Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions. Therefore, further explanation of the rationale for expanding the area for the environmental justice impact assessment should be provided. *Comment #048-35 (cont.)*

35. Page 3-68, line 18 - The sentence states that Figure 3-31 depicts major sources and levels of background radiation near the proposed NEF site. However, Figure 3-31 actually depicts major sources and average levels of background radiation for the U.S. Therefore, the reference to Figure 3-31 in this line should be clarified. *Comment #048-36*

36. Page 3-68, line 28 - The units "microRad/hour" should be "µR/hr." *Comment #048-37*

37. Page 3-69, Figure 3-31 - The title of this figure is "Major Sources and Levels of Background Radiation Exposure in the Proposed NEF Vicinity. However, Figure 3-31 actually depicts major sources and average levels of background radiation for the U.S. Therefore, the title of Figure 3-31 should be revised. *Comment #048-38*

Additionally, the pointers/arrows from "Consumer Products" and "Air Travel" to the associated sections of the chart in Figure 3-31 currently point to the wrong sections of the chart. *Comment #048-39*

38. Page 4-2, lines 36 through 38 - A discussion of the installation of the necessary municipal water supply piping and electrical transmission lines is provided. Accordingly, this section should also address the installation of the natural gas supply piping. *Comment #048-40*

39. Page 4-7, lines 6 and 7 - The reference to "National Weather Station" should be "National Weather Service Station." *Comment #048-41*

40. Page 4-11, line 49 - The UBC Storage Pad Stormwater Retention Basin, i.e., a single-lined retention basin, is stated as receiving discharges from UBC Storage Pad stormwater runoff and cooling tower blowdown discharges. However, another source exists and should be added, i.e., heating boiler blowdown discharges. *Comment #048-42*

41. Page 4-13, lines 10 through 14 - For the UBC Storage Pad Stormwater Retention Basin, the following statement is made.

> "A water balance of this basin, including consideration of effluent and precipitation inflows and evaporation outflows, indicates that the basin would be dry for 11 to 12 months of the year, depending on annual precipitation rates."

This sentence should be revised to "A water balance of this basin, including consideration of effluent and precipitation inflows and evaporation outflows, indicates that the basin would be dry for 12 months of the year for the minimum scenario and would have on average 0.3 m (1 ft) or less of standing water for 10 months of the year for the maximum scenario." This revised information with respect to the water balance results for the UBC Storage Pad Stormwater Retention Basin was previously submitted to the NRC in letter NEF#04-029 dated July 30, 2004. *Comment #048-43*

LES Comments Regarding Draft Report
NUREG-1790, Environmental Impact Statement for the
Proposed National Enrichment Facility in Lea County, New Mexico

42. Page 4-13, lines 31 through 36 - An analysis of a hypothetical groundwater plume is presented for the Site Stormwater Detention Basin. The analysis appears to assume that 100% of all annual stormwater runoff into the basin eventually reaches the groundwater plume. Since nearly all of the runoff would evaporate directly from the basin before infiltrating into the ground or evapotranspire after infiltration, the assumed groundwater plume appears to be substantially overestimated. The lack of observed shallow groundwater above the red bed surface during field explorations supports this conclusion. The high evapotranspiration rate of 65 inches/year in the area (refer to DEIS page 3-32, line 20) also supports the conclusion of a limited groundwater recharge plume. Accordingly, we suggest that this discussion in the DEIS include a qualifier that explains the conservative nature of the analysis. *Comment #048-44*

43. Page 4-13, line 33 - "252 meters (0.16 mile) per years" should be "252 meters (0.16 mile) per year." *Comment #048-45*

44. Page 4-13, lines 43 through 45 - Regarding the discussion that portions of the plume could result in a minor seep at Custer Mountain or in the excavation 3.2 kilometers (2 miles) southeast of Monument Draw, the word "portions" should be clarified. Since little, if any, basin waters are expected to recharge the shallow groundwater system, any waters originating at the NEF that discharge at these locations would be negligible. *Comment #048-46*

45. Page 4-14, lines 6 through 11 - An analysis of a hypothetical groundwater plume is presented for the septic system leach fields. The analysis appears to assume that 100% of all annual discharge to the septic systems eventually reaches the groundwater plume. Since most of septic system discharge is expected to evapotranspire after infiltration, the assumed groundwater plume is greatly overestimated. The lack of observed shallow groundwater above the red bed surface during field explorations supports this conclusion. The high evapotranspiration rate of 65 inches/year in the area (refer to DEIS page 3-32, line 20) also supports the conclusion of a limited groundwater recharge plume. *Comment #048-47*

46. Page 4-14, line 19 through 22 - Regarding the discussion that portions of the plume could result in a minor seep at Custer Mountain or in the excavation 3.2 kilometers (2 miles) southeast of Monument Draw, the word "portions" should be clarified. Since little, if any, septic system discharges are expected to recharge the shallow groundwater system, any waters originating at the NEF that discharge at these locations would be negligible *Comment #048-48*

47. Page 4-18, line 44 - A discussion of installation of the material to be used to exclude waterfowl from the Treated Effluent Evaporative Basin is provided and refers to "installing appropriate netting." This discussion should be revised to "installing appropriate netting or other suitable material" to be consistent with the ER since NEF may use other material to exclude waterfowl as recommended by the New Mexico Environment Department. *Comment #048-49*

48. Page 4-19, line 2 - A discussion of the design of the material to be used to exclude waterfowl from the Treated Effluent Evaporative Basin is provided and states, "The pond netting would be specifically designed..." It should be revised to "The pond netting or other suitable material would be specifically designed..." to be consistent *Comment #048-50*

with the ER since NEF may use other material to exclude waterfowl as recommended by the New Mexico Environment Department.

49. Page 4-19, lines 40, 41, and 42 - It is stated that "LES estimates that it would spend about $390 million locally on construction..." However, in NEF ER Section 7.1.4.2, and Figure 7.1-5, LES estimates that it will spend $397 million locally on construction expenditures over an 8-yr period. *Comment #048-51*

50. Page 4-25, line 26 - The word "results" in this line should be revised to "result." *Comment #048-52*

51. Page 4-44, line 32 - The phrase "gaseous effluent vent system" should be "gaseous effluent vent systems." *Comment #048-53*

52. Page 4-50, line 43 - The word "govern" should be "governed." *Comment #048-54*

53. Page 4-54, line 48 - In the discussion of maximum accident impact "12 person-sieverts (12,000 person-rem) or equivalent to 7 latent cancer fatalities" should be "12 person-sieverts (1200 person-rem) or equivalent to 0.7 latent cancer fatalities." *Comment #048-55*

54. Page 4-62, lines 15 and 16 - This sentence indicates that potable water use is expected to increase during part of the decommissioning phase. However, there is no data to support this statement. It is recommended the sentence be revised to "Potable water use is expected to vary during the decommissioning phase, particularly during the middle of the nine-year decommissioning program. *Comment #048-56*

55. Page 4-62, lines 17 and 18 - This sentence indicates that liquid effluents from decontamination operation would be higher than during normal operations. However, there is no data to support this statement. It is recommended the sentence be revised to "Liquid effluents from decontamination operations during decommissioning would be higher than liquid effluents from decontamination operations during normal operations." *Comment #048-57*

56. Page 4-62, lines 19 through 21 - This sentence indicates that spent citric acid will be sent to the Treated Effluent Evaporative Basin as during the operation phase of the NEF. This statement is not correct. The statement should be revised since the Liquid Effluent Collection and Treatment System will remove citric acid from the waste stream before discharge to the Treated Effluent Evaporative Basin. *Comment #048-58*

57. Page 4-62, lines 28 and 29 - A statement is made implying that, at the end of facility operations, structures and components are turned over to the State. This statement should be clarified since LES does not currently plan to turn structures and components over to the State at the end of facility operation. *Comment #048-59*

58. Page 4-62, line 35 - The phrase "The sludge and soil in bottom of the Treated Effluent Evaporative Basin" should be revised to "The sludge and soil in the bottom of the Treated Effluent Evaporative Basin." *Comment #048-60*

59. Page 4-63, lines 21 and 22 - The reference "(LES, 2004a)" should be revised to "(LES, 2004f)." *Comment #048-61*

60. Page 4-64, line 34 - In the discussion of occupational exposure "(approximately 0.3 millisieverts [300 millirem] per year)" should be ""(approximately 0.3 millisieverts [30 millirem] per year)." *Comment #048-62*

61. Page 4-66, lines 14 and 15 - This sentence discuss potential contamination from NEF operations and states that the most likely contamination would consist of manmade radionuclides. This statement is not correct and should be revised to "Any contamination resulting from proposed NEF operations, although unlikely, would most likely consist of naturally occurring radionuclides." *Comment #048-63*

62. Page 4-67, line 27 – The phrase "The employment of proposed WCS disposal facility would have a peak construction force of ..." should be revised to "The proposed WCS disposal facility would have a peak construction force of ..." *Comment #048-64*

63. Page 4-68, lines 47 through 49 - This sentence discusses water releases and indicates that water infiltrates to the ground from the two lined basins. This is not correct. The sentence should be clarified to read "Water used would be released from the two lined basins to the atmosphere through evaporation; from the one unlined basin to the ground through infiltration, to the atmosphere from evaporation, and to the atmosphere through evapotranspiration of infiltrated waters; and from the septic leaching fields to the ground through direct discharge and to the atmosphere through evapotranspiration of discharged waters." *Comment #048-65*

64. Page 4-72, line 32 - The word "action" in this line should be revised to "actions." *Comment #048-66*

65. Page 4-72, line 49 - The phrase "provide remaining 44 percent" should be revised to "provide the remaining 44 percent." *Comment #048-67*

66. Page 4-74, line 29 - The phrase "because no land disturbance would be occur" should be revised to "because no land disturbance would occur." *Comment #048-68*

67. Page 4-74, line 38 - The sentence "Water supply demand would continue at current rate" should be revised to "Water supply demand would continue at the current rate." *Comment #048-69*

68. Page 4-74, line 49 - Delete the extraneous comma near the end of the line. *Comment #048-70*

69. Page 4-75, line 32 - The phrase "Under no-action alternative" should be revised to "Under the no-action alternative." *Comment #048-71*

70. Page 4-75, line 40 - The phrase "as described in the affected environment" should be revised to "as described in the affected environment section." *Comment #048-72*

71. Page 4-75, line 41 - The phrase "No radiological exposure" should be revised to "No radiological exposures." *Comment #048-73*

72. Page 4-75, lines 43 and 44 - The word "occupation" should be revised to "occupational" in both lines. *Comment #048-74*

73. Page 5-2, Table 5-1, under the Ecological Resources impact area - The proposed mitigation measures associated with use of "netting over basins to prevent use by *Comment #048-75*

migratory birds" should be revised to "netting or other suitable material over basins to prevent use by migratory birds" to be consistent with the ER since NEF may use other material to exclude waterfowl as recommended by the New Mexico Environment Department.

74. Page 5-4, Table 5-2, under the Ecological Resources impact area - The proposed mitigation measures associated with use of "netting over basins to prevent use by migratory birds" should be revised to "netting or other suitable material over basins to prevent use by migratory birds" to be consistent with the ER since NEF may use other material to exclude waterfowl as recommended by the New Mexico Environment Department. *Comment #048-76*

75. Page 6-1, line 14 - The phrase "stormwater diversion ditch from the site stormwater detention basin" should be revised to "stormwater diversion ditch into the site stormwater detention basin." *Comment #048-77*

76. Page 6-1, Figure 6-1 - The reference in the title "(LES, 2003)" should be revised to "(LES 2004b)." *Comment #048-78*

77. Page 6-2, Figure 6-2 - The figure depicts the proposed sampling and monitoring locations for the NEF. This figure identifies that soil samples, identified by note 2, will be taken at the diversion ditch outfall. This sampling location is not consistent with the sampling and monitoring commitments provided in NEF ER Section 6.1, Radiological Monitoring, and NEF ER Section 6.2, Physiochemical Monitoring, and should be deleted from DEIS Figure 6-2. *Comment #048-79*

Additionally, the reference in the title "(LES, 2003)" should be revised to "(LES 2004a)." *Comment #048-80*

78. Page 6-2, Figure 6-2 - Note 6 is not used in the figure and should be deleted. *Comment #048-81*

79. Page 6-2, line 8 - It is stated that there is an additional soil sampling location at the diversion ditch outfall. This statement is not consistent with the sampling and monitoring commitments provided in NEF ER Section 6.1, Radiological Monitoring, and NEF ER Section 6.2, Physiochemical Monitoring, and should be deleted. *Comment #048-82*

80. Page 6-4, lines 25 through 41, and Page 6-5, line 1 - A discussion of the administrative action levels for sample parameters is provided in Section 6.1.1. Section 6.1.1 addresses the radiological effluent monitoring program. This discussion of administrative action levels was taken from NEF ER Section 6.2.8 and only applies to physiochemical monitoring sample parameters. Therefore, this discussion does not apply to radiological effluent monitoring sample parameters and should be removed from Section 6.1.1 of the DEIS to be consistent with the NEF ER. However, this discussion of administrative action levels does apply to physiochemical monitoring sample parameters and should be placed into Section 6.2, Physiochemical Monitoring, of the DEIS to be consistent with the NEF ER. The discussion of the administrative action levels, which are applicable for radiological effluent monitoring sample parameters, is provided in NEF ER Section 6.1.1 (page 6.1-2, second full paragraph) and should be included in Section 6.1.1 of the DEIS. *Comment #048-83*

