UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

BEFORE THE COMMISSION

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

ORIGINAL

Deposition of:

GEORGE R. (RANDY) CAMPBELL

ROD KRICH

ROGER L. PEERY

LEN STOKES

TIM WOOMER

witnesses of lawful age, taken on behalf of the Nuclear Information & Resource Service and Public Citizen, pursuant to notice, in the New Mexico Environment Department, Office of the Secretary, Conference Room, Harold Runnels Building, 1190 St. Francis Drive, Santa Fe, New Mexico, on Friday, September 17, 2004, at 2:00 p.m., before Carol Oppenheimer, Notary Public, when were present:

APPEARANCES:

On behalf of Nuclear Information & Resource Service and Public Citizen:

LINDSAY A. LOVEJOY, JR., ESQ.

618 Paseo del Peralta, Unit B

Santa Fe, New Mexico 87501

U.S. NUCLEAR REGULATORY COMMISSION
In the Matter of LOUISIANA ENERGY SERVICES, LP
Docket No. 70-3103-ML Official Exhibit No. 21
OFFERED by: Applicant/Licensee Intervenor NIRS/PC
NRC Staff Other
IDENTIFIED on Witness/Panel G. Rice
Action Taken: ADMITTED REJECTED WITHDRAWN
Reporter/Clerk

On behalf of the Louisiana Energy Services, L.P.:

JAMES R. CURTISS, ESQ.
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On behalf of the Nuclear Regulatory Commission:

LISA CLARK, ESQ.
Nuclear Regulatory Commission

Also Present:

JOHN W. LAWRENCE, ESQ.
National Enrichment Facility

GEORGE RICE
Expert Witness, Groundwater Hydrologist

ALAN TOBLIN
Advanced Technologies and Laboratories International, Inc.

ABE ZEITOUN, Ph.D.
Advanced Technologies and Laboratories International, Inc.

I N D E X

PROCEEDINGS

Whereupon,

GEORGE R. (RANDY) CAMPBELL

ROD KRICH

ROGER L. PEERY

LEN STOKES

TIM WOOMER

having been first duly sworn, were called as a witnesses herein, and were examined and testified as follows:

EXAMINATION

BY MR. LOVEJOY:

Q Would the witnesses please identify themselves, starting with Mr. Peery.

A (Mr. Peery) Roger Peery.

A (Mr. Woomer) Tim Woomer.

A (Mr. Stokes) Len Stokes.

A (Mr. Campbell) Randy Campbell.

A (Mr. Krich) Rod Krich.

Q Thank you. This is kind of an unusual format. I just feel I should caution everyone and myself at the same time that there's a whole crowd of us here supposed to be talking, and if there's more than one talking at once, nothing good happens at all.

Anyway, with that in mind, let's see. Mr. Peery, you've identified yourself in the previous

deposition. So we'll turn to Mr. Woomer. Can you state what position you hold professionally now?

A (Mr. Woomer) Yes, sir. I'm the utilities director for the City of Hobbs, New Mexico.

Q And how long have you been that?

A (Mr. Woomer) I've been in that capacity, it will be four years in December.

Q And what's your educational background? Could you just --

A (Mr. Woomer) I have a --

Q -- start with college?

A (Mr. Woomer) -- bachelor of science in mining engineering from West Virginia University.

Q Do you have any graduate degrees?

A (Mr. Woomer) No.

Q Okay. Do you have any -- have you had any instruction in matters of hydrology or geology?

A (Mr. Woomer) Are you asking about formal classwork?

Q Yes.

A (Mr. Woomer) No, sir.

Q Okay. Do you regard yourself as an expert in matters of hydrology?

A (Mr. Woomer) No, sir.

Q Are the matters you're going to be testifying

about in this proceeding, do they involve hydrology?

A (Mr. Woomer) I think you'd probably need to get more specific. Am I going to be testifying about hydrology? Is that what you mean or --

Q Yes.

A (Mr. Woomer) I don't intend to testify about hydrology.

Q Okay. Mr. Stokes, where are you employed now?

A (Mr. Stokes) I'm the president of Progressive Environmental Systems.

Q And where is that based?

A (Mr. Stokes) My home office is in Capitan, New Mexico.

Q And are you going to be offering expert evidence in this case?

A (Mr. Stokes) Yes.

Q On what issues?

A (Mr. Stokes) Water supply and water rights administration if asked.

Q And what training do you have in the area of water supply and water rights?

A (Mr. Stokes) I've been engaged in the -- as a water supply consultant since -- for about ten years. City of Las Cruces, I do all of their water supply, water rights work. City of Alamogordo, I'm the project manager

on the permitting of their desalination plant. I'm the contract director of the Lea County Water Users Association, and I'm under contract with the New Mexico State Interstream Commission for the Pecos River Compliance Project.

Q Okay. Pardon me. I'm going to look through this. I just received your resume. (Perusing document.)

You say you've acted as a water supply consultant for the City of Las Cruces for about ten years. What activities has that involved?

A (Mr. Stokes) I deal with their permitting issues, water rights. I negotiate purchases of water rights and contracts with the Elephant Butte Irrigation District on their behalf, I do some lobbying strictly on water issues for the City.

Q Do you regard yourself as an expert in water supply and water rights?

A (Mr. Stokes) Yes, sir. I've been certified such by the Federal Bankruptcy Court and provided testimony in -- expert testimony in several New Mexico State Engineering proceedings.

Q Okay. What proceeding involving the Bankruptcy Court was that?

A (Mr. Stokes) That was the Crowder in Judge McPhiely's -- in front of Judge McPhiely. It was the

Crowder, Santa Theresa case.

Q Okay. Now, Mr. Campbell, can you state your present position?

A (Mr. Campbell) Yes, sir. I'm with Lockwood Greene Engineers, and my current position is that of a senior consultant.

Q And what's your area of expertise with Lockwood Greene?

A (Mr. Campbell) I'm a mechanical engineer, and my area of expertise is in process engineering and in mechanical engineering.

Q And what issues are you going to be testifying about in this proceeding?

A (Mr. Campbell) The derivation of water usage for the NEF.

