by Mr. Rice is his assertion that “the long-term effects of water use by the NEF could be estimated by simulating pumpage from the Hobbs well field both with, and without, the additional pumpage required for the proposed NEF.” Notably, however, Mr. Rice makes no effort to undertake such an analysis himself, *i.e.*, to determine the effects of pumpage from the Hobbs well field and to quantify postulated effects on water levels and well productivity in the Hobbs well field.

Q6. Do you believe that such an analysis is, in fact, necessary to evaluate the potential effects of NEF water usage on water supplies in the site vicinity? Please explain.

A6. (RLP, LKS, TMW) No. As we explained in our direct testimony, the NEF’s projected water usage constitutes an extremely small fraction of the water currently used by, and available to, the City of Hobbs. This fact, coupled with the favorable hydraulic properties (*e.g.*, high specific yield and large saturated thickness) of the portion of the Ogallala aquifer supplying the Hobbs well field, assures that the proposed NEF would not have any significant impacts on water levels and well productivity within the Hobbs well field. Further, analysis by the City of Hobbs has shown that the City’s water rights holdings will protect the water supply for the City for the next 40 years, and that the current production and distribution system are more than

adequate to supply the projected NEF plant site now, and through its expected operational life of thirty years, while still adequately meeting the needs of the community. See LES Direct Testimony on NIRS/PC EC-2 (Answers 48-49), at 26-30.

Q7. Is it correct that the NRC Staff has, in any event, performed an analysis of the type mentioned by Mr. Rice in his direct testimony?

A7. (RLP) Yes. NRC Staff expert witness Alan Toblin used a finite-difference numerical computer model of the Lea County Underground Water Basin, which he obtained from the New Mexico Office of the State Engineer, specifically to simulate the effects that water withdrawal for the proposed facility would have on water levels and the long-term productivity of the Hobbs well field and the Lea County Underground Water Basin. See "NRC Staff Testimony of Alan Toblin Concerning Nuclear Information and Resource Service and Public Citizen Environmental Contention 2 ("NIRS/PC EC-2") (Impacts Upon Water Supplies)" (January 28, 2005) (Answers 11-13), at 5-7 ("Toblin Direct Testimony on NIRS/PC EC-2").

Q8. Are you familiar with the model used by Mr. Toblin in his simulation?

A8. (RLP) Yes, I am familiar with the model used by Mr. Toblin. It is a digital groundwater flow model (*i.e.*, a three-dimensional, finite-difference computer model) that was developed for the Lea County Underground Water Basin for the administration of water rights. It is the same model referenced extensively in the *Lea County Regional Water Plan*, to which I was a principal contributor (*i.e.*, I was the project manager for the hydrogeologic portion of the Plan). The development and testing of the model are described in detail in NRC Staff Exhibit 21 (Musharrafieh, G. & Chudnoff, M., *Numerical Simulation of Groundwater Flow for Water Rights Administration in the Lea County Underground Water Basin New Mexico*, New Mexico

Office of the State Engineer, Hydrology Bureau Report 99-1, January 1999), which I have reviewed.

Q9. Have you reviewed Mr. Toblin's discussion, as presented in his direct testimony, of the manner in which he used the digital groundwater flow model, and the outcome of his modeling efforts?

A9. (RLP) Yes, I have. As Mr. Toblin explained, he modeled the additional water withdrawal specifically from the Hobbs well field attributed to water usage by the proposed NEF from 2010 to 2040. Specifically, he changed the input to the model provided by the State to reflect the increased water withdrawal specifically from the area north of the City of Hobbs by the projected NEF water usage. See Toblin Direct Testimony on NIRS/PC EC-2 (Answer 11), at 6.

Q10. Do you believe that the modeling performed by Mr. Toblin provides an adequate and conservative simulation of the effects of proposed NEF water usage on water levels in, and the long-term productivity of, the Hobbs well field and the Lea County Underground Water Basin?

A10. (RLP) Yes. Based on my review of Mr. Toblin's testimony and the Musharrafiieh-Chudnoff model, I believe that Mr. Toblin's simulation is adequate and conservative, and fully addresses Mr. Rice's concern regarding the alleged need to simulate pumpage from the Hobbs well field. It confirms that any additional drawdown at the Hobbs well field that might occur in connection with NEF water usage would be very small. See Toblin Direct Testimony on NIRS/PC EC-2 (Answer 12), at 6.

Q11. Do you agree with Mr. Toblin's conclusion that the amount of drawdown simulated to occur locally at the Hobbs well field would result in a small impact on the long-term water supplies in Lea County?

A11. (RLP) Yes. Mr. Toblin's modeling results and his associated conclusion are consistent with our qualitative assessment described above, and with the City of Hobbs' evaluation of the adequacy of its water supply relative to projected water usage needs.

Q12. Does this conclude your testimony?

A12. (RLP, LKS, TMW) Yes.

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

CERTIFICATE OF SERVICE

I hereby certify that copies of the "REVISED PREFILED REBUTTAL TESTIMONY OF GEORGE A. HARPER AND ROGER L. PEERY ON BEHALF OF LOUISIANA ENERGY SERVICES, L.P. ON CONTENTION NIRS/PC EC-1 ("IMPACTS UPON GROUND AND SURFACE WATER")"; "REVISED PREFILED REBUTTAL TESTIMONY OF ROGER L. PEERY, LEN R. STOKES AND TIMOTHY WOOPER ON BEHALF OF LOUISIANA ENERGY SERVICES, L.P. ON CONTENTION NIRS/PC EC-2 ("IMPACT UPON WATER SUPPLIES")"; "REVISED PREFILED REBUTTAL TESTIMONY OF ROD M. KRICH AND PAUL G. SCHNEIDER ON BEHALF OF LOUISIANA ENERGY SERVICES, L.P. ON CONTENTION NIRS/PC EC-4 (IMPACTS OF WASTE STORAGE)"; and "REVISED PREFILED REBUTTAL TESTIMONY OF MICHAEL H. SCHWARTZ ON BEHALF OF LOUISIANA ENERGY SERVICES, L.P. REGARDING CONTENTION 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 3, 2005 as shown below. Additional service has been made by deposit in the United States mail, first class, this 3rd day of February 2005.

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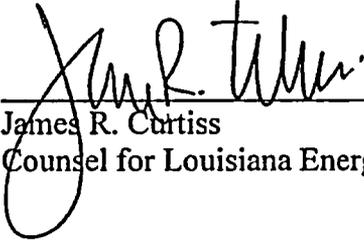
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