LES Comments Regarding Draft Report
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Proposed National Enrichment Facility in Lea County, New Mexico

81. Page 6-5, line 11 - The phrase at the end of this line "and conduct audits" should be revised to " and audits are conducted." *Comment #048-84*

82. Page 6-5, lines 28 and 29 - This sentence indicates that the gaseous source term would be 240 µCi/year for routine gaseous effluent releases and that this amount is conservative since it is twice the amount assumed for the Claiborne Enrichment Center. This statement should be clarified since the actual expected gaseous release source term is less than 10 grams of uranium or approximately 35 times less radioactivity than the 240 µCi/yr value used in the bounding routine dose impact assessment for demonstrating expected compliance with regulatory limits. The value of 240 µCi/yr is the same upper bound release value used for the Claiborne Enrichment Center analysis, only doubled since the NEF is approximately twice the planned size of the Claiborne Enrichment Center. The conservative nature of the source term from the analysis is based on it being approximately 35 times larger than the expected source term, not on the source term being twice the amount assumed for the Claiborne Enrichment Center. *Comment #048-85*

83. Page 6-10, lines 4, 5, and 6 - The UBC Storage Pad Stormwater Retention Basin is stated as receiving UBC Storage Pad stormwater runoff and cooling tower blowdown discharges. However, another source exists and should be added, i.e., heating boiler blowdown discharges. *Comment #048-86*

84. Page 6-11, Table 6-6, line 18 - The location of the septic tank samples and sampling and collection frequency should be revised to be consistent with ER Table 6.1-4. The location should be revised to "One from each affected tank." The sampling and collection frequency should be revised to "1 to 2 kg (2.2 to 4.4 lbs) sludge samples collected from each affected tank prior to pumping." *Comment #048-87*

85. Page C-10, line 5 - The phrase " with a net covering the basin" should be revised to "with a net or other suitable material covering the basin" to be consistent with the ER since NEF may use other material to exclude waterfowl as recommended by the New Mexico Environment Department. *Comment #048-88*

86. Pages C-18, C-23, C-24, C-25, C-26, and C-27, Tables C-13 and C-15 through C-19 - For worker chemical exposures, these tables refer to 5-minute exposures. As a result of discussions with representatives of the NRC and the National Advisory Committee for Acute Exposure Guideline Levels (AEGLs) for Hazardous Substances, LES has decided to provide a bounding evaluation for worker exposure limits and will eliminate the use of time scaling of AEGLs, and as a result worker 5-minute exposure limits, to define Consequence Categories. Correspondence to this effect will be submitted to the NRC. This change potentially impacts Tables C-13 and C-15 through C-19 of the DEIS. *Comment #048-89*

87. Page D-1, lines 25 and 26 - The following statement is made.

"With the exception of the product material, all shipments can be transported in Type A shipping containers without additional requirements."

This statement is no longer correct and should be revised. Transportation regulations in 49 CFR 173.420 have been modified such that, effective October 1, *Comment #048-90*

2004, each package designed to contain 0.1 kg or more of fissile, fissile excepted, or non-fissile uranium hexafluoride offered for transportation must be designed to withstand the thermal test specified in 10 CFR 71.73(c)(4) without rupture of the containment system. This change impacts the transportation and handling of cylinders for the NEF. The Department of Transportation rule change will now require thermal protection (e.g., overpack or other protective assembly) of the shipping containers for all off-site UF_6 shipments as described in NEF#04-036 dated September 14, 2004. *Comment #048-90 (cont.)*

88. Page D-1, lines 32 through 34 - The following statement is made.

"Table D-1 presents the composition of three different types of containers proposed for the shipment of feed, product, depleted uranium, and waste."

However, Table D-1 addresses "four" different types of containers. Therefore, the reference to "three different types of containers" should be revised to "four different types of containers." *Comment #048-91*

89. Page D-4, Figure D-1 - The label for the cylinder end view at the lower left-hand side of the figure should be revised from "PLUG END" to "VALVE END." *Comment #048-92*

90. Page D-5, Figure D-2 – The label for the cylinder end view at the lower left-hand side of the figure should be revised from "PLUG END" to "VALVE END." *Comment #048-93*

91. Page D-6, Figure D-3 - The label for the cylinder end view at the lower left-hand side of the figure should be revised from "PLUG END" to "VALVE END." *Comment #048-94*

92. Page E-1, line 29 - The phrase "to less than 0.5 percent of total number of hours per year" should be revised to "to less than 0.5 percent of the total number of hours per year." *Comment #048-95*

93. Page E-3, line 7 - The reference to "National Weather Station" should be "National Weather Service Station." *Comment #048-96*

94. Page E-4, lines 64 and 65 - This sentence refers to Figure E-8 and states "This figure shows that a narrow plume would extend to the west from the proposed NEF source." However, Figure E-8 shows the plume extending to the east of the NEF site. Therefore, the sentence should be revised to "This figure shows that a narrow plume would extend to the east from the proposed NEF source." *Comment #048-97*

95. Page E-6, Figure E-10 - The Y-axis of this figure is incorrectly labeled. The labeling goes from "10^0" to "1" to "10^2." The labeling should be revised to "10^0" to "10^1" to "10^2." *Comment #048-98*

96. Pages G-2 through G-7, Table G-1 - For both New Mexico and Texas, the state summaries of the percent of minorities in many cases do not match with the values given in the referenced U.S. Census Bureau Table DP-1. An explanation of the basis for the differences should be provided. *Comment #048-99*

News Sun

Commenter 052

November 3, 2004

Chairman Nils Diaz
US Nuclear Regulatory
Office of Public Affairs
Washington, D.C. 20555

Dear Chairman Diaz:

This letter is in support of Louisiana Energy Services (LES) to obtain a license from the Nuclear Regulatory Commission. This facility, to be built outside of Eunice, New Mexico, will greatly impact Eunice and the surrounding region. *Comment #051-1*

There is much excitement in the preparations to facilitate LES. The Draft Environmental Impact Statement helped calm nerves by showing how little of an impact this facility will have concerning environmental justice and other important issues. We are excited to welcome this plant into Lea County. The NEF will not only positively impact us it will also aid our nation in becoming independent from foreign countries for our energy needs.

We are hoping that this process will be swift so we can welcome LES into ou community and help our nation where it is needed. *Comment #051-2*

Sincerely,

Kathi Bearden
Publisher

Cc: Governor Bill Richardson
Secretary Ron Curry
New Mexico Attorney General Patricia Madrid

P.O. Box 850 • Hobbs, NM 88241-0850 • (505)393-2123 • Fax (505)397-0610

NEW MEXICO JUNIOR COLLEGE

Foundation

Commenter 053

November 4, 2004

Chairman Nils Diaz
U.S. Nuclear Regulatory Commission
Office of Public Affairs
Washington, D.C. 20555

Dear Chairman Diaz:

It is with extreme excitement and great anticipation that I express my continued support for the National Enrichment Facility (NEF) to be built in Lea County, New Mexico.

Comment #053-1

I was pleased by the findings of the NRC when I recently reviewed the Draft Environmental Impact Statement (EIS), thus confirming the things Louisiana Energy Services has been telling the citizens of Lea County all along. I have complete confidence in the safety and soundness of this facility.

In addition, I am equally excited for the socioeconomic benefits the National Enrichment Facility will have on southeastern New Mexico and West Texas. At New Mexico Junior College, we are already planning ahead to have workforce training needs for NEF in place. Louisiana Energy Services is also taking beginning steps to prepare the workforce in Lea County; they provided over $2,400 in scholarships for ten Lea County students this fall. We will be accepting additional applications for spring scholarships soon.

Comment #053-1 (cont.)

I greatly appreciate your time and dedication spent on the review of this project. As a supporter of the National Enrichment Facility in Lea County, I encourage you to approve their license application quickly so NEF can become a permanent part of our community.

Sincerely,

Jennifer L. Jordon
Executive Director

cc: Governor Bill Richardson
Secretary Ron Curry
New Mexico Attorney General Patricia Madrid

5317 Lovington Highway • Hobbs, New Mexico 88240 • (505) 392-4510

J-157

Economic Development Corporation of Lea County

Commenter 054

November 2, 2004

Chairman Nils Diaz
US Nuclear Regulatory
Office of Public Affairs
Washington, D.C. 20555

Dear Chairman Diaz:

I am writing to express my continued support of the planned National Enrichment Facility (NEF) and to communicate the excitement being generated as we look forward to the benefit to our local economy that NEF will bring.

Comment #054-1

From an Economic Development perspective, we view the NEF as an economic anchor within Lea County from which potential business opportunities from within their supply-chain can be derived. Given its proposed proximity to local municipalities, I envision an enormously positive economic impact over the next ten to fifteen years both in terms of revenue distribution and increased population.

Regarding energy independence for America, I as a patriot am concerned about our dependence upon foreign countries for our energy needs and I wholeheartedly endorse this project which will ultimately provide a domestic source of enriched uranium to help drive our National Energy interests.

I look forward to assisting NEF with a seamless transition into Lea County and welcoming this proven corporate citizen as a permanent part of our community and encourage you to approve their license application as soon as practicable.

Thank you for such a thorough and informative Draft EIS. I look forward to reviewing the final one.

Sincerely,

Ben A. Kendrick
Executive Director
Economic Development
Corporation of Lea County

cc: Governor Bill Richardson
Secretary Ron Curry
New Mexico Attorney General Patricia Madrid

P.O. Box 1376
Hobbs, N M 88241
(505) 397-2039
1-800-443-2236
FAX: (505) 392-2300
E-mail:
edclea@leaconet.com

Commenter 058

State of New Mexico
House of Representatives
Santa Fé

DONALD E. BRATTON
R-Lea County
District 62

2012 North McKinley
Hobbs, NM 88240

Business Phone: (505) 393-2937
Home Phone: (505) 397-6093
E-Mail: donald.bratton@state.nm.us

COMMITTEES:
Appropriations & Finance
Transportation
Enrolling & Engrossing (A)

November 4, 2004

Chairman Nils Diaz
US Nuclear Regulatory
Office of Public Affairs
Washington, D.C. 20555

Dear Chairman Diaz:

I am writing to show my support for the National Enrichment Facility. This project will add jobs in southeast New Mexico and West Texas and help to diversify our economies. Having spent my entire working career in the energy industry, I appreciate the opportunity we have to welcome a new energy industry into the area.

Comment #058-1

The Draft Environmental Impact Statement found that the entire NEF process from construction, operation, and decommissioning will have only a small impact on ecological resources. It also shows that land use and air quality will not be adversely affected. While a thorough and complete review by your agency is expected, any prolonged delay is costly to the local economy and the nation.

Comment #058-2

According to the Draft EIS, "The NRC staff recommends that, unless safety issues mandate otherwise, the proposed license be issued to LES." I agree. LES has shown itself to be a good corporate citizen. Not only does LES contribute to local organizations that benefit the people of Lea County, they have gone to great lengths to keep us informed about their intent and to help educate everyone about the process. I believe that the draft EIS supports the fact that the NEF is a safe and environmentally sound project.

I urge the NRC to grant LES their license.

Sincerely,

Donald E. Bratton

Donald E. Bratton

cc: Governor Bill Richardson
NMED Secretary Ron Curry
New Mexico Attorney General Patricia Madrid

CARLSBAD

CHAMBER OF COMMERCE
CONVENTION & V

Commenter 060

WHEREAS, Louisiana Energy Services, L.P. (National Enrichment Facility) seeks to build a uranium enrichment plant to provide enrichment uranium for the United States nuclear energy industry;

WHEREAS, the economic benefit to Southeastern New Mexico will be stability, growth, job creation, and industry diversification;

WHEREAS, the facility will produce a depleted uranium byproduct in cylinders (Uranium Byproduct Cylinder-UBC's) that will undergo deconversion with final disposal in a location outside of New Mexico;

WHEREAS, the facility will be virtually the same as uranium enrichment plants that have operated safely in Europe for more than 30 years;

WHEREAS, the facility will be licensed and regulated by the Nuclear Regulatory Commission, along with appropriate state agencies;

WHEREAS, the facility will have regulated air and water emissions at or below state and federal limits as allowed by the NRC and New Mexico Environment Department;

WHEREAS, the National Enrichment Facility, to be situated in Southeastern New Mexico, has the support of major US utilities, the DOE, and US Senate Energy Committee Chairman Pete Domenici, and ranking member, Senator Jeff Bingaman, Congressman Steve Pearce and numerous local and state elected officials;

NOW THEREFORE, BE IT RESOLVED, the Carlsbad Chamber of Commerce supports locating such facility in Southeast New Mexico in the interest of regional economic stability.