Q And we don't have your resume. Can you describe what your educational background is --

A (Mr. Campbell) Yes, sir. I --

Q -- in the relevant areas?

A (Mr. Campbell) I have a bachelor's of mechanical engineering technology from the University of North Carolina at Charlotte. And I do not have any advanced degrees.

Q Have you testified as an expert in the past?

A (Mr. Campbell) No, sir, I have not.

Q Mr. Krich, insofar as this deposition is concerned, what areas of expertise, if any, are you going to be testifying in?

A (Mr. Krich) Basically the same as Randy. It's the demand of the water for the facility, what the facility needed in terms of its usage.

Q And what training and experience do you have in that area?

A (Mr. Krich) I am a mechanical engineer and a nuclear engineer. I have done engineering and licensing for 30 years in the nuclear field, so I've done this type of work before.

Q Have you testified as an expert?

A (Mr. Krich) I have. Yes.

Q When has that happened?

A (Mr. Krich) That was in an NRC ASLB hearing for the Big Rock Point spent-fuel pool expansion.

Q What company was that for?

A (Mr. Krich) That was for Consumers Power.

Q And what was the substance -- what was the subject of your testimony there?

A (Mr. Krich) It was a long time ago. It had to do with cranes and water, basically the supply of cooling water to the spent-fuel pool.

Q Okay. Supply or demand?

A (Mr. Krich) Supply. And that's based on, of course, the heat loads, so it's based on a demand.

Q Okay. Let's start at the left again. Mr. Peery, what is the substance of the facts and opinions you're going to be testifying about the Board in this proceeding, apart from what we've discussed in the other deposition this morning?

A (Mr. Peery) Well, water availability in the Lea County Underground Water Basin, and I also have knowledge of the administrative criteria for the Lea County Underground Water Basin, which I can present as well.

Q And what conclusions are you going to testify to about water availability in the basin?

A (Mr. Peery) Impacts related to pumping the proposed water from the Lea County basin for the LES facility.

Q Can you state what conclusion you're going to give the Board?

A (Mr. Peery) My conclusion will be that there is a de minimis impact on water in the Ogallala Aquifer.

Q And how do you measure -- how do you calculate the impact?

A (Mr. Peery) Impact can be calculated in several ways. As a percentage of water withdrawn in

relation to the amount of water available in the Lea County Underground Water Basin and the potential additional declines in water levels at existing wells, specifically the Hobbs and Eunice wells.

Q Have you calculated those figures, the declines in the percentage of water withdrawn?

A (Mr. Peery) I haven't calculated them in a fashion where I've provided them to anyone else, but I have calculated them.

Q Can you share your calculations with us? Are they on paper?

A (Mr. Peery) No, they're not.

Q All right. Can you tell them into the record?

A (Mr. Peery) What I did for my calculations on the impacts of water levels was look at published hydrogeologic information, specifically related to the area of the Hobbs and Eunice well field. I looked at the transmissivity of the aquifer in that area, the specific yield of the sediments, and what the proposed withdraw of the equivalent of 75, 80 feet a year would be actually from an individual well. So I looked at a worst-case scenario, not looking at what that withdrawal would be as spread out over numerous wells or several well fields.

Q Did you do this all in your head?

A (Mr. Peery) No. I did it on my computer.

Q And is the data you generated in your computer now?

A (Mr. Peery) No.

Q What happened to it?

A (Mr. Peery) I didn't save the data. I can tell you what my assumptions were. I ran different scenarios.

Q Okay. What were your assumptions?

A (Mr. Peery) My assumptions were based on State Engineer's Office groundwater flow model for that area, which you can find reference to in the Lea County Underground Water Basin -- or Lea County Regional Water Plan.

Q Uh-huh.

A (Mr. Peery) It's a 1999 report by Musarieff & Chudnov. I used the transmissivity values they report for the Hobbs well field area and specific yield of that area.

Q Do you remember those figures, the transmissivity?

A (Mr. Peery) I looked at two different scenarios, one with transmissivity of approximately 80,000 GPD per foot, and another with a transmissivity of approximately 50,000 GPD per foot. Specific yield of 23 percent and the pumping rate equivalent, the continuous pumping rate equivalent to 75-acre feet per year.

Q Where did you get the figure 80,000?

A (Mr. Peery) From the State Engineer's published data on hydraulic conductivity for that area.

Q Is that in the regional water plan?

A (Mr. Peery) By reference, the range of hydraulic conductivities are.

Q When you say, by reference, would you be able to find it if I gave you a copy of the plan?

A (Mr. Peery) I could probably find where it says the hydraulic conductivity range is from X to X.

Q Okay. I just have one kind of marked-up copy here. Do you think you can find it?

A (Mr. Peery) I might.

MR. CURTISS: What's the document, Lindsay, you're referring to?

MR. LOVEJOY: Well, it's a Lea County Regional Water Plan, as run off from the web, from the State Engineer's web site, and I think we gave you the html in our identifying documents.

MR. CURTISS: Okay.

BY MR. LOVEJOY:

Q I don't know if we -- that's the only copy I have. I've been --

A (Mr. Peery) It should be understood this is a preliminary estimate. It has not been reviewed by anyone

else here at this table, nor anyone in my office, and it's standard for us to do peer review on everything that we do, and that is why I'm just not providing anything written on this.

Q I see.

A (Mr. Peery) (Perusing document.) Let me read a specific sentence in this Lea County Regional Water Plan. It's on page 6-9. Maybe a couple of sentences.

"Hydraulic conductivity reported for various portions of the Ogallala Aquifer in Lea County Underground Water Basin has been evaluated by a number of different authors, using different techniques. Values reported range from 3 to 262 feet per day."

"With higher" -- and I'm going to just pick out a select section here. "With higher hydraulic conductivity near the central portion of the basin between Tatum and Lovington, eastward to the Texas border and near Hobbs, specific yields ranging from 10 to 28 percent."

Q Was that the source of the data that you used in your calculations?

A (Mr. Peery) Yes.

Q The figures you gave were 80,000. Is GPD gallons per day?

A (Mr. Peery) Gallons per day per foot.

Q Per foot. Yes.