Comment #060-001

302 South Canal Street • P.O. Box 910 • Carlsbad, New Mexico 88220
505-887-6516 Phone • 505-885-1455 Fax
www.chamber.caverns.com • E-mail: chamber@caverns.com

New Mexico State Senate

State Capitol
Santa Fe

Commenter 062

SENATOR GAY G. KERNAN
R-Curry, Lea & Roosevelt-42

928 Mesa Verde
Hobbs, NM 88240

Home: (505) 397-2536
Cell: (505) 370-1335
Fax: (505) 392-1431
E-mail: ggkern@valornet.com

MEMBER:
·Education
·Indian & Cultural Affairs

INTERIM:

MEMBER:
·Legislative Education Study Committee
·Corrections Oversight & Justice Committee
·Radioactive & Hazardous Materials
·Water & Natural Resources Committee

November 2, 2004

Chairman Nils Diaz
US Nuclear Regulatory
Office of Public Affairs
Washington, DC 20555

Dear Chairman Diaz:

I am writing to offer my continued support of the National Enrichment Facility (NEF) project that is to be built outside of Eunice, New Mexico. *Comment # 062-1*

I have carefully reviewed the Draft Environmental Impact Statement (EIS). It was nice to see that the study was done so thoroughly and I was not surprised to learn the NEF will only have a positive impact on our economy and will have minimal impact environmentally on the region.

I am also proud that Lea County has the opportunity to help the United States reach its national energy security policy objectives which President Bush has wisely made a priority. To decrease our need on foreign oil and energy would greatly help the United States and I fully support any effort that is as safe and environmentally sound as the NEF to accomplish that goal.

Our community and our state will benefit from the NEF. We in Lea County have contributed to the energy needs of this country for over 75 years. With the NEF we can continue to contribute for another 30.

I encourage the Nuclear Regulatory Commission to grant Louisiana Energy Services their license to run the NEF. We in Lea County are ready to plan our future with the NEF in it. *Comment #062-6*

Sincerely,

Gay G. Kernan

Cc: Governor Bill Richardson
Secretary Ron Curry
New Mexico Attorney General Patricia Madrid

J-159

Commenter 063

Chairman Nils Diaz
US Nuclear Regulatory
Office of Public Affairs
Washington, D.C. 20555

Olav Amundsen
Director of Radiological Control and Waste Handling
New Mexico Junior College
5317 Lovington Hwy, Hobbs NM 88260
Phone: 505 392 5335 ext 265
oamundsen@nmjc.edu

Dear Chairman Diaz:

This letter is in support of Louisiana Energy Services (LES) to obtain a license from the Nuclear Regulatory Commission to establish the National Enrichment Facility in Eunice, NM. *Comment #063-1*

After studying the Environmental Statement concerning the impact on people and the environment in Lea County, I endorse the placement and operation of the National Enrichment Facility in our County. I believe in the positive impact of harnessing the tremendous energy potential of the atom. I know it was the dream of our pioneering scientists like Leo Silzard, Lisa Meitner and Niels Bohr, just to mention a few - to unlock and harness the power of the atom. By enriching uranium, we can operate nuclear facilities in a more controlled and stable manner. As of now, I see this as the best way of protecting the environment around our nuclear power plants. I believe that the NEF will have a small impact on radiological exposures to the public, and after studying their plant proposal I believe they will operate with levels significantly below regulatory limits.

LES has shown itself to be a good corporate citizen by contributing to a scholarship fund for our students at the local Community College. It is our hope that LES will continue to contribute to our County by giving young people an opportunity for respected and well paying careers through supporting vocational training at the Community Colleges, supporting this government goal as outlined by President Bush in his nomination speech at the Republican Nomination Congress this fall.

Sincerely,

Olav Amundsen

Date: 11/4/04

cc: Governor Bill Richardson
Secretary Ron Curry
New Mexico Attorney General Patricia Madrid

THE CITY OF
HOBBS, NEW MEXICO

Commenter 079

300 North Turner Hobbs, New Mexico 88240-
8302
(505) 397-9232 FAX
(505)397-9227

October 14, 2004

Chairman Nils Diaz
US Nuclear Regulatory
Office of Public Affairs
Washington, D.C. 20555

Dear Chairman Diaz:

I am writing to voice my support for the construction of LES' proposed uranium enrichment facility to be built near Eunice, New Mexico. I speak for myself as a citizen of Lea County and as a Hobbs City Commissioner.

When I first heard about this facility I had many questions. Will it be safe? What affect will it have on the environment?

After visiting the model facility in the Netherlands and talking to the LES management team I know the NEF will be safe and it will be good for New Mexico. Further, it will be good for our country.

The Draft Environmental Impact Statement (EIS) was very positive for the NEF. I am glad that the NEF will have no large negative impact on our local resources. I am also very excited about the boost to our local economy that the NEF will bring. We certainly need a more diversified economy and new jobs. The NEF will help achieve both of these.

Comment #079-2

I look forward to welcoming NEF as a permanent part of our community and encourage you to approve their license application quickly.

After reviewing the Draft EIS, I firmly believe that the NEF will be both safe and environmentally sound to the citizens of Lea County.

Comment #079-3

Sincerely,

H. Ramirez

cc: Governor Bill Richardson
Secretary Ron Curry
New Mexico Attorney General Patricia Madrid

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J-160

Commenter 102

NRC
Chief, Rules and Directives Branch
Division of Administrative Services
US Nuclear Regulatory Commission
Washington DC 20555-0001

NUREG-1790/Docket #70-3103

To Whom It May Concern:

Since the announcement of the proposed uranium enrichment plant by Urenco/LES to our town, I have followed the news and the information trail however scant it is and have drawn my own conclusions regarding the proposed safety of such a facility.

I totally oppose the building of said facility. I live 2.6 miles from the sight in question on NM Rd 234 and I have over the last few months determined that my home and family would without a doubt be in perilous danger if there is a radioactive accident or any release of the emissions from the daily operations of the plant. My family and I take care of small children in my home. As a caregiver, I am responsible for the health and welfare of the babies and under no circumstances would I allow them to be endangered by anyone or any outside influences. If this plant is built, there will be toxic emissions and radioactive materials on the plant site for 30 years or longer, as well as toxic and contaminated water pits on the site subject to overflow or flooding due to rains. This type of environment is not acceptable for raising children. What unknown and dangerous impacts will this have on their little bodies? We know from experience and lessons learned that many illness and medical conditions are caused by external factors in our environment and I choose to acknowledge that we know toxic chemicals, polluted radioactive emissions and contaminated water as well as the DUF6 waste on that site cannot and will never be a healthy alternative for anyone.

Comment #102-1

Comment #102-2

There are already many trucks in and out of the area carrying the wastes to the WCS plant and the local landfill, if radioactive materials like the uranium cake and possible waste to be sent to other sites around the country are added to this traffic it will impact my life significantly. It is apparent now that more and more people are becoming aware of the real dangers that this city government and Lea Country government and state officials are willing to subject little Eunice NM to in favor of monetary rewards. It is shameful that they are willing to degrade their integrity in order to see their name associated with Louisiana Energy Services. Just as this company was rejected in Louisiana and Tennessee I believe this company will be rejected in New Mexico.'

Comment #102-3

I request that you deny the application for license for Urenco, Louisiana Energy Services.

Sincerely,

Gloria Williams

WESTERN GOVERNORS' ASSOCIATION

Bill Owens
Governor of Colorado
Chairman

Janet Napolitano
Governor of Arizona
Vice Chair

Pam O. Inmann
Executive Director

Headquarters:
1515 Cleveland Place
Suite 200
Denver, Colorado 80202-5114

303-?23-9378
Fax 303-534-7309

Washington, D.C. Office:
400 N. Capitol Street, N.W.
Suite 388
Washington, D.C. 20001

202-?24-5402
Fax 202-?24-7707
www.westgov.org

J-161

Commenter 103

December 16, 2004

Division of Waste Management and Environmental Protection
Office of Nuclear Material Safety and Safeguards
U. S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Re: NUREG-1790, DEIS for Proposed
National Enrichment Facility, Lea County,
New Mexico

Dear Sirs:

Enclosed, please find the Western Governors' Association comments on the Draft Environmental Impact Statement for the Proposed National Enrichment Facility, to be located in Lea County, New Mexico.

Should you have questions, please contact Mr. Bill Mackie of my staff.

Sincerely,

Pam O. Inmann
Executive Director

enclosure:

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Western Governors' Association
Comments on the Draft Environmental Impact Statement (DEIS)
for the Proposed National Enrichment Facility
in Lea County, New Mexico (NUREG 1790)
Prepared by the Staff of the US Nuclear Regulatory Commission
September 2004

General Comment:

On November 30, the Western Governors' Association (WGA) and the States of Colorado and Wyoming met with officials from the National Enrichment Facility (NEF) to discuss the proposed National Enrichment Facility in Lea County, NM. In addition to discussions on their draft Environmental Impact Statement, NEF agreed to stakeholder involvement in the development of a comprehensive Transportation System.

Comments:

Item 1:

"The proposed NEF would be licensed in accordance with the provisions of the *Atomic Energy Act.* Specifically, an NRC license under Title 10, "Energy," *U.S. Code of Federal Regulations* (10 CFR) Parts 30, 40, and 70 would be required to authorize LES to possess and use special nuclear material, source material, and byproducts material at the proposed NEF site." DEIS page iii

Comment 1 (a)

The final Environmental Impact Statement (EIS) should specify what organization will own the special nuclear material, source material and byproduct material, therefore specifying the responsible party for each of these materials.	*Comment #103-1*

Comment 1 (b)

The final EIS should specify what organization will own the NEF, therefore specifying the responsible party.	*Comment #103-2*

Item 2:

"Nuclear power plants are currently supplying approximately 20 percent of the Nation's electricity requirements, but only about 15 and 14 percent of the enrichment services that were purchased by U.S. nuclear reactors in 2002 and 2003, respectively, were provided by enrichment plants located in the United States." DEIS page xix

Comment 2 (a)

The question is not the fraction of enrichment services provided by USEC in 2002 and 2003, but rather what fraction of fuel will be met in the future based upon the use of MOX, the disposition of the 60,000+ kilograms of weapons Pu, any additional enriched U from Russia, increased burnup of fuel at the power reactors, relative costs of domestic and foreign provided SWOs, cost of uranium, etc. Accordingly, the final EIS should evaluate plausible scenarios relating to these important economic variables.

Comment #103-3

Comment 2 (b)

". . . but only about 15 and 14 percent of the enrichment services that were purchased by U.S. nuclear reactors in 2002 and 2003, respectively, were provided by enrichment plants located in the United States." Was this because of cost considerations, because of enrichment services shortfall, or because the electric utilities desired a diversity of supply? Generally, utilities purchase fuel at the lowest cost, not necessarily based upon country or origin (as in uranium ore from Canada or Australia rather than uranium ore from the United States). The final EIS should clarify the reason for the specified percentages.

Comment #103-4

Comment 2 (c)

The final EIS should specify what fraction of U to UF_6 conversions services were provided by domestic (US) facilities as opposed to foreign facilities. The final EIS should specify what fraction of oil consumed in the US is refined in facilities located in the United States. These two ratios would be more relevant comparisons than ones already provided.

Comment #103-5

Item 3:

"Use of a U.S. Department of Energy (DOE) conversion facility in Paducah, Kentucky, or near Portsmouth, Ohio, for disposition of depleted uranium hexafluoride (DFU_6) could extend the operating life of the conversion facility, and therefore, the socioeconomic impacts associated with the operation." DEIS page xxii

Comment 3 (a)

As a result of DOE and predecessor organization operations there exists a huge backlog of DUF_6. The final EIS should provide support to the implied assertion that the DOE conversion will be available for use for the DUF_6 waste produced by the NEF.

Comment #103-6

Comment 3 (b)

What is the estimated cost for disposal, assuming the NEF DUF_6 is converted? The final EIS should provide a basis (letter from suppliers of services, quotations, contracts, agreements in principle, etc.) of the disposal cost. What organization will own the DUF_6 that is planned to be stored at the NEF? What organization will own the cylinders that will contain the DUF_6 stored at the NEF? The final EIS

Comment #103-7

should address these questions and therefore specify the responsible parties for the DUF_6 and the cylinders.

Comment #103-7 (cont.)

Item 4:

"Construction of a new privately owned conversion facility, whether adjacent to the proposed NEF or potentially near Metropolis, Illinois, would have comparable impacts to the DOE conversion facilities." DEIS page xxiv

Comment 4

The final EIS should provide support to the implied assertion that DUF_6 waste would be processed at a facility adjacent to the NEF or one near Metropolis, Illinois. It should specify plans for these facilities and it should explain why there would be comparable impacts to the DOE conversion facilities. The paragraph below starts with the statement that: "No private company has yet agreed to construct or operate a DUF_6 to U_3O_8 conversion facility anywhere in the United States."

Comment #103-8

"No private company has yet agreed to construct or operate a DUF_6 to U_3O_8 conversion facility anywhere in the United States. LES suggested the construction of a DUF_6 to U_3O_8 conversion facility near Metropolis, Illinois. The existing ConverDyn plant at Metropolis, Illinois, converts natural uranium dioxide (UO_2) (yellow cake) from mining and milling operations into UF_4 and UF_6 for feed to enrichment facilities such as the proposed NEF (ConverDyn, 2004). Construction of a private DUF_6 to U_3O_8 conversion near the ConverDyn plant in Metropolis, Illinois would allow the hydrogen fluoride produced during the DUF_6 to $U3O_8$ conversion process to be reused to generate more UF_6 feed material while the U_3O_8 would be shipped for final dispositioning." DEIS page 2-29

Item 5:

"Costs associated with construction activities would be approximately $1.2 billion (2002 dollars) excluding escalation, contingencies, and interest." DEIS page xxiv

Comment 5

The final EIS should provide a complete estimate, including contingencies and interest.