A (Mr. Peery) But I think I'd like to discuss the more conservative of 50,000 GPD per foot.

Q Okay. How did you derive 50,000 from the figures you just dictated?

A (Mr. Peery) Just taking a conservative approach.

Q Okay.

A (Mr. Peery) And that calculates out to -- and a pumping well is an additional decline of approximately a tenth of a foot per year, actually a little bit less than that. So over a 30-year period, I would say that it has a de minimis effect.

Q So you'd multiply that figure times 30 to calculate the 30-year effect?

A (Mr. Peery) No. I actually calculated a 30-year effect.

Q You calculated a 30-year effect.

A (Mr. Peery) Uh-huh.

Q And was that a tenth of a foot? You said a tenth of a foot per year.

A (Mr. Peery) It was a little over two feet for 30 years.

Q Would there be -- apart from the decline in the water level, which I take you calculated, would there be any other impact on the aquifer from the pumping you

hypothesized?

A (Mr. Peery) No.

Q Do you intend to have your calculations peer-reviewed?

A (Mr. Peery) If I'm requested to submit them, certainly they would have to be peer-reviewed.

Q Do you intend to write up your calculations?

A (Mr. Peery) I hadn't really considered it.

Q Okay. Do you intend to do any other calculations in connection with the issues of water supply, broadly speaking, in the LES case?

A (Mr. Peery) Not that I can currently think of.

Q Do you intend to offer any testimony on any other subjects in connection with the, broadly speaking, water supply issues here?

A (Mr. Peery) As I mentioned, I might be able to provide some information on water supply as it relates to administrative -- the State Engineer's administrative criteria for the basin.

Q What do you propose to testify concerning at the administrative criteria of the State Engineer?

A (Mr. Peery) The fact that -- basically all I was going to do was summarize the fact that the State Engineer's office originally had declared that basin and managed it in such a fashion that it was to be a totally

mined groundwater basin. They had intended for that entire basin and let enough water rights out to be mined over a 40-year period.

Q Over a what year?

A (Mr. Peery) Forty-year period. And we're certainly past the 40-year period at this point, and it hasn't occurred yet.

Q What hasn't occurred?

A (Mr. Peery) The complete mining of the Ogallala Aquifer. The other thing I would like to say is that the lower portion of the Lea County Underground Water Basin, the Ogallala water, is reserved for municipal and domestic use.

Q Reserved by whom?

A (Mr. Peery) The State Engineer's office.

Q When you say, the lower portion, what do you mean by that?

A (Mr. Peery) The lower 40 feet of the aquifer.

Q Are you saying that there's a declared policy to set apart the lower 40 feet for only municipal and domestic uses on the part of the State Engineer?

A (Mr. Peery) Yes, I am.

Q And so you would assume that would not be available for any industrial plant. Is that right?

A (Mr. Peery) No. Quite the opposite actually.

If an industrial plant were -- any activity where the water's provided from a municipal system, that would be reserved as part of the reservation for the municipal rights.

Q Oh, so you're saying that it would be available for a municipality to sell then to an industrial user.

A (Mr. Peery) Absolutely.

Q Okay. When did the State Engineer declare a basin here to be operated on the basis of mining the aquifer? When did that happen?

A (Mr. Peery) Len Stokes might be able to help me with this a little bit on the exact dates.

A (Mr. Stokes) It was declared in '51, I believe. Is that correct? Or it was declared in the '40s. Then it was revisited during the '50s.

A (Mr. Peery) Reopened in the '50s.

A (Mr. Stokes) It was closed and -- when it was first declared, it was closed in reappropriations. Then it was expanded and reopened in '51 for new appropriations. But they -- there's -- all mined basins have criteria for mining. All closed basins do.

Q You say they have criteria for mining. What do you mean? Criteria addressing what?

A (Mr. Stokes) That we -- every closed basin in the state, which is a basin that has no surface-water

discharge from it is called a close basin. All of those basins in the state of New Mexico that are administered by the Engineer -- and I think with the inclusion of the Salt Basin, they all are now -- have criteria that regulates mining. They are all -- withdraws are made in all of them that exceed recharge. The State Engineer administers those withdraws through criteria in each of those basins.

Q Okay. And concerning what you've said about the Engineer Office's administrative criteria, what conclusion do you reach that you want to express to the Board hearing this case?

A (Mr. Peery) The conclusion is that there will be an ample supply of water for the LES facility, for its proposed 30-year life.

Q Do you know what terms LES has reached, if any, with municipal water suppliers?

A (Mr. Peery) No, I don't.

Q You haven't seen any documentation of that?

A (Mr. Peery) I've seen some documentation, but it was not the focus of my studies. I know that they've reached agreements with Eunice and Hobbs, but the specifics of those agreements, I'm probably not the right one to ask.

Q Okay. Mr. Woomer, what do you propose to testify about to the Board hearing this case?

A (Mr. Woomer) I'm just here to discuss the situation with the water system in Hobbs, the City of Hobbs, and its ability to deliver water and willingness to deliver water to the NEF site.

Q Uh-huh. Are you going to testify as an expert on any matters involving the availability of the water to Hobbs to resell?

A (Mr. Woomer) I'll be testifying about the knowledge that I have on the Hobbs water system and the ability for Hobbs to deliver the required GPD to the plant site.

Q Okay. Well, essentially what are your conclusions going to be?

A (Mr. Woomer) My conclusions are that Hobbs has the water rights and the water available and the systems available to deliver the water required by the NEF site.

Q And how much water is required by NEF site?

A (Mr. Woomer) The requirements for the NEF on what we've been looking at is 65,000 gallons per day, approximately 72 acre-feet per year.

Q And what is the duration of that requirement?

A (Mr. Woomer) A 30-year period.

Q And what investigation have you undertaken to determine that Hobbs has the rights on the water and the systems to deliver that amount?

A (Mr. Woomer) Hobbs holds the right to 20,066.4 acre-feet of water. We are currently using between -- a little less than 8,000 acre-feet per year.

Q Is that all you've done?

A (Mr. Woomer) The 72 acre-feet per year probably equates to less than 1 percent of our total usage.

Q Uh-huh.

A (Mr. Woomer) Which is minimis.

Q Have you done any calculations of what the situation will be, say, 30 years after the plant begins operation?

A (Mr. Woomer) I have not done any calculations personally. We do have a 20-year plan that accounts for population growth of about 1.4 percent per year. And it describes the system that would be needed at that time.

Q And -- all right. Twenty years out, what will the water usage of the Hobbs system be?

A (Mr. Woomer) I can't recall exactly what that number is.

Q Do you remember what it -- well, is there any projection for what it will be 30 years out?

A (Mr. Woomer) For 30 years out?

Q Yes.

A (Mr. Woomer) No, sir.

Q You don't know. And are there any projections of what water will actually be available to Hobbs, say, 20 years out, as distinguished from rights?

A (Mr. Woomer) For 30 years out? No, sir.

Q Twenty --

A (Mr. Woomer) Oh, 20? No, sir.

Q The question is to 20. Okay.

A (Mr. Woomer) No.

Q Mr. Stokes --

A (Mr. Stokes) Yes, sir.

Q Can you give us the substance of the facts and opinions you propose to testify to the Board about?

A (Mr. Stokes) Facts and opinions: The fact that the City of Eunice has 4,003 acre-feet of random water rights as recognized by the State Engineer Office. Current usage or usage in 2000, metered usage, was just a little over 2,000 acre-feet per year, and the provision of an additional 75 acre-feet per year water to the site could be done with no problem to the water rights or the well capacities. And that the provision of water by the municipalities to the facility is authorized under Chapter 3 of the statutes.

Q Have you done any estimates of the ability of Eunice to deliver water to the NEF out, say, 30 years from today?

A (Mr. Stokes) The -- I have done so straight calculations. The 40-year water plan has information in it dealing with the wells and the rights -- when those rights are permitted, the administration of those rights are done on a 40-year period, and there will be water, according to the State Engineer administrative policy, for water to be available for 30 years. The State Engineer does those calculations. I don't.

Q So it's his problem then.

A (Mr. Stokes) No. It is based -- the supply of water is based upon the administrative criteria and the models developed by the State Engineer Office.

Q Okay. So they've done that model.

A (Mr. Stokes) That's correct.

Q And you're relying on their model in that respect.

A (Mr. Stokes) The water rights -- the modeling was done to ensure the viability of the 4,000 acre-feet of withdrawals, and the additional 75 acre-feet fits very well into that 4,000 number.

Q Okay. You speak of a 40-year water plan. What is this plan?

A (Mr. Stokes) The regional plan that you have in front of you.

Q The Lea County plan.

A (Mr. Stokes) That's correct.

Q Okay. Are you going to offer testimony on any other subjects in this proceeding, other than what you've just described?

A (Mr. Stokes) Only if I'm asked.

Q Okay. Do you know if the City of Eunice or the utility for the City of Eunice has entered into a commitment to deliver water to the NEF?

A (Mr. Stokes) I believe that Mr. Krich is probably the person to answer that question, as he has been in negotiations with the City of Eunice and with Hobbs.

Q Okay. Mr. Campbell, can you tell us the substance of the opinions and facts that you're going to testify to the Board about in this case?

A (Mr. Campbell) I'll be testifying in regards to what Lockwood Greene did to determine the water usage for the facility. We were also somewhat instrumental in determining the source of water, i.e., Eunice and Hobbs. I will discuss that if necessary and any other things that I may be asked to discuss.

Q Okay. Well, what are you going to testify to about the efforts of Lockwood Greene to identify the water demand?

A (Mr. Campbell) We will discuss the methodology

that we used to determine water quantities, from both the process engineering perspective and the mechanical engineering perspective.

Q And where can I find these calculations in writing since I don't want to ask you to try to recall them?

A (Mr. Campbell) They're all submitted in our design documents, the basis of design documents, our narratives, et cetera.

Q Are they in the materials submitted to the NRC?

A (Mr. Campbell) Yes, sir.

Q They are? Okay.

MR. CURTISS: I believe that's the case.

BY MR. LOVEJOY:

Q Are they in the application or in response to RAIs?

A (Mr. Campbell) They are in the application.

Q Okay. Now, what was the bottom line, so to speak, of water demand at the -- you attributed to the facility?

A (Mr. Campbell) Total water quantity was 63.5 thousand gallons per day for all water usage.

Q And was that pure drinking water?

A (Mr. Campbell) I'm sorry?

Q Was that drinking water that was required,

potable water?

A (Mr. Campbell) Yes, sir.

Q Okay. And I think you said there was some other matter that you were going to testify about, in addition to Lockwood Greene's efforts to calculate the water demand. There's something about the acquisitions of rights.

A (Mr. Campbell) We were instrumental -- not the acquisition of rights. We were involved with discussions with the City of Eunice and Hobbs on initial discussions on obtaining water from both of those.

Q And did you describe the proposed plant's needs to officials of Eunice of Hobbs?

A (Mr. Campbell) When we began our discussions with both, we had preliminary numbers as to usage, and we discussed preliminary numbers. As time progressed, we finalized and got down to the last number of the 63.5 thousand a day.

Q Were your earlier numbers bigger or smaller? Do you remember?

A (Mr. Campbell) Earlier numbers were larger.

Q In the discussions with Hobbs and Eunice, did you, on behalf of -- working on behalf of LES, did you characterize the assurance of supply that was necessary for this facility?

A (Mr. Campbell) We did discuss the criticality of the reliability of the supply.

Q And what did you say?

A (Mr. Campbell) We explained to them what the water was for and the necessity of having a reliable water source.

Q Did you discuss with them what kind of priority among users the NEF would have?

A (Mr. Campbell) Not that I could recollect.

Q And have you reached agreement with both cities now concerning water supply?

A (Mr. Campbell) Yes, sir. We have a memorandum of understanding from both Hobbs and Eunice.

Q And what is your understanding of the assurance of supply contained in the memorandum, let's say, first for Hobbs?

A (Mr. Campbell) Both entities have agreed to supply 100 percent of the water quantity necessary.

Q Sometimes utilities assign to certain customers or classes of customers relative priorities as users. Do you understand whether the proposed NEF has any particular priority assigned to it by either Hobbs or Eunice?