Comment #103-9

Item 6:

"For the no-action alternative, the proposed NEF would not be constructed, operated, and decommissioned in Lea County, New Mexico. The Paducah Gaseous Diffusion Plant in Paducah, Kentucky, and the down-blending of highly enriched uranium covered under the "Megatons to Megawatts" program (both are managed by USEC) would remain the sole source of domestically generated low-enriched uranium for U.S. commercial nuclear power plants. Foreign enrichment

sources would continue supplying more than 85 percent of the U.S. nuclear power plants demand until other new domestic suppliers are constructed and operated. In the long term, this could lead to increase reliance on foreign suppliers for enrichment services." DEIS page xxiv

Comment 6
Currently over 30 reactors in Europe (Belgium, Switzerland, Germany and France) are using MOX and a further 20 have been licensed to do so. Japan also plans to use MOX in around a third of its reactors by 2010. Most reactors use it as about one third of their core, but some will accept up to 50% MOX assemblies. France aims to have all its 900 MWe series of reactors funning with at least one third MOX.

Russia and the United States have held extensive discussions on plutonium disposition, culminating in a September 2000 agreement to dispose of 34 metric tons of surplus weapons-grade plutonium in each country. That is 68 tonnes (68,000 kilograms)! And that is not all the weapons grade Pu available in the US and Russia. *(Please see NUREG/BR-0284, Mixed Oxide Exchange, published by the U.S. Regulatory Commission relating to the licensing of a mixed oxide (MOX) nuclear fuel fabrication facility.)*

In view of the plans by the US NRC to license an MOX fabrication plant, the associated plans by the DOE to dispose of 68,000 kilograms of weapons grade plutonium, plans of others to fabricate MOX for use by US light water power reactors, and the potential increase in enriching services (from Brazil, Communist China, and others), the final EIS should address the actual need for the NEF. This is particularly important because if the NEF is constructed but is uneconomical to operate (its capital costs should be greater than $1.8 billion including interest, escalation and contingencies), the operators could assert commercial impracticability (declare bankruptcy) and the facility would revert to the owners of the facility in a diminished, yet highly competitive, market for enriched uranium.

Comment #103-10

The final EIS should provide information on the source of supply of the uranium used in US power reactors and what fraction is provided by foreign sources.

Comment #103-11

Item 7:

"Non-radioactive gaseous effluents include argon, helium, nitrogen, hydrogen fluoride, and methylene chloride (LES, 2004a)." DEIS page 2-23

Comment 7
The final EIS should indicate the source(s) of the hydrogen fluoride.

Comment #103-12

Item 8:

"The Programmatic EIS evaluated the potential environmental impacts of disposal in shallow earthen structures, below-grade vaults and underground mines." DEIS page 2-42

Comment 8 (a)
The final EIS should specifically clarify that costs are the reason that placement in underground mines was not considered viable and not discussed further. NRC acknowledges that LES proposed several disposal options for DUF_6, including placement of depleted U_3O_8 in underground mines (specifically, LES proposed using exhausted Ur mines owned by Cotter in Colorado), shallow earthen structures, below-grade vaults, and several international treatment options. The text, however, is unclear in attaching the non-viability to the international options or to the underground options or to all options listed in this paragraph.

Comment #103-13

Comment 8 (b)
If costs were the reason why placement of DUF_6/U_3O_8 in underground mines was not considered, the final EIS should provide additional information on why the costs are considered to be so high for such a low technology alternative as well as the additional factors that may have contributed to NRC's rejection of that alternative.

Comment #103-14

Comment 8 (c)
NRC's statements throughout the DEIS that all radioactive wastes from the LES facility go to appropriate licensed facilities is strongly supported. Currently, there are no such licensed disposal facilities (in the State of Colorado, for example) and the states have no knowledge of any entity proposing disposal in old mines. Additionally, disposal in mines seems to be inconsistent with DOE's preferred alternative in the Depleted Uranium PEIS of 1999 (DOE/EIS-0269, April 1999).

Comment #103-15

Item 9:

The information at the bottom of page 2-55 is incomplete. It reads as follows:

"SMALL to MODERATE during accidents. If a rail accident involving the shipment of DUF_6 occurs in an urban area, approximately 28,000 people could suffer" . . . ????

Comment 9
The final EIS should include the missing information.

Comment #103-16

Item 10:

The information at the bottom of 2-56 is incomplete. It reads as follows:

Comment #103-17

"SMALL to MODERATE for accidents. Although highly unlikely, the most severe accident is estimated to be the release of UF_6 caused by rupturing an over-filled and/or over-heated cylinder, which could incur a collective" . . . ????

Comment 10
The final EIS should include the missing information.

Comment #103-17 (cont.)

Item 11:

Table 3-21, Current Traffic Volume for the Road systems in the Vicinity of the Proposed NEF Site (page 3-67) lists traffic volume per day. Average volume per day includes evening and nighttime traffic (which is very low) as well as traffic on Saturdays and Sundays. A more meaningful measure is average volume per hour for the peak load traffic period (6 AM to 6 PM, Monday through Friday). With this measure the reported traffic volume would not be diluted by off-hours and low weekend traffic.

Comment 11
The final EIS should show the more meaningful measure, which would reflect, not an average traffic volume, but traffic volume during the time construction related traffic and school busses are on the road.

Comment #103-18

Item 12:

"The surrounding air quality would be affected by non-radioactive gaseous effluent releases during operation of the proposed NEF. Non-radioactive gaseous effluents include hydrogen fluoride and acetone. The proposed NEF would release approximately 1 kilogram (2.2 pounds) per year of hydrogen fluoride, 40 liters (11 gallons) of ethanol, and 610 liters (161 gallons) of methylene chloride per year (LES, 2004a)." DEIS page 4-8

Comment 12
The final EIS should indicate the sources of hydrogen fluoride.

Comment #103-19

Item 13:

"The highest employment would occur in the second through fifth construction years with employment peaking at 800 jobs in the fourth year (LES,, 2004a)." DEIS page 4-19

Comment 13
The final EIS should provide an analysis that shows the local roads can handle the increased vehicle (construction workers, deliveries to the site) traffic during normal work hours (that is, 6 AM to 6 PM, Monday through Friday) in the fourth year.

Comment #103-20

Item 14:

Page 4-34 of the DEIS presents many "candidate" solutions to the disposal of the DUF_6 waste materials.

"The impact of transporting the depleted uranium to a conversion facility were also analyzed. Conversion could be performed either at a DOE or a private conversion facility. Currently DOE conversion facilities are being constructed at Paducah, Kentucky, and Portsmouth, Ohio. For the purpose of this analysis, it is assumed that the private conversion facility will be located at Metropolis, Illinois. As discussed previously in Section 2.1.9 of Chapter 2 of this Draft EIS, LES suggested the construction of a DUF_6 to U_3O_8 conversion facility near Metropolis, Illinois. The existing ConverDyn plant at Metropolis, Illinois, converts natural uranium dioxide (UO_2) (yellow cake) from mining and milling operations into UF_4 and UF_6 for feed to enrichment facilities such as the proposed NEF (ConverDyn, 2004). Construction of a private DUF_6 to U_3O_8 conversion facility near the ConverDyn plant in Metropolis, Illinois, would allow the hydrogen fluoride produced during the DUF_6 to U_3O_8 conversion process to be reused to generate more UF_6 feed material while the U_3O_8 would be shipped for final disposition. The NRC staff has determined that construction of a private DUF_6 to U_3O_8 conversion plant near Metropolis, Illinois, would have similar environmental impacts as construction of an equivalent facility anywhere in the United States. The advantage of selecting the Metropolis, Illinois, location is the proximity of the ConverDyn UO_2 to UF_6 conversion facility and, for the purposes of assessing impacts, the DOE conversion facility in nearby Paducah, Kentucky, for converting DOE-owned DUF_6 to U_3O_8. Because the proposed private plant would be similar in size and the effective area would be the same as the Paducah conversion plant, the environmental impacts would be similar.

The DUF_6 would be placed in Type 48Y cylinders for either temporary onsite storage or shipment offsite. If the DUF_6 were shipped offsite, 627 truck shipments with 1 cylinder per truck would be transported to a conversion facility located near Paducah, Kentucky; Portsmouth, Ohio; or Metropolis, Illinois. At the conversion facility, the DUF_6 would be converted into U_3O_8. After conversion, the U_3O_8 could be shipped from Paducah, Kentucky and Portsmouth, Ohio to Envirocare near Clive, Utah, or, if converted at a DOE facility, the Nevada Test Site for disposal. The U_3O_8 from Metropolis, Illinois could be shipped to Envirocare. If the DUF_6 were converted to the more chemically stable form of U_3O_8 at an adjacent conversion facility to the proposed NEF, the conversion product of U_3O_8 and calcium fluoride (CaF_2) could be shipped to Envirocare or U.S. Ecology in Hanford, Washington. The hydrofluoric acid generated during the process of converting the DUF_6 to U_3O_8 could be reused in the process of generating UF_6 or neutralized to CaF_2 for potential disposal at the same site as the U_3O_8. The conversion process would generate over 6,200 metric tons (6,800 tons) of U_3O_8 and 5,200 metric tons (5,700 tons) of CaF_2 annually. Assuming that this material would be shipped in 11.3 metric ton (25,000 pound)

capacity bulk bags, 547 and 461 bulk bags would be required annually to ship the U_3O_8 and CaF_2, respectively, with one bulk bag per truck."

Comment 14

In order to determine the commercial practicality of the scenario, the final EIS should include a cost estimate for each element of the above scenario as well as the basis of the cost estimate (engineering study, information from a vendor, published report (other than that from the Applicant). For the facilities that are already in existence, like Envirocare, a letter from the firm indicating that it can accept the material (U_3O_8 as well as very large quantities of CaF_2) at a cost or range of costs for service would be acceptable documentation.

Comment #103-21

~~Item 15:~~

Beginning on page 4-39 of the DEIS, the Chemical Impacts From Transportation Accidents are summarized. The assumptions supporting the impacts presented in Table 4-7 are provided in Appendix D, Section D.5. Page D-26 presents some of the assumptions used in the accident analysis. The "maximally exposed individual" is not defined in the DEIS, but generally is considered an adult male.

"DOE evaluated chemical impacts to rural (6 persons per square kilometer [15 persons per square mile]), suburban (719 persone per square kilometer [1,798 persons per square mile]), and urban (1,600 persons per square kilometer [4,000 persons per square mile]) areas." DEIS page D-26

Comment 15

If the 'maximally exposed individual" used in the analysis is an adult male, then the consequences of the analyzed accidents (that is "potential health effects" and "irreversible adverse health effects") should reflect the fact that a representative population includes females, the embryo-fetus, children, infants, the elderly and the inform. Moreover, occupational exposure levels must not be used as a guideline for exposure of the public to HF. Many segments of the public do not have the characteristics of "Reference Man". The final EIS should specifically define the "maximally exposed individual".

Comment #103-22

Item 16:

With regard to transportation accidents involving UF_6 and fire (page D-26, Section D.5), First Responders may not be currently versed in necessary safety precautions. The transportation of UF_6 is not a routine occurrence along some of the proposed routes. It appears that an inherent assumption in the accident scenarios is that First Responders provide prompt and effective countermeasures that minimize the effects of the accident.

Comment 16

The final EIS should evaluate transportation scenarios that include a range of countermeasures and various times after the accident at which the

Comment #103-23

countermeasures are initiated. Moreover, the final EIS should require the Applicant to provide periodic (annual) training to First Responders along the routes.

Comment #103-23 (cont.)

Item 17:

"Facility Worker Uranium Intake and Exposure to Hydrogen Fluoride

The accident consequences to a facility worker include the risks of toxicological effects of uranium intake, radiation dose from uranium intake, and exposure to hydrogen fluoride concentration in air. The amount of uranium a facility worker could inhale (uranium intake) is calculated by assuming the worker is exposed to C1(t) until T1 = 5 minutes after the start of the release (LES, 2004a). By T1 = 5 minutes, a worker is assumed to successfully escape the affected room. The uranium intake is calculated by assuming the worker inhales at a constant breathing rate of 3.33×10^{-4} cubic meters per second (20 liters per minute, **which is consistent with the breathing rate used by NRC in 10 CFR Part 20, Appendix B, for Reference Man performing "light work."** Similarly, the hydrogen fluoride concentration to which a facility worker could be exposed is calculated by evaluating the time-averaged hydrogen fluoride concentration during the first T1 = 5 minutes.

"For the uranium intake and hydrogen fluoride exposure calculations, it is assumed that sufficient moisture (i.e., humidity) is present in the room to completely convert released UF_6 gas to UO_2F_2 particulate matter and hydrogen fluoride vapor. This assumption results in a conservative estimate of the concentration of hydrogen fluoride vapor that would be present in both the affected room of the proposed NEF and downwind." DEIS page C-18

A key assumption is that: "The uranium intake is calculated by assuming the worker inhales at a constant breathing rate . . . used by NRC in 10 CFR Part 20, Appendix B, for Reference Man performing "light work." Similarly, the hydrogen fluoride concentration to which a facility worker could be exposed is calculated by evaluating the time-averaged hydrogen fluoride concentration during the first T1 = 5 minutes."