A (Mr. Campbell) I recollect having read something that the NEF would be a high-priority user, and if I recollect correctly, if water rationing began, it

would be one of the last facilities to be rationed on the water plan.

Q And where did you read that?

A (Mr. Campbell) I'm sorry. I don't remember.

Q Did that relate to supply from Hobbs or from Eunice?

A (Mr. Campbell) I'm fairly confident it was from Hobbs.

Q All right. Mr. Krich, in this proceeding as regards matters of water supply, what subjects are you going to be testifying on?

A (Mr. Krich) Same subject pretty much as Randy. That is, the analysis that led to the determination of how much water the plant will need.

Q Are you going to testify about the supply obtained?

A (Mr. Krich) I was involved in -- as a manager for the overall project. I was the one who agreed or gave the go-ahead for these MOUs to be signed.

Q Okay. And what is the substance of your testimony going to be concerning the calculation of water requirements?

A (Mr. Krich) That the calculation that was done is a -- has been thoroughly reviewed. It uses standard methods that in our analysis we have included in the

design of the plant, water conservation measures to minimize the amount of consumptive use of water at the plant, and that our usage is on the order of about 71, 72 acre-feet per year, which is by comparison to other common usage pretty low. And what I mean, common usage, such as farms or golf courses.

Q And what is the duration of the water supply commitments that you've obtained for this facility?

A (Mr. Krich) Both the memorandum of understanding from City of Hobbs and the City of Eunice state explicitly that the supply will be for 30 years.

Q Starting when?

A (Mr. Krich) Starting when the plant operates, I believe. Starting when we request, I think is the way it reads.

Q And when do you expect that request to be made?

A (Mr. Krich) When we're going to start needing the water.

Q And in what year?

A (Mr. Krich) What year? We have said in the Hobbs -- in the memorandum of understanding with the City of Hobbs, we've estimated that initial use will start about 2007, so we'll obviously need water on the site as we go through construction.

Q Have you done anything to determine that water

will, in fact, be available for 30 years from that point?

A (Mr. Krich) We have looked at the amount of water, the capacity of water, from both the City of Hobbs and the City of Eunice. The numbers that Mr. Woomer and Mr. Stokes gave and that satisfied us that our usage was so small as to be inconsequential to the supply of water for a long period of time, certainly to cover 30 years.

Q When you say capacity, what are you referring to?

A (Mr. Krich) I'm referring to the numbers that Mr. Woomer gave for the amount of water that the City of Hobbs has at their -- that they have right to. I think -- and, Tim, you'll have to help me out. It's 20,000 acre-feet?

A (Mr. Woomer) 20,066.4 acre-feet.

Q So you judged the capacity based on water rights.

A (Mr. Krich) We judged the capacity based on what both the City of Hobbs and the City of Eunice told us that they had in terms of water capacity.

Q Expressed in what units?

A (Mr. Krich) In acre-feet per year.

Q Water rights. Is that what you're saying?

A (Mr. Krich) I -- we didn't get into whether they were water rights or what they were. We just were

interested in their capacity.

MR. LOVEJOY: Okay. I'd like to mark these as Exhibits 1, 2, and 3. These are the resumes that we've been supplied.

(The documents referred to were marked for identification as Exhibits NIRS-Panel-1 through NIRS-Panel-3.)

BY MR. LOVEJOY:

Q I'd like the witnesses just to identify these. Mr. Krich, would you please identify Exhibit 1? Mr. Stokes, would you please identify Exhibit 2, and Mr. Peery, Exhibit 3. We can take it in numerical order.

Mr. Krich, would you state for the record what is Exhibit 1?

A (Mr. Krich) Exhibit 1 is my resume.

Q Okay. Mr. Stokes, is Exhibit 2 you resume?

A (Mr. Stokes) It is.

Q And, Mr. Peery, is Exhibit 3 yours?

A (Mr. Peery) Yes, it is.

MR. LOVEJOY: All right. Let's hand these back to the reporter, for the record.

Let's mark this as -- this will be Number 4.

(The document referred to was marked for identification as

Exhibit NIRS-Panel 4.)

MR. LOVEJOY: Do you have Number 4?

THE REPORTER: Yes.

MR. LOVEJOY: The witness needs it.

BY MR. LOVEJOY:

Q Mr. Campbell, would you look at Number 4 and tell us if you can identify that, please.

A (Mr. Campbell) Yes, sir. These are meeting minutes from the meeting that we had with the officials at Hobbs.

MR. LOVEJOY: Okay. Let's mark this one also. So it would be Number 5.

(The document referred to was marked for identification as Exhibit NIRS-Panel 5.)

BY MR. LOVEJOY:

Q Mr. Campbell, would you also please look at Number 5 and identify that if you can.

A (Mr. Campbell) Yes, sir. These are meeting minutes from our meeting with the officials at Eunice.

Q Did you prepare Number 4 and Number 5?

A (Mr. Campbell) Yes, sir.

MR. LOVEJOY: Okay. Let's move right ahead and mark this one. This will be Number 6.

(The document referred to was

marked for identification as Exhibit NIRS-Panel 6.)

BY MR. LOVEJOY:

Q And this one seems to be signed by Mr. Woomer, so let's ask him to identify it if he can. Mr. Woomer, can you identify that as a copy of a document that you signed?

A (Mr. Woomer) Yes, it is.

Q Is this the memorandum of understanding with Lockwood Greene on behalf of NEF concerning water supply --

A (Mr. Woomer) Yes, it is.

Q -- by the City of Hobbs? Okay.

MR. LOVEJOY: Let's mark this one, too.

(The document referred to was marked for identification as Exhibit NIRS-Panel 7.)

BY MR. LOVEJOY:

Q Mr. Stokes, would you take a look at Number 7 and tell us if you can identify that.

A (Mr. Stokes) No. I'm not the one to identify it. I did not negotiate this or sign this.

Q Okay. Let's hand it to Mr. Krich. Maybe he knows.

A (Mr. Stokes) (Handing document.)

Q Can you identify that document?

A (Mr. Krich) Yes, I can.

Q What is that?

A (Mr. Krich) This is the memorandum of understanding that we have signed between us, with John Shaw acting as our agent, and the City of Eunice.

Q Okay. Mr. Woomer, do you have Number 6?

A (Mr. Woomer) Yes, sir.

Q Under this agreement, what priority of water usage would the proposed NEF as a utility customer?

A (Mr. Woomer) As part of our agreement, the NEF site would have first priority of the water going down to the Eunice site.

Q Eunice site being the NEF site. Is that what you mean?

A (Mr. Woomer) Yes, sir.

Q Do you have any other utility customers that have first priority?

A (Mr. Woomer) We have a ordinance in place, a rationing ordinance in place for the City of Hobbs that prioritizes from non-essential use such as irrigation is the first to be curtailed.

Q Uh-huh.

A (Mr. Woomer) Then the next tier of nonessentials would be car washes, operations of that

nature. Of course, in the meantime, there is rationing on lawn irrigation for residents.

Q Uh-huh.

A (Mr. Woomer) And that's pretty much the priority scale.

Q You said irrigation is ranked among the nonessential uses. Is that --

A (Mr. Woomer) It is the first to be --

Q -- agricultural irrigation or --

A (Mr. Woomer) This is municipal use. There is no agricultural use on our system.

Q Okay. So how many categories of priority are there under your system?

A (Mr. Woomer) I don't recall exactly. I would have to review the ordinance to give you that exact answer.

Q Well, how many users exist in the same category that NEF has under this agreement?

A (Mr. Woomer) I don't recall that exact number. They would be grouped as an industrial user, which is a new category that we just instituted to handle our pretreatment program.

Q All right.

A (Mr. Woomer) That will be a combination which will be garnered out of our commercial classification of

customers that we currently have.

Q So this is a new category, and is NEF the first one in --

A (Mr. Woomer) Yes.

Q -- this category?

A (Mr. Woomer) And the rationing is based on usage, not exactly classification for billing.

Q Did you say the rationing is based on usage?

A (Mr. Woomer) That's what I --

Q What do you mean?

A (Mr. Woomer) Irrigation usage is the first to be rationed.

Q Yes. Okay. Mr. Krich, looking at Exhibit 7, can you tell us what priority you believe the NEF would have under this commitment by the City of Eunice?

A (Mr. Krich) I can't. There is no -- there's no priority specified in the MOU.

Q Have you been advised of any particular priority that you would have?

A (Mr. Krich) Not that I'm aware of. No. Nor have we requested a priority.

Q Did you request a particular priority in the City of Hobbs?

A (Mr. Krich) No.

Q But it was expressed to Hobbs and to Eunice on

behalf of NEF that assurance of supply was important, was it not?

A (Mr. Krich) Assurance of supply or reliability of supply is important for asset protection.

Q The asset being the NEF.

A (Mr. Krich) Well, being the machines in the NEF. It's not required for safety. It's required for asset protection.

MR. LOVEJOY: This is Exhibit 8, I believe.

(The document referred to was marked for identification as Exhibit NIRS-Panel 8.)

BY MR. LOVEJOY:

Q Okay. Mr. Campbell, would you look at Exhibit 8 and tell us if you can identify that as something you've seen.

A (Mr. Campbell) (Perusing document.) Yes, sir. I have seen it.

Q And is this document the audit, the Lea County Municipal Water Audit document?

A (Mr. Campbell) As far as I'm aware, yes, sir.

Q Okay. I've got a number of questions for different people about this. Could you hand it over to Mr. Stokes, please.

A (Mr. Campbell) (Handing document.)

Q Would you look at the page captioned, LES-1184 in the lower right corner.

A (Mr. Stokes) Yes.

Q Under, Water Production -- you may want to read that paragraph -- there's a reference to wells in an area called Nadine.

A (Mr. Stokes) That's correct.

Q Are you familiar with that area?

A (Mr. Stokes) Yes, sir.

Q Where's it located?

A (Mr. Stokes) It's about halfway between Hobbs and Eunice.

Q And --

A (Mr. Stokes) It's on the very southern end of the Ogallala Aquifer.

Q There's a statement that, "When the Nadine wells became contaminated, water production was shifted north." Are you aware of contamination of the wells at Nadine?

A (Mr. Stokes) Yes, I am.

Q What's the cause of the contamination?

A (Mr. Stokes) There was some hydrocarbon contamination in the wells.

Q How did that happen?

A (Mr. Stokes) Well, they're in the middle of an

oil patch.

Q Was there an accident, or was this --

A (Mr. Stokes) Just over time --

Q -- a natural phenomenon?

A (Mr. Stokes) Just over time -- Roger may know more about the Nadine contamination out of the water deal, but it's a hydrocarbon contamination. It's a low-level contamination, but they did move their production source further northwest of Hobbs.

Q These wells are now out of use -- is that right? -- at Nadine.

A (Mr. Stokes) Those wells are not being used at the current time. However, the rights from those wells are valid, and those -- water was used there for water-plug purposes in a lease that just expired last year.

Q It was used for what purpose?

A (Mr. Stokes) Water-plug purposes for oil extraction purposes. It was leased by the City of Eunice, I believe, to Conoco. That lease expired in 2003. That water is available.

Q But it's not potable water, is it?

A (Mr. Stokes) It is available and could be made potable with treatment.

Q Mr. Peery, are you better informed about the origins of contamination at the Nadine wells?

A (Mr. Peery) No, I'm not. I don't have anything to add to what Len said.

Q Okay. Mr. Woomer, Hobbs has a so-called increasing block or rate structure in system for water consumption, doesn't it?

A (Mr. Woomer) Inclining block --

Q Inclining block?

A (Mr. Woomer) -- rate structure. Yes, sir.

Q And what's the purpose of that?

A (Mr. Woomer) It is -- its main purpose is to make sure that the utilities is solvent fiscally through a rate structure and rate analysis for cost of service. And there are several different rate structures that you can put into place: flats, volumetric, inclining or declining block. And Hobbs chose to institute an inclining block to encourage conservation of water resources.

Q Does the inclining block -- does the same rate structure apply to all customers of the water system at Hobbs?