Comment 17

In an accident situation, it is unreasonable to assume that the breathing rate of a male worker involved in the accident is identical as the breathing rate of a worker (Reference Man) performing "light work". In an accident situation, blood pressure increases, heart rate increases, blood stream adrenaline values increase (Adrenaline causes quickening of the heart beat, strengthens the force of the heart's contraction, opens up the bronchioles in the lungs and has numerous other effects. The secretion of adrenaline by the adrenal is part of the "fight-or-flight" reaction that we have in response to being frightened,) and breathing rate increases.

Table 5A-6 (from EPA/600/P-95/002Fa, August 1997, VOLUME I – GENERAL FACTORS EXPOSURE FACTORS HANDBOOK) provides a summary of reasonable assumptions regarding breathing rates for various activities. Based upon the EPA (and clearly a more reasonable assessment of what transpires to the breathing rate during an accident situation) a greater breathing rate must be used in order for the analysis to somewhat reflect reality. Accordingly, the final EIS Appendix C should show new calculations using a breathing rate representative of the breathing rate for a worker involved in an accident not a worker performing routing tasks in "light activity".

Comment #103-24

Item 18:

"The cost for decontamination and decommissioning of the proposed NEF would be approximately $837.5 million in 2002 dollars. The majority of this cost estimate ($731 million) is the fee for disposal of the DUF_6 generated during operation assuming the DUF_6 would be not be disposed of prior to decommissioning." DEIS page 4-63

Comment 18 (a)

It is unclear if the Applicant plans to own the DUF_6 or the customer of the facility will own the DUF_6. If the Applicant owns the DUF_6, then at what time does the ownership transfer from the customer to the Applicant? The final EIS should clarify ownership of all UF_6 and DUF_6 during various stages.

Comment #103-25

Comment 18 (b)

If, for whatever reason or combination of reasons (use of MOX, longer burnup of fuel at reactors, foreign competitors reduce price of SWU, the cost of U increases thus making MOX more attractive, regulatory requirements for additional safety equipment are put in place, etc.), it is commercially impractical to continue providing enriching services (after 5 years, after 10 years, after 15 years of operations), will there be sufficient funds to dispose of the DUF_6 and will the facilities and firms that are discussed in the DEIS as thoughts for treatment and disposal of DUF_6 be in existence at those times? The final EIS should discuss these contingencies.

Comment #103-26

J-166

Commenter 104

Chief, Rules Review and Directives Branch
Mail Stop T6-D59,
U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001

RE: Public Comments, Docket No. 70-3103 National Enrichment Facility, Eunice NM

To whom it may concern:

I recently read in the Denver Post (11/28/04) about the N.E.F project and the plans to ship nuclear materials through the front range and mountains of Colorado. Being a part-time resident of Canon City, Colorado, I am familiar with the negative consequences of having a "legally permitted" nuclear waste facility as a neighbor. In fact, I continuously hear about my friends and neighbors who have succumbed to various forms of cancer—a seemingly common fate around the Canon City area.

My initial reaction after reading the article was to investigate the facts, myself. You should know that in my first search of the NRC website, I was frustrated to learn that the public comment period for this project had already been closed (on November 6th), so I gave up my search. By chance, I learned yesterday from a friend that the comment period had been changed to December 18th. Accordingly, I submit the following abbreviated commentary for your consideration.

Living first hand with the consequences of the Cotter Corporation in my community, I find it wholly inconceivable that any project the size of the NEF can be adequately evaluated based solely on the irresponsible notion that the wastes generated will be deposited "somewhere" outside the State of New Mexico. I question the fundamental competency of the existing environmental review, which seems to have successfully divorced the project from responsibility for the wastes it will generate. Is it, in fact, legal to permit a project without concrete knowledge of the ultimate fate of these wastes? Will other States have any authority to assert in such cases?

Comment #104-1

I am disturbed by comments such as those of LES spokesperson April Wade concerning the fact that actual supply and waste transport routes for the project still remain to be concretely determined. Being a resident of a State "somewhere" other than NM, I think it is only fair that the applicant be compelled to disclose complete and definitive plans for regional nuclear transportation, as well as comprehensive waste management plans. Obviously, only after affected communities become aware of the plans will they be able to undertake a truly complete review of the potential environmental and economic impacts involved.

Comment #104-2

Lastly, I am aware that other shipments of radioactive materials are a relatively common occurrence in the front range. Regardless of this fact, I do not believe that any adequate investigation has been conducted regarding the potential diversion of these existing and future shipments intentionally in terrorist situations, or even the more likely eventuality of a derailment or other vehicle accident. I see no reason to exclude these very possible contingencies from environmental review.

Comment #104-3

Thank you for the opportunity to send my comments.

Sandy Rogers

Sandy Rogers

Commenter 105

From: "Phil Silberman" <phil@poetrycardsusa.com>
To: <nrcrep@nrc.gov>
Date: Wed, Dec 15, 2004 1:35 AM
Subject: Attention: Anna Bradford

Re: Docket No. 70-3103

Dear Ms Bradford,

I am writing to express my grave concerns about the proposed Nuclear Enrichment Facility in Eunice, New Mexico. As I understand it, if it is constructed, about 3 shipments per day of raw, enriched and waste depleted uranium and other wastes would be shipped via truck and train right up I-25 through Denver. With all of the concern about the terrorist attacks using "dirty bombs", is it not ironic to allow the transport of THREE truckloads per day of such deadly materials right through the middle of a major US metropolitan area? *Comment #105-1*

As a citizen and father to be this is quite disconcerting. Will these trucks travel with a military escort? Has the Dept. of homeland security submitted any comments on this project? Given all the discussion regarding dirty bombs of late, has adequate attention been devoted to the question of potential terrorist activity relating to these shipments? What assurances can the NRC provide a pregnant mother-to-be that this possibility has been addressed? Can the NRC demonstrate that DHS has even been notified for comment on the project? What training or information/disclosures have been made to notify first responders along these routes of the special problems associated with accidents or attack. *Comment #105-2* *Comment #105-3* *Comment #105-4*

J-167

Thinking on the project seems at best incomplete and at worse horribly misguided. How is it possible for a thorough or even adequate environmental review to be accomplished on a project that has so many "options" and variables still under consideration. More importantly, given the excess supply of nuclear materials available on the black market that can be blended down for electrical purposes, we should question whether adequate attention is being paid to the "no action" alternative, i.e. not building the facility at all, while keeping the stuff out of the hands of terrorists. If the plant is to be built, is it not necessary to fully evaluate each and every contingency of operation that is still on the table here? *Comment #105-5* *Comment #105-6*

Given that the project hinges on an LES promise that waste won't stay in New Mexico, what gives New Mexico and the NRC the right to assume the project can go ahead without a comprehensive management plan in place, with firm contractual arrangements as to where all the wastes will go? *Comment #105-7*

This plan has numerous built in potential disasters and should be halted. *Comment #105-8*

Thank you.

Phil Silberman

Commenter 109

McCormick & Sons Tire & Service Cente
215 S. Turner
Hobbs, NM 88240
505-397-3782
Fax 505-397-6316

December 15, 2004

Chairman Nils Diaz
U.S. Nuclear Regulatory
Office of Public Affairs
Washington, D.C. 20555

Dear Chairman Diaz:

I am writing this letter in Support of the proposed National Enrichment Facility in Eunice, New Mexico. *Comment #109-1*

Being a business owner for the past twenty-two years in Hobbs, New Mexico, I understand the need for diversification in our county. Relying on the highs and lows of the oil industry can be very unpredictable for businesses and for our citizens trying to retain their employment.

After visiting the Urenco facility in Almelo, Netherlands and with their local citizens, I came to realize the facility will be both safe and environmentally sound. According to the Draft Environmental Impact Statement, there would be no significant impact on our land, water or air. The positive socioeconomic impact, with respect to jobs and revenue will help our economy grow.

I support the Louisiana Energy Services' application to operate the National Enrichment Facility in Eunice, New Mexico. With 102 nuclear power plants open in the United States today the need for a uranium enrichment facility that is more cost effective is in demand today and will increase in the future. The National Enrichment Facility will benefit our cities, county and provide energy independence for America as an additional, reliable, and economical domestic source of enrichment services.

Thank you for your time and consideration of this proposed facility.

Sincerely,

Randall D. McCormick
Newly elected Lea County Commissioner – District 1

Cc: Governor Bill Richardson
Secretary Ron Curry
New Mexico Attorney General Patricia Madrid

Commenter 149

December 15, 2004

Chairman Nils Diaz
U.S. Nuclear Regulatory
Office of Public Affairs
Washington, D.C. 20555

Dear Chairman Diaz:

I am writing this letter in support of the proposed National Enrichment Facility in Eunice, New Mexico.

Comment #149-1

I am a native of Eunice, New Mexico living most of my life here and continuing to raise my family in Lea County. My children having grown up as military dependents with the lifestyle that implies made it known to me they wanted to settle in Eunice. Here they experience the love of their relatives and neighbors. The close contact and care provided by our local educators as well as a feeling of security and well being that comes from living in a small community is paramount. Through their lifetime experiences they have developed a broad view of the world and now support the work and efforts of LES in its endeavors to bring the licensing for the National Enrichment Facility. As a family we have encouraged the expeditious licensing process and are pleased with the progress thus far. We have been extremely pleased with the findings of the Draft Environmental Impact Statement and feel that NEF will bring our community long needed changes as well as economic and social stability. Each of us feels secure in supporting the National Enrichment Facility.

I was afforded the opportunity to recently visit the Urenco site in Almelo, Nederland B.V. I was impressed with the professionalism of its employees and marveled at the high standards of which Urenco adheres to in the area of safety as well as the exceptional quality of technical equipment and procedures implemented at this plant. I personally believe that not only would NEF be an asset to our community, but its impact would be felt nationally and internationally. NEF would set the standard for future industry in Lea County.

Approval and licensing of LES/NEF would highten the prospect of economic, educational, and social growth that would revitalize this area giving us hope for a brighter future. We are proud to be a part of the production of fossil fuels through our oil and gas industry. Unfortunately, its lifetime appears to be limited. While we research and develop other fuel and energy sources, NEF would be in place for the more immediate demands as well as embracing the demands of the future.

On behalf of my family and myself, I urge you to continue to move quickly forward with the licensing process for the National Enrichment Facility. Thank you for your time and consideration of this request.

Comment #149-2

With warm regards,

Paula B. Hayes & Family
P.O. Box 1973
Eunice, NM 88231

Cc: Governor Bill Richardson
Secretary Ron Curry
New Mexico Attorney General Patricia Madrid

J-168

Commenter 151

Chief, Rules Review and Directives Branch
Mail Stop T6-D59, U.S. Nuclear Regulatory Commission,
Washington, DC 20555-0001

Dec. 18th, 2004

RE: Docket No. 70-3103 National Enrichment Facility, Eunice NM

To whom it may concern:

I am writing to express profound concern about the regulatory review currently underway regarding the proposed N.E.F project near Eunice, NM.

I have serious concerns relating to what appears to be the functional barriers to public participation and scrutiny of this project, arising from: 1) General inaccessibility of technical information both directly related to this project and reference information used as tier supporting information for this application; 2) Inadequate solicitation of comment and/or incomplete consultation with appropriate regulatory, governmental, tribal and public stakeholders; 3) Incorrect, out-dated and misleading information disseminated via official NRC websites regarding the actual closing date for public comment/participation.

From what information I have been able to access, I have noted numerous apparent deficiencies in the scoping/D.E.I.S. process to-date, specifically relating to: 1) Inconsistent and general exclusion of implicit security risks and other security-related issues associated with the project; 2) Connectivity and *critical* dependency of this facility on associated radioactive source and waste material transportation issues; 3) Connectivity of this action with power transmission lines intended to supply the project; 4)Water and Wastewater management impacts on ground/surface water resources; 5) Legal issues associated with relevant existing interstate and international compacts concerning government, energy, economy, etc.

Barriers to public review and scrutiny:
As you well know, access to the NRC website supporting this permit action has been commonly closed to the general public for due to security concerns. In denying access to this information, the effect has been to deflect inquiry and delay investigation. As a result, both myself and the general public are deprived of an adequate opportunity to access and scrutinize information, and therefore, denied both the right and ability to fully-engage in the public review process.

Comment #151-1

More disturbing is the continued reliance of this permitting action upon dated references and questionably relevant studies which are practically and effectively unavailable for independent review. For example, within the transportation analysis sections, requirements for additional detailed scrutiny into several potentially relevant issues were dismissed based on existence NRC-EIS documents that were prepared in 1977 and 1980. I was personally unable to retrieve these documents through the NRC website to be sure, but given the interim growth in population, associated problems with air quality, and numerous sensitive environments along the interstate routes connected with the project, I am suspicious that such dated information is relevant today. I question true compliance with N.E.P.A. in this regard. To functionally 'tier' off previous studies, such documents must at least be both accurate and timely. Referenced documents are over 20 years old! The public relies on certain assumptions regarding appropriate standards of "freshness" and accuracy when consuming information presented by its government in such proceedings.

Comment #151-2

Inadequate notification and solicitation of comment: Pursuant to 10 CFR 51.71 (d) as referenced in the D.E.I.S. "due consideration will be given to compliance with Federal, State, regional and local agencies having responsibilities for environmental protection." I question whether due consideration has in fact been given to the solicitation of necessary stakeholders and/or consultation with appropriate regional authorities. In view of the extensive regional/interstate and tribal issues potentially involved in power supply transmission routes, as well as transportation routing of both nuclear source and waste materials, it seems highly inappropriate that the comment of obvious regional and State authorities, as well as other stakeholders were not solicited for input.

Additional factors which serve to create a barrier to public participation in this action include the incompetent operation of official NRC website: For example, when accessed via "google" or other popular internet search engines, the link to NRC website provides information that has not been updated to reflect the extension of the public comment period to December 18th. Even as of the evening of Friday December 17, 2004, when accessing the site: http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1790/, one is provided the following message, beneath the official NRC logo:

Comment #151-3

"Environmental Impact Statement for the Proposed National Enrichment Facility in Lea County, New Mexico (NUREG-1790) Draft Report for Comment This NUREG publication has been issued for public comment. The public comment period closed November 6, 2004."

Because significant press regarding potentially controversial issues such as interstate nuclear waste transportation didn't occur outside New Mexico until after November 28, (see Denver Post: *West Wary of Nuclear Waste Route*)-any citizen using the internet to investigate this matter has been incorrectly informed that the public comment period was closed Nov. 6th. Only if you were to follow links listed well-below the official website listing would internet users find notice that the comment period was extended. In addition to the general difficulties arising from sporadic closure and limited access to the NRC website, I believe that **failure to reliably update the content of official information** has served to functionally confuse and deflect additional public scrutiny of this project.

J-169

Comment #151-4

Deficiencies in project scoping and D.E.I.S. process:

Significant ambiguity exists regarding the overall purpose and need of this facility. The stated basic premise for the N.E.F. is to supply domestic demands, with many scenarios illustrating potential reliance on foreign source material for power generation if the project is not constructed. However, the applicant suggests in the D.E.I.S. that the plant will supply continuing demand "both in the U.S. and **abroad**". Definitive uses for all material produced by this facility must be provided. It should be very clear if any material produced by the facility will be used outside the U.S., or for any other purpose than power generation within the U.S. This raises basic questions regarding actual production from U.S. enrichment facilities as compared to actual demand from existing generating facilities. Is there an as yet 'unstated' administration policy which seeks to dramatically expand the construction of nuclear generators in the near future?

Regarding security concerns, I find it curiously paradoxical that information necessary to a basic review of this project is sufficiently sensitive as to warrant shutting down web access to shield it from the public eye, yet throughout the process, general concerns of terrorism (i.e. at the plant and the potential hijacking of source and waste shipments for dirty bombs) have been completely dismissed from consideration. It would seem that if

Comment #151-5

#151-5 (cont.)

security issues are a rationale to dismiss for any aspect of this project, security concerns must be addressed with regard to all other issues. Clearly, there are very real issues associated with security of the plant, and the security of transported source/waste materials that have been simply dismissed in this process. It is only fair that if a decision is made to open this door on security for one aspect of analysis, security should be open to discussion for all other concerns as well. Lastly, if construction and operation of the project is accomplished in "phases", what has been done to address the special security issues associated with the presence of construction crews near operating nuclear facilities?

I have serious concerns that this application process has effectively segmented many activities that are directly connected to this permit action. For example, basic management plans for interstate transport of nuclear source and waste materials are left completely vague. Obviously, the plant cannot operate without the transportation of source material to supply it, and without waste material eventually hauled away. It seems equally obvious that those activities are connected actions –necessary to meet the purposes and need of the N.E.F. In recent press, LES Spokesperson April Wade has confirmed that even the multiple modes and routes currently described in the D.E.I.S. may change in the future. How is it possible to adequately scope, much less perform an environmental review for this project with so many critically important components left unresolved? How is it possible to solicit the input of affected communities at some future point when the 'option' of 'no-action' is no longer available to them?

Comment #151-6

Similarly, the construction of power transmission lines are critically necessary to the operation of the facility, and should therefore also be considered connected actions to this application. The same case can be made regarding water supply and wastewater infrastructures for the project. In both instances, detailed plans do not exist, and management strategies are, at best, vague. What is the source of the 'municipal' supply? What investigations have been performed to assure protection of the quantity and quality of aquifer/surface waters in the area? Environmental reviews for the construction and maintenance of utility infrastructure cannot be segmented from this project and should be included as part of this action.

Comment #151-7

Lastly, I question whether this project will be reviewed by existing regional entities. The existence of very important regional government organizations (i.e. Western Governor's Association, Western Interstate Energy Board, State/Regional Departments of Transportation, Economic Development and Utility Commissions) has been brought to the attention of the NRC by myself previously in scoping documents. Continued exclusion of these vested regional entities calls into question the good faith and discretion of both the applicant and the reviewing agency. To simply ignore the existence of both relevant interstate and international legal compacts in this action is at best dangerously arrogant, and at worst, unseemly and functionally prejudicial.

Comment #151-8

Thank you for the opportunity to submit these comments.

John Grove
P.O. Box 1549
Buena Vista, CO 81211

From: "John Grove" <wetlands@chaffeeco.net>
To: <nrcrep@nrc.gov>
Date: Fri, Jan 7, 2005 1:34 PM
Subject: Docket No. 70-3103

Chief

Rules Review and Directives Branch

Mail Stop T6-D59,

U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001

Attention: Anna Bradford.

RE: Docket No. 70-3103, Addendum to previous comments:

Sirs:

J-170

I send this additional comment as an addendum to my previous written commentary, originally submitted in accordance with the December 18th comment period.

I wish to bring additional attention to the obvious paradox concerning the subject of 'security- related issues' associated with the N.E.F. project.

I find it strange that the public comment periods have been necessarily extended as a result of on-going security reviews of project documents, yet previously, broad and sweeping dismissals have been made regarding numerous security-related issues raised by myself and others concerning this proposed project.

For example, numerous questions remain regarding the proposed 'phased construction and operation' of the N.E.F. whereas no detailed information is provided regarding obvious and significant security issues associated with construction crews working in the vicinity of an operational nuclear facility. Further, the consequences of the poor track record of URENCO management in previous handling of sensitive technology information are well known, yet such concerns have been previously dismissed from consideration. With the protracted review of security information for ADAMS purposes, the NRC has implicitly raised the question of security review for the entire project. Therefore, the Agency must reverse previous dismissals, and

Comment #151-9

specifically respond to all security related questions raised in the process to-date.

Comment #151-9 (cont.)

As a matter of information regarding the general function of the public notice process, it should be noted that even as a listed stakeholder, participation in the on-going process has been 'user-hostile', i.e. the written notice I received regarding the comment period being extended to January 7th was postmarked DEC 29, 2004 from Rockville, MD. I received this stakeholder mailed notice only on Monday, January 03, 2005. Given the obvious short window in turn around notifications, I believe this final extension for such a short period of additional time was essentially useless. This final extension date essentially acknowledges the shortcomings of the process to date, but offers no functionally-effective amount of time to mitigate the damage to public participation.

Comment #151-10

Thank you for the opportunity to send comments.

John Grove

Po Box 1549

Buena Vista CO 81211

Commenter 185

From: "Charles Hersh" <chuck101@optonline.net>
To: "Anna Bradford" <nrcrep@nrc.gov>
Date: Thu, Jan 6, 2005 4:25 PM
Subject: Comments on the Draft Environmental Impact Statement for theProposed National Enrichment Facility in Lea County, New Mexico

Charles Hersh
291 Sioux Ave
Amityville, NY 11701

January 6, 2005

Anna Bradford

Anna Bradford:

Chief, Rules and Directives Branch
U.S. Nuclear Regulatory Commission
Mail Stop T6-D59
Washington, D.C. 20555-0001

Re: Comments on the Draft Environmental Impact Statement for the Proposed National Enrichment Facility in Lea County, New Mexico (NUREG-1790); Docket No. 70-3103

J-171

To Whom It May Concern:

Subject: Stop Mining and Enriching Uranium and Start Reprocessing and Using the "Spent" Fuel You Already Have

Will you please stop mining and enriching uranium and instead start reprocessing and using the "spent" nuclear fuel that you already have?

Comment #185-1

Right now our entire commercial nuclear industry is using less than 4% of the fuel and discarding the rest as waste. This is because we don't reprocess the so-called "spent" nuclear fuel and recover the unused fuel, which is greater than 96%. Most of the other nuclear nations are aware of this and use MOX fuel, which is mixed oxides of uranium and plutonium.

Since this has been going on for over 30 years, we have accumulated huge reserves of "dirty" fuel that can be cleaned up—the so-called "spent" fuel. Furthermore, we have even larger accumulations of depleted uranium available for use as nuclear fuel. There is no need to enrich uranium for probably the next one thousand years, at least. Let's stop all the waste and inefficiency and finally start managing both our fuel and nuclear waste wisely.

If you examine uranium ore, it consists mostly of U238 and only 0.7% is U235. A sensible policy would utilize the U238 by incorporating it in a nuclear reactor where it is converted to Pu239, (plutonium) and then used as fuel. Of course this would mean using MOX fuels as they are made. At present, our entire nuclear industry uses the fuel once and then throws it away. We need to stop making all this waste immediately and we can, just

by reprocessing the dirty fuel we already have into usable MOX fuel.

So how much fuel do we have in the waste? For 30 years we used 4%, leaving 96% available. We have been saving 24 times as much fuel as we have been using each year for over 30 years. This amounts to a 720-year supply, (24 times 30 = 720). This is amazing. We accumulated a 720-year supply of fuel to run our entire industry! Unbelievable! Guess what? Congress wants to permanently dispose of this dirty fuel in Yucca Mountain! How dumb!

So how much fuel do we have from enriching uranium and thereby leaving depleted uranium? My estimate is a 5,600-year supply!

Enriched / Depleted Uranium Ore
Enriched uranium ore is between 3-5% uranium 235 and the rest is uranium 238. Uranium ore is roughly 0.7% uranium 235 the rest is uranium 238. Depleted uranium ore is roughly 0.3% uranium 235 and the rest uranium 238.

Problem: How much uranium ore do you need to make 1 lb of 4% enriched uranium oxide and how much depleted uranium is left over?

Start with X amount of U ore

Equate the amount of U235 for your 3 samples, the ore, the enriched U and the depleted U.

$X(0.7\%)=1(4\%)+(x-1)(0.3\%)$ or $0.7x=4+0.3(x-1)$

Solve for x and x-1

$0.4x=3.7$ $x=37/4$ $x=9.25$ $x-1=8.25$

You need about 9 lbs of ore and you are left with about 8 lbs of depleted U.

Based upon this simple problem, we would have 8 times as much fuel in depleted uranium as we have in the so-called "spent" fuel. This is about 5,600 years or 8 times 700 years.

This is a huge surplus of fuel and it seems absolutely ridiculous to throw it away. Furthermore, it makes no sense to keep mining and enriching uranium when we have so much fuel already. All this fuel can greatly reduce our dependence on fossil fuels as well as reduce carbon dioxide greenhouse emissions. We could easily meet the Kyoto standards.

I'm aware of the "Overview of Generation IV Technology Roadmap" by the GIF countries dated 18 Sep 2002. The problem is what do we do in the meantime? We have 103 commercial nuclear power plants that are continuing to use the fuel once and throw it away. This is very wasteful and causes huge storage/disposal problems. We need to start reprocessing this waste and using the resulting MOX fuels. This will stop the further production of nuclear waste while keeping all of our nuclear power plants running and producing cheap non-polluting electricity. We need to start reprocessing and using the MOX fuels.

Reference the Cogema Website http://cogema.fr/. They are a major nuclear reprocessing facility in Le Hague, France. They reprocess nuclear waste

for England, France, Japan and other countries. Unfortunately, they reprocess the waste by first chemically removing the plutonium and then removing the true waste, dirt from the dirty uranium fuel. They then reincorporate the plutonium oxide back into the fuel. I believe this method can be safely done without leading to plutonium theft and nuclear proliferation. You need to look into this matter. I know that Russia did try an experimental technique of uranium-plutonium co-precipitation. They closed their facility out of health fears. Perhaps some research into how to reprocess "spent" nuclear fuel without first separating the plutonium is necessary. In any case, you need to start dealing with the excess nuclear fuel problem immediately.

Please consider this matter and thank you for your time. I'm a retired electronics engineer formerly employed by the US Army and this issue has been bothering me for years.

Regards,

Charles A. Hersh
Please enter these comments into the official record on this proceeding.

Sincerely,

Charles Hersh
631-789-3611

J-172

Commenter 245

From: "John F. Galbraith Jr." <jfgjranalternativeway@rcn.com>
To: <nrcrep@nrc.gov>
Date: Thu, Jan 6, 2005 10:02 PM
Subject: Re: Comments on Nuclear Energy

To: Anna Bradford

Dear Anna!

I have been asked to comment on the intended enrichment facility. I would first like you to read some quotes, from some of the most famous men of our time, that I have met personally over the last 68 years. In Chronological Order.

Ernest J. Ruthaford, Considered by most, to be the Father of Nuclear Theory, Winner of the Nobel Prize in 1908. Stated... in 1912, "Those who think that the day will come, when Mankind will be able to Harness the Power of the Atom, have been Drinking to much Moonshine."

Albert Einstein, said,.....By Embracing the Atom, we have embarked on a Path, Fraught with Unparalle Catastrophe."