A (Mr. Woomer) Yes, it does.

Q Is there any witness here who is knowledgeable in the rate structure for Eunice?

A (Mr. Stokes) No.

Q So there's nobody who knows whether Eunice has an inclining block system. Okay. Let me just check

something here.

(Pause.)

BY MR. LOVEJOY:

Q Does any one of the witnesses here know what changes in water usage in Lea County are projected to occur over, say, the next 40 years?

A (Mr. Peery) I think it's in the regional water plan there.

Q And you worked on the plan, didn't you?

A (Mr. Peery) Yes, I did.

Q And what projection of water usages is there contained for the next 40 years, 40 years from the report?

A (Mr. Peery) It projects an increase in water use.

Q To what extent?

A (Mr. Peery) I don't have the specific figures in front of me.

Q Let me be fair to you and show you the report. On the second page of the executive summary, you can see the highlighted provision. See if that refreshes your recollection.

A (Mr. Peery) (Perusing document.) I'm just going to read this out loud --

Q Please, please.

A (Mr. Peery) It says, "Over the next 40 years,

if unrestrained, water use in Lea County is estimated to increase to approximately 360,000 acre-feet, 105 percent greater than the 1995 totals."

Q Okay.

A (Mr. Peery) And I think the key point there is "if unrestrained."

Q And why do you say that's the key point?

A (Mr. Peery) As I mentioned earlier, the State Engineer does have provisions in to save the lower part of the aquifer, if it should become necessary, for municipal and domestic use. So obviously the State Engineer's administration would require them to stop other uses to save that water for the municipal and domestic uses.

Q And what other uses do you have in mind when you say that?

A (Mr. Peery) Agriculture. That would be the primary one, since it accounts for something on the order of -- I don't remember the exact number -- maybe 80 percent of the basin use.

Q And do you foresee that within the 40 years from this report, it's going to be necessary to stop some agricultural use, to restrain it?

A (Mr. Peery) It's hard to predict the future. We don't know who is going to put their water rights into play and who is not going to use their water rights. The

report basically assumed that the vast majority of existing water rights and declarations for water -- which aren't true water rights; they're just a declaration of the water right -- would be used for agricultural purposes.

MR. CURTISS: Lindsay, can we take a break at this point, if we could?

MR. LOVEJOY: Sure. Let's take a break.

(Whereupon, a short recess was taken.)

THE WITNESS: (Mr. Peery) Mr. Lovejoy, if I could try to --

BY MR. LOVEJOY:

Q Please, go right ahead.

A (Mr. Peery) -- try to clarify where I was headed when we took a break. What the report did was look at a worst-case scenario for water use in a Lea County Underground Water Basin. As I was mentioning, it was assuming that all the declared and permitted water rights would be used for agricultural lands.

In addition to all the lands that are currently in the CRP, which is the Crop Reserve Program, which allows agricultural lands to be taken out of production, but the water rights to be -- not lost, but to remain with the land going back into production. So it was really looking at worst-case scenario for the basin.

Q Can you --

A (Mr. Peery) And the fact of the matter is that as water levels declined, it's more and more difficult for the agricultural industry to continue on, because it becomes uneconomical for them. So what happens eventually is when the saturated thickness drops, starts to drop too much for them to make money, because it's more expensive to pump water to the surface where they need more wells to make the same amount of water, then agricultural uses naturally slow down also.

Q Can you point to the place in this plan where it says that it's describing a worst-case scenario?

A (Mr. Peery) No. I can't -- I don't think that it says in the plan that it is a worst-case scenario. But it certainly is the worst-case scenario.

A (Mr. Stokes) May I interject one thing?

Q Please.

A (Mr. Stokes) You probably, being with the AG Office, understand why the 40-year regional water plans were developed. Statutory reasons to develop those water plans was it was a way that the regions in the state of New Mexico could put on paper that they needed every drop of water in a certain basin of New Mexico for use in New Mexico, so that it would not have to be exported to Texas. It is definitely a worst-case scenario. I managed the

project.

Q Okay. Mr. Peery, you gave your calculations of the impact, assuming one single well were used as a source.

A (Mr. Peery) Uh-huh. That's really unlikely.

Q How many wells does Eunice have?

A (Mr. Peery) They currently have four they're operating, and I don't recall the number that Hobbs has.

Q Uh-huh. Let me draw your attention to the highlighted language on page 6-9 of the regional water plan. You can read it into the record for clarity.

A (Mr. Peery) "Because pumping is in excess of the Ogallala's recharge rate, elevation at the top of the aquifer has declined or experienced drawdown. The recent groundwater flow model indicated that, in response to heavy pumping in Texas, the most severe drawdowns occur along Lea County's east border, the Texas line.

"In this area, draw-downs in excess of 60 feet have occurred since 1940. The model predicts that the saturated thickness will decrease by another 50 to 100 feet in the area between the state line and the communities of Hobbs, Lovington and Tatum in the next 40 years. Actual drawdowns could be much greater than this amount."

Q If drawdowns occur at the rate projected there,

say -- rather, a decrease in saturated thickness by 50 to 100 feet in the area of the well that you hypothesized, would your calculations still reach the same result?

A (Mr. Peery) Oh, yes. My calculation would have reached the same result, but the fact of the matter is, the area --

(Interruption at door.)

THE WITNESS: (Mr. Peery) Let me clarify my last comment. Naturally the hydraulic properties of the aquifer are related to the saturated thickness, so it could have had an impact if it was 100 or 150 foot of drawdown over a period of time.

There is ample saturated thickness in the Ogallala in the areas west of Hobbs, and primarily, in all actuality, throughout the westernmost portion of the basin, there's very little agriculture in the western portion of the basin, because there's very little soil, so it's very difficult to grow anything there.

And if you want to look at the perspective of the amount of water that's going to be needed at the LES facility in terms of the current water in storage in the Lea County Basin, Underground Water Basin, there's approximately 31 million acre-feet of water in storage in the Lea County Underground Water Basin. If you look at LES's --

BY MR. LOVEJOY:

Q What was that number? Sorry.

A (Mr. Peery) 31 million acre-feet. If you compare LES's needs to that quantity, you're looking at well less than .01 percent of available water from the Lea County Underground Water Basin.

Q And what amount would be in storage in, say, 20/40?

A (Mr. Peery) I would have to look at that. (Perusing document.)

Referring to your highlighted section, it says, "It follows that approximately only 8 million acre-feet of recoverable water will exist in 2040 if continuation of 1998 pumping rates occur. The bulk of this figure will also probably be located away from existing well fields due to drawdown in the aquifer." So it still is a substantial amount of water.

Q And would --

A (Mr. Peery) And that 8 million acre-feet of recoverable water was taken as 45 percent of the water in storage. So it says here, "Approximately 14 million acre-feet of water would still be in storage, 8 million recoverable." So still a significant quantity.

Q And would your calculation as to the extent of drawdown attributable to the facility be the same under

those circumstances, the ones you just referred to?

A (Mr. Peery) It would be specific to the drawdown at the particular site, so I would have to look at the projected drawdown at the end of the 40-year period and calculate that.

Q You'd have to do a new calculation. Is that right?

A (Mr. Peery) I'd have to review my calculation --

Q Would your --

A (Mr. Peery) -- because those drawdowns don't occur evenly throughout the basin, so that's the important thing to know.

Q Would the figure you used for transmissivity be the same if there were significant drawdowns as described in the document?

A (Mr. Peery) Since I already started with a conservative transmissivity, I'm not sure.

Q Okay. Were there -- in the calculations you did, were there any boundary conditions with respect to the single well that you've assumed?

A (Mr. Peery) No.

Q Nothing. Okay.

A (Mr. Peery) Again, looking at one well -- I mean, you're talking about all the water coming out of one

well, when the fact of the matter is it's going to come out of two well fields -- does provide a conservative estimate.

MR. LOVEJOY: Okay. That's all I have. Thank you all.

MR. CURTISS: That's it.

THE WITNESS: (Mr. Krich) One point of clarification, which I'm not sure is there, and that is simply that the supply from Hobbs and the supply from Eunice are redundant supply for the plant, and I don't know whether you're aware of that, but either supply will provide enough for the plant to operate, both are not needed at the same time.

MR. CURTISS: We're done?

MR. LOVEJOY: We're done.

(Whereupon, at 3:15 p.m., the taking of the instant deposition was concluded.)

CERTIFICATE

This is to certify that the foregoing proceedings in the matter of: The Deposition of
George R. Campbell
Rod Krich
Roger L. Peery
Len Stokes
Tim Woomer

held on: September 17, 2004

at the location of: Santa Fe, NM

were duly recorded and accurately transcribed under my direction; further, that said proceedings are a true and accurate record of the testimony given by said witness; and that I am neither counsel for, related to, nor employed by any of the parties to this action in which this deposition was taken; and further that I am not a relative nor an employee of any of the parties nor counsel employed by the parties, and I am not financially or otherwise interested in the outcome of the action.

Carol Oppenheimer

Carol Oppenheimer

AUTHENTICATION BY SIGNATURE

I, the undersigned, do hereby certify by my signature hereunder that I have read the foregoing deposition of testimony given by me on September 17, 2004, and find said transcription to be a true and accurate record, as corrected.

George R. Campbell
George R. Campbell

Sworn to and subscribed before me this 13 day of OCTOBER, 2004.

Harriet L. Dave
Notary Public

My commission expires My Commission Expires January 23, 2014

0917LOVE

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ERRATA

ERRATA

RE THE DEPOSITION OF GEORGE R. CAMPBELL
(deponent's name)

TAKEN ON SEPT. 17, 2004.
(date)

IN THE MATTER OF

_____ v. _____
(party) (party)

DOCKET NO. _____.

IN _____.
(name of court)

PAGE NO.	LINE NO.	CORRECTION
		NO CORRECTIONS NECESSARY
		George R Campbell

AUTHENTICATION BY SIGNATURE

I, the undersigned, do hereby certify by my signature hereunder that I have read the foregoing deposition of testimony given by me on September 17, 2004, and find said transcription to be a true and accurate record, as corrected.

_____
Rod Krich

Sworn to and subscribed before me this _____ day of _____, 20__ __.

_____
Notary Public

My commission expires _____.

AUTHENTICATION BY SIGNATURE

I, the undersigned, do hereby certify by my signature hereunder that I have read the foregoing deposition of testimony given by me on September 17, 2004, and find said transcription to be a true and accurate record, as corrected.

_____
Roger L. Peery

Sworn to and subscribed before me this _____day of _____, 20__ __.

_____
Notary Public

My commission expires _____.

AUTHENTICATION BY SIGNATURE

I, the undersigned, do hereby certify by my signature hereunder that I have read the foregoing deposition of testimony given by me on September 17, 2004, and find said transcription to be a true and accurate record, as corrected.

Len Stokes

Sworn to and subscribed before me this 3rd day of November, 2004.

Terri Hemphill
Notary Public

My commission expires March 31, 2006.

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ERRATA

ERRATA

RE THE DEPOSITION OF Len Stokes
(deponent's name)

TAKEN ON _____,
(date)

IN THE MATTER OF

_____ v. _____
(party) (party)

DOCKET NO. _____.

IN _____.
(name of court)

PAGE NO.	LINE NO.	CORRECTION
18	18	closed to new APPROPRIATIONS
~~20~~ 18	20	Delete But they -- there's -- Capitley All
	24	Delete - That we (Cap) Every
19	3	Engineer (s)
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23	1	Delete: The -- ,JUST RIGHT
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	7	Delete water to be available
	10	Delete It is based -- .
	17	Delete · The WATER RIGHTS
33	~~18~~ 17	WATERFLOOD

AUTHENTICATION BY SIGNATURE

I, the undersigned, do hereby certify by my signature hereunder that I have read the foregoing deposition of testimony given by me on September 17, 2004, and find said transcription to be a true and accurate record, as corrected.

Tim Woomer

Tim Woomer

Sworn to and subscribed before me this 20th day of October, 2004.

Elizabeth A. Dujen

Notary Public

My commission expires Oct. 2, 2007.