President John F. Kennedy, when asked about Nuclear Energy, responded.....The Reason that there are so many Burned out Planets in he Universe is, That Their Scientists, were ahead of Ours."

Frutjif Capra, Scientist, Physisist and Professor Emeritus, Berkley. ...."Nuclear Energy, is the Greatest Malady, ever Foisted on Mankind, Those Responsible, Should be Tried for Genocide."

Anna, are you aware that we currently have over 25,000 Nuclear Accidents every year around the World. Thanks to these Screwballs we are all down wind and drowning in Radiation.
I don't know who has so incidiously Indoctrinated, any of these People that are involved with Nuclear Energy Expansion, but they have already taken 12,000 generations of life out of Our Planet. It takes 70,000 years, for 1000, generations to pass through this way.

Their are tens of thousands of Real Scientists, including myself, that say end this insanity now.

Comment #245-1

Sincerely,

John F. Galbraith Jr. President

An Alternative Way

CC: "John F. Galbraith Jr." <jfgjranalternativeway@rcn.com>

From: "John F. Galbraith Jr." <jfgjranalternativeway@rcn.com>
To: <nrcrep@nrc.gov>
Date: Thu, Jan 6, 2005 10:29 PM
Subject: Emailing: fact-sheet_ne&w

Issues: Nuclear Energy & Waste: Nuclear Energy Fact SheetMore follow-up, Anna. Read this through, and see if you still feel the same way.

Comment #245-2

John Galbraith.

Issues Nuclear Energy & Waste Nuclear Energy - Fact Sheet

Introduction to Nuclear Energy for Civilian Purposes

a.. Most early atomic research focused on developing an effective weapon for use in World War II. After the war, the United States government encouraged the development of nuclear energy for peaceful civilian purposes while continuing to develop, test, and deploy new nuclear weapons.
b.. The Experimental Breeder Reactor I at a site in Idaho generated the first electricity from nuclear energy on December 20, 1951.
c.. 16% of the world's electricity now comes from nuclear energy, 85% of which is concentrated in industrialized countries. A total of 441 nuclear power plants were operating as of February 2003. There were also 32 nuclear reactors under construction (Nuclear Energy Institute).
d.. In the United States alone, there are 103 nuclear power plants, which provide about 20% of the nation's electricity.
e.. A new nuclear power plant has not been ordered in the U.S. since 1973.
f.. Today, President George W. Bush's energy policies call for a $15 billion federal subsidy to build six or seven new nuclear power plants.

J-173

1. How It Works - The Scientific Process Behind Nuclear Energy

a.. Nuclear energy relies on the fact that some elements can be split (in a process called fission) and will release part of their energy as heat.
a.. Because it fissions easily, Uranium-235 (U-235) is one of the elements most commonly used to produce nuclear energy. It is generally used in a mixture with Uranium-238, and produces Plutonium-239 (Pu-239) as waste in the process.
a.. A nuclear power plant generates electricity like any other steam-electric power plant. Water is heated, and steam from the boiling water turns turbines and generates electricity.
a.. The main difference in the various types of steam-electric plants is the heat source. Coal, oil, or gas is burned in other power plants to heat the water. Heat from a chain reaction of fissioning Uranium-235 boils the water in a nuclear power plant. Some have compared this process to using a canon to kill a fly.

2. How It Doesn't Work - Risks and Dangers of Nuclear Energy

a.. Proliferation Risks
a.. Plutonium is a man-made waste product of nuclear fission, which can be used either for fuel in nuclear power plants or for bombs.
b.. In the year 2000, an estimated 310 tons (620,000 pounds) of civilian, weapons-usable plutonium had been produced.
c.. Less than 8 kilograms (about 18 pounds) of plutonium is enough for one Nagasaki-type bomb. Thus, in the year 2000 alone, enough plutonium was created to make more than 34,000 nuclear

weapons.
d.. The technology for producing nuclear energy that is shared among nations, particularly the process that turns raw uranium into lowly-enriched uranium, can also be used to produce highly-enriched, weapons-grade uranium.
e.. The International Atomic Energy Agency (IAEA) is responsible for monitoring the world's nuclear facilities and for preventing weapons proliferation, but their safeguards have serious shortcomings. Though the IAEA is promoting additional safeguards agreements to increase the effectiveness of their inspections, the agency acknowledges that, due to measurement uncertainties, it cannot detect all possible diversions of nuclear material. (Nuclear Control Institute)

b.. Risk of Accident
a.. On April 26, 1986 the No. 4 reactor at the Chernobyl power plant (in the former U.S.S.R., present-day Ukraine) exploded, causing the worst nuclear accident ever.
a.. 30 people were killed instantly, including 28 from radiation exposure, and a further 209 on site were treated for acute radiation poisoning.
b.. The World Health Organization found that the fallout from the explosion was incredibly far-reaching. For a time, radiation levels in Scotland, over 1400 miles (about 2300 km) away, were 10,000 times the norm.
c.. Thousands of cancer deaths were a direct result of the accident.
d.. The accident cost the former Soviet Union more than three times the economical benefits accrued from the operation of every other Soviet nuclear power plant operated between 1954 and 1990.
b.. In March of 1979 equipment failures and human error contributed to an accident at the Three Mile Island nuclear reactor at Harrisburg, Pennsylvania, the worst such accident in U.S. history. Consequences of the incident include radiation contamination of surrounding areas, increased cases of thyroid cancer, and plant mutations.
c.. According to the US House of Representatives, Subcommittee on Oversight & Investigations, "Calculation of Reactor Accident Consequences (CRAC2) for US Nuclear Power Plants" (1982, 1997), an accident at a US nuclear power plant could kill more people than were killed by the atomic bomb dropped on Nagasaki.

c.. Environmental Degradation
a.. All the steps in the complex process of creating nuclear energy entail environmental hazards.
b.. The mining of uranium, as well as its refining and enrichment, and the production of plutonium produce radioactive isotopes that contaminate the surrounding area, including the groundwater, air, land, plants, and equipment. As a result, humans and the entire ecosystem are adversely and profoundly affected.
c.. Some of these radioactive isotopes are extraordinarily long-lived, remaining toxic for hundreds of thousands of years. Presently, we are only beginning to observe and experience the consequences of producing nuclear energy

d.. Nuclear Waste
a.. Nuclear waste is produced in many different ways. There are wastes produced in the reactor core, wastes created as a result of radioactive contamination, and wastes produced as a byproduct of uranium mining, refining, and enrichment. The vast majority of radiation in nuclear waste is given off from spent fuel rods.
b.. A typical reactor will generate 20 to 30 tons of high-level nuclear waste annually. There is no known way to safely dispose of this waste, which remains dangerously radioactive until it naturally decays.
c.. The rate of decay of a radioactive isotope is called its half-life, the time in which half the initial amount of atoms present takes to decay. The half-life of Plutonium-239, one particularly lethal component of nuclear waste, is 24,000 years.
d.. The hazardous life of a radioactive element (the length of time that must elapse before the material is considered safe) is at least 10 half-lives. Therefore, Plutonium-239 will remain hazardous for at least 240,000 years.

e.. There is a current proposal to dump nuclear waste at Yucca Mountain, Nevada.
a.. The plan is for Yucca Mountain to hold all of the high level nuclear waste ever produced from every nuclear power plant in the US. However, that would completely fill up the site and not account for future waste.
b.. Transporting the wastes by truck and rail would be extremely dangerous.
c.. For a more detailed analysis of the problems of and risks incurred by the plan, see Top Ten Reasons to Oppose the DoE's Yucca Mountain Plan
f.. Repository sites in Australia, Argentina, China, southern Africa, and Russia have also been considered.
g.. Though some countries reprocess nuclear waste (in essence, preparing it to send through the cycle again to create more energy), this process is banned in the U.S. due to increased proliferation risks, as the reprocessed materials can also be used for making bombs. Reprocessing is also not a solution because it just creates additional nuclear waste.
h.. The best action would be to cease producing nuclear energy (and waste), to leave the existing waste where it is, and to immobilize it. There are a few different methods of waste immobilization. In the vitrification process, waste is combined with glass-forming materials and melted. Once the materials solidify, the waste is trapped inside and can't easily be released.

3. Sustainable Energy Alternatives

There are many alternative energy sources that are sustainable and do not pose the accident risks inherent in nuclear energy production. These sources include:

a.. Bioenergy: biomass, such as plant matter and animal waste, can yield power, heat, steam, and fuel.
b.. Geothermal: renewable heat energy can be harnessed from deep within the earth.
c.. Wind: turbines turning in the air convert kinetic energy in the wind into electricity.
d.. Solar: the sun's energy can be captured and used to produce heat and electricity.
e.. Hydrogen: if produced by renewable sources, it can power fuel cells to convert chemical energy directly into electricity, with useful heat and water as the only byproducts.
f.. Tidal: using the movement of the ocean to power turbines and generate electricity.
g.. Many more sustainable resources could be found and current resources improved if better technology were available and if the government and utilities actively promoted their development.
h.. Sustainable energy links:
a.. Renewable Energy Policy Project (a CREST site)
b.. Sustainable Energy Coalition
c.. Renewable Energy

4. Additional Online Resources on Nuclear Energy

1.. History of Nuclear Energy
2.. Institute for Energy and Environmental Research (IEER)
3.. Nuclear Energy Information Service (NEIS)
4.. Nuclearfiles, Nuclear Energy
5.. Nuclear Information and Resource Service (NIRS)
6.. Nuclear Control Institute (NCI)

Issues Nuclear Energy & Waste Nuclear Energy - Fact Sheet

Commenter 284

From: "rjs.mail@netzero.net" <rjs.mail@netzero.net>
To: <nrcrep@nrc.gov>
Date: Fri, Jan 7, 2005 5:32 AM
Subject: Docket No. 70-3103, Attn-Anna Bradford

Attached comments on NUREG 1790,
Docket No. 70-3103
Attention: Anna Bradford

CC: <rjs.mail@netzero.net>

January 7, 2005

Chief, Rules Review and Directives Branch
Division of Administrative Services, Office of Administration
U.S. Nuclear Regulatory Commission
Mail Stop T6-D59
Washington, DC 20555-0001

RE: Docket No. 70-3103; NUREG 1790, Draft Environmental Impact Statement for the Proposed National Enrichment Facility in Lea County, New Mexico

Dear Sirs:

I am submitting the following comments on the Draft Environmental Impact Statement in the above captioned matter. Please enter these comments into the official record of the proceeding.

Rather than taking issue with a long list of specific problems in the Draft EIS, I will confine my comments to two areas of the analysis that are particularly significant. These areas are: I) The Institutional Environment & Cumulative Impacts and II) The Physical Environment. Although these problem areas are interactive, for the sake of simplicity, I will treat them separately.

I) THE INSTITUTIONAL ENVIRONMENT AND CUMULATIVE IMPACTS

In the analysis of the institutional context in which the DEIS takes place, there are several problems that affect the selection of facts deemed relevant to the license application and that condition the argument used by NRC to justify its approval of the LES/NEF project. These problems reflect the influence of relationships among legal and regulatory institutions (e.g. NRC, DOE and other "persons" authorized to represent the public at federal, state and local levels of government) and self-interested corporations and individuals (e.g. LES, WCS, ATLI and other "persons" that represent private economic, political or cultural goals). Problems occur in a wide range of issues relevant to the DEIS such as:

Comment #284-1

* conflict of interest when public "persons" (e.g. NRC, Sen Dominici, etc.) become interdependent with private interests (e.g. ATLI, Urenco, Westinghouse, WCS, etc.)

Comment #284-2

* failure to identify negative impacts ("opportunity costs") of taxpayer-supported revival of a moribund nuclear power industry at the expense of emerging industries in the renewable energy sector (wind, solar, geothermal, etc.)

Comment #284-3

* inability to discern disparate impacts on geographic regions with relatively high ratios of disadvantaged populations versus benefits that accrue to already privileged groups in national and international contexts

Comment #284-4

* the DEIS' frequent shifts of focus between various levels of analysis (local, regional, state, national, global, etc.) without accounting for problems ignored when shifting from one level to another

Comment #284-5

* contradictions regarding the relevance of terrorism/espionage to the DEIS [e.g. finding that these issues are "...speculative and simply too far removed from the

Comment #284-6

J-175

natural or expected consequences of agency action," (DEIS, Appendix A, p. 19) versus the imposition of censorship due to fears of terrorists with access to public documents, including the DEIS]. Because of NRC's ambivalence evidenced in these contradictions, the license proceeding should be halted until a consistent policy can be defined. Terrorism is either a significant threat and relevant for inclusion in the discussion of potential environmental impacts, or it is not relevant, and NRC's censorship of public documents due to security concerns should be rescinded.

Comment #284-6 (cont.)

Although these issues are examples of problems that permeate the entire analysis of institutions in the DEIS, I will not address them in detail in these comments.

However, within the DEIS' analysis of the institutional environment, there are two topics in the discussion of waste disposition that demand scrutiny. These issues are: A) The definition of depleted uranium as Class A low-level radioactive waste; and B) The discussion of Option 1(b) (and Option 2) regarding uranium byproduct disposal. The final EIS should not be issued without extensive revisions of these two topics.

A) Definition of Depleted Uranium As Class A Low-Level Radioactive Waste

In several places, the DEIS asserts that depleted uranium (both uranium hexafluoride, @2-27, lines 38-41, and triuranium octaoxide, @2-31, lines 15-19) is a Class A low-level radioactive waste (DEIS, @2-29, insert, lines 1-19). This assertion is based upon language in 10 CFR, Part 61.55(a), which is the default provision for unclassified wastes. The determination should be thoroughly explained and justified by NRC before the license procedure continues. Although the same declaration was made in the EIS for LES' Claiborne Enrichment Center application, it has never been supported by NRC analysis commensurate with its significance.

The enrichment process identifies the U-235 isotope as its product and the U-238 isotope as a byproduct. Depleted uranium radionuclides are primarily U-238, which eventually decay into other radioisotopes, and finally into a stable isotope of lead-206. However the half-life of U-238 is 4.46 billion years, which means, in practical terms, that depleted uranium will always be radioactive. Uranium-238 can also be converted to plutonium-239, the "fissile" isotope of plutonium that is used in weapons. Furthermore, the specific activity of depleted uranium, measured in nanocuries per gram, is much greater than the activity of transuranic wastes (including wastes of plutonium), and DU is comparable to TRU wastes in the amount of radiation that is emitted in decay (Institute for Energy and Environmental Research, <www.ieer.org>).

Although there are differences between depleted uranium and transuranic waste, there are enough similarities in their potential hazards that they should be subject to similar disposal methods. The NRC's default declaration that DU is a Class A low-level radioactive waste is misleading and should be revisited before waste disposition policy is defined for a uranium enrichment facility. The DEIS is setting a dangerously low standard of environmental protection when it assumes that shallow land burial of depleted uranium byproduct will have no significant impact upon the environment (for 4.5 billion years?). In fact, the NRC acknowledges the potential for problems with DU disposal as Class A low-level waste in its discussion of potential impacts at 4-58, lines 30-32. "Final disposal of large quantities of depleted uranium at a licensed facility could require additional environmental impact evaluations depending on the location of the disposal facility and quantity of depleted uranium to be deposited." However, such re-evaluations should be preceded by a thorough revision of NRC standards for DU disposal issued prior to a license for the LES/NEF project.

Comment #284-7

B) Discussion of Option 1(b) (and Option 2) Regarding Uranium Byproduct Disposal

Related to the issue of byproduct classification is the DEIS discussion of disposal options. Specifically, the discussion of disposition Option 1(b) contains some false assertions that are particularly significant in light of NRC's declaration that depleted uranium is Class A low-level waste. The DEIS contains errors of fact regarding the legal and regulatory environment of Waste Control Specialists. It also fails to identify the probability that WCS will be able to store, process and dispose of all radioactive, hazardous and mixed waste generated at the proposed NEF. In other words, the DEIS fails to evaluate the fact that waste generated by LES in Lea County, New Mexico may never leave the vicinity (although its disposition may be in Texas, not in New Mexico).

Comment #284-8

Waste Control Specialists currently is licensed by the Texas Department of State Health Services (formerly the Texas Department of Health) to process and store low-level radioactive waste (Classes A, B, C, greater-than-class-C and sealed sources) and mixed hazardous and radioactive waste. Contrary to the DEIS (@3-3, lines 32-33), the license does not currently include 11e(2) byproduct waste. WCS has requested two amendments to its current license, one for storage and processing of 11e(2) material (now being stored in Fernald, Ohio), and one for the disposal of this material. The amendment requests will probably be granted this spring.

WCS is also licensed by the Texas Commission on Environmental Quality (formerly Texas Natural Resource Conservation Commission) to dispose of hazardous waste and Naturally Occurring Radioactive Material. In addition, the company has applied to TCEQ for a license to dispose of low-level radioactive waste and mixed waste. The license will allow WCS to dispose of low-level waste from the Texas-Vermont Interstate Compact and to open an adjacent site for "federal facility waste." On page 2-32, the DEIS asserts that LES/NEF could not dispose of its waste at either the Compact facility (lines 31-35) or at the federal facility (lines 43-45). If depleted uranium is considered Class A low-level waste, the DEIS is wrong on both counts.

The Texas-Vermont Compact states: "The comission may:...Enter into an agreement with any person, state, regional body, or group of states for the importation of low-level radioactive waste into the compact for management or disposal, provided that the agreement receives a majority vote of the commission..." [TX-VT Compact, Article III, Sec. 3.05(6)]. The definition of "person" includes any "...individual, corporation, partnership or other legal entity, whether public or private" [TX-VT Compact, Article II, Sec. 2.01(14). Because of this Compact "loophole," both Louisiana Energy Services and the Department of Energy may contract with the Compact Commission (six of whom will be from Texas, one from Vermont) to dispose of low-level radioactive waste at the Compact facility. There is no statutory limit on the volume or activity of waste that can be received (limits apply only to Vermont), and the facility may receive either uranium hexafluoride or triuranium octaoxide, if they are considered low-level waste.

If the Department of Energy takes possession of the uranium hexafluoride byproduct from LES (DEIS, 4-50, insert, lines 9-43), it can deal directly with the Compact facility license holder (i.e. Waste Control Specialists) to use the "federal facility waste disposal facility," adjacent to, and simultaneously licensed with, the Compact facility. Texas law regarding "federal facility waste" requires only that DOE have "responsibility" for its disposal, not that it must have been generated by DOE at a federal facility. "'Federal facility waste' means low-level radioactive waste that is the responsibility of the federal government under the Low-Level Radioactive Waste Policy Act, as amended by the Low-Level Radioactive Waste Policy Amendments Act of 1985 (42 U.S.C. Sections 2021b-2021j)" and "'Federal facility waste disposal facility' means a facility for the disposal of federal facility waste licensed under Section

401.216" [Texas Health & Safety Code, Sec. 401.2005, (4) & (5)].

If DOE assumes responsibility for LES' uranium hexafluoride byproduct, and the DU byproduct is Class A low-level radioactive waste, then WCS may receive the waste for storage, processing and/or disposal at the "federal facility waste disposal facility." The byproduct material may be received for direct disposal, or for processing to the more stable triuranium octaoxide form, then disposal. However, the federal facility waste disposal facility is subject to statutory limits on the volume of waste that it may receive for disposal.

The Compact facility license holder (WCS) may only dispose of six million cubic yards (162 million cubic feet) of low-level radioactive waste at the federal facility waste disposal facility, adjacent to the Compact facility (which has no such limits). By comparison, the Compact facility that was proposed for Sierra Blanca, Texas would have been limited to less than two million cubic feet (i.e. cubic FEET) of capacity. The currently proposed federal facility has approximately eighty times the capacity of Sierra Blanca, and the capacity of the proposed Compact facility is limited only for Vermont. The federal facility limit is initially set at three million cubic yards (300,000 cu. yds. of which may be Class B & C waste), but the totals are doubled after five years of operation [TH&SC, 401.216(a), (b), & (c)].

The facility is also authorized to receive Class A low-level waste with "high radiation levels," so long as it uses the disposal method prescribed for Class B & C waste (i.e. in reinforced concrete containers, or containers that are comparable to reinforced concrete) [TH&SC, Sec. 401.218(b) & (c)]. Apparently, Class B & C volume limits do not apply to Class A waste with "high radiation levels." This may allow burial of DUF6 cylinders without further processing, but would certainly accommodate burial of triuranium octaoxide.

Although WCS does not currently have a permit for a depleted uranium byproduct conversion facility (converting uranium hexafluoride to triuranium octaoxide), it would require only an amendment to its license for processing and storage, rather than a separate permit. A conversion facility amendment to its current license for storage and processing would provide one more path by which DEIS Option 1(b) could be met by WCS. Because of these problems in the DEIS analysis of waste disposition, the NRC should completely re-evaluate its position on this crucial topic.

Comment #284-8 (cont.)

In fact, it is reasonable to assume that WCS would seek amendments to its license for processing to allow it to develop facilities for fuel fabrication and several other functions that NRC licenses. There are existing activities (Waste Isolation Pilot Plant, about 45 miles west of Eunice, NM) and activities proposed [Modern (plutonium weapons) Pit Facility, near the WIPP site] that may potentially interact with the LES/NEF and WCS. In addition, Andrews County has a history of aggressively pursuing high-risk projects (e.g. designation as the high-level radioactive waste site and the site of the superconducting supercollider), and WCS has a long-standing ambition to attract a wide range of waste-related industries (e.g. a complex array of hazardous waste facilities and the effort by USEC to develop an AVLIS uranium enrichment project in 1998-1999).

This pattern of development associated with WCS/Andrews and southeast New Mexico suggests that it is unreasonable to assume that the proposed LES/NEF would not have cumulative impacts far beyond the level proposed in the DEIS, Section 4.4, pages 4-65 to 4-68. For this reason, the NRC should also re-evalute the potential for cumulative impacts of the proposed LES/NEF.

Comment #284-9

II) PHYSICAL ENVIRONMENT

The need for revision of the DEIS analysis of the institutional environment and its cumulative impacts is compounded by problems with the DEIS description of the physical environment, primarily with site geology and meteorology. The DEIS does not give sufficient attention to potential effects of extreme weather conditions (e.g. high winds, tornados, flash floods, high heat) on operations and transportation related to the proposed LES/NEF. Furthermore, the Hobbs, NM rainfall data used as a basis for other parts of the analysis (DEIS, 3-13, Table 3-3) contain anomalies that raise questions. Although the data cover almost ninety years of measured rainfall, half of the maximum monthly measurements have occurred in the last twenty years, and three quarters of the minimum measurements occurred in the first ten years of record-keeping. Either the rainfall at the site has been increasing at an alarming rate, or earlier record-keeping was faulty and should not be used to calculate "average" rainfall.

Comment #284-10

Rainfall measurements are significant because they influence interpretations of surface and near-surface hydrology. Drainage patterns at the site trend to the west and south, toward Monument Draw, which runs parallel to the border between Texas and New Mexico. Monument Draw is above the western edge of the subsurface Central Basin Platform, the structure that describes the eastern rim of the Deleware Basin and the Capitan Reef. Monument Draw, and the LES/NEF site's connection to the West Platform area beneath Monument Draw constitute a significant problem in the DEIS analysis.

Comment #284-11

Although the DEIS identifies several facts about area geology that should be explored more fully, it assumes that chemical and radiological pollutants in airborne emissions and leachate will not affect the regional environment. However, pollutants from the facility may travel long distances in the air, regardless of surface wind conditions, and fast flow paths for water may undermine reliance on root system uptake and evapotranspiration as mitigation for water contaminants. And if the potential for disposal of depleted uranium near the site is considered, longer term factors of site geology take on new significance.

Comment #284-12

Descriptions of local geology may be interpreted to suggest that the Ogallala Aquifer is at risk, and despite the DEIS' assurance to the contrary, this is a valid concern. Yet there is another view of geological processes that is also plausible, but it directs concerns for water contamination to the south, beneath Monument Draw and along the West Platform Fault Zone. This is a well-known area of interconnected faults that has proven to be a prolific source of oil and gas production.

Hydrocarbon production is thought to be the cause of the area's frequent seismicity (Luo, et.al., 1991), but the DEIS' assertion that oil and gas production is the only cause of seismic activity is contradicted by other geologists (Sanchez, 1992; Hill, 1996). The 1992 earthquake at Eunice (magnitude 5.0) was probably tectonic in origin, and the presence of oil and gas deposits may be as much an effect of seismicity, as a cause. In addition, there are many dissolution features (fissures, sink holes, beccia pipes, etc.), also associated with hydrocarbon, salt, and sulfur resources that accompany karst formation and increased probability of fast flow paths (DuChene & McLean, 1989; Hill, 1992). Furthermore, the use of secondary oil recovery methods, such as waterfloods, may also interact with site geology to accelerate water in unpredictable ways ("well blowouts") through hydrologic systems (Silva, 1996). Although oil deposits are much deeper than the water bearing formations at issue, the presence of thousands of wells and numerous fault pathways that connect widely separated strata makes the hydrology of the site impossible to characterize without more extensive data.

Comment #284-13

Unfortunately, the DEIS sheds no light on the potential for water to move through the

NEF and WCS sites. Water may enter local surface and groundwater systems from rainfall, water pumped to the surface for operations, perched lenses connected by preferred pathways such as faults and fractures, or wells connecting strata that are otherwise separated. Because there are known faults in the area, and the site is located above the West Platform Fault Zone, a detailed study of potential pathways should be completed before a final EIS is issued. In addition to polluting the Ogallala Aquifer, water from the site may reach the Pecos River Valley surface water, groundwater from the Capitan Reef formation, and possibly other sources of fresh water in Texas.

Comment #284-13

CONCLUSION

In conclusion, I respectfully request that these comments be entered in the record of this proceeding and that the Nuclear Regulatory Commission either reject the license application as inadequate or conduct a thorough revision of the EIS before continuing.

Comment #284-14

Sincerely,

Richard Simpson
P.O Box 13101
Austin, TX 78711

Chief, Rules Review and Directives Branch

Division of Administrative Services, Office of Administration

U.S. Nuclear Regulatory Commission

Mail Stop T6-D59

Washington, DC 20555-0001

RE: Docket No. 70-3103; NUREG-1790, Draft Environmental Impact Statement for the Proposed National Enrichment Facility in Lea County, New Mexico

Dear Sirs:

On January 7, 2005, I sent comments to NRC regarding NUREG-1790, Docket No. 70-3103. Yesterday I learned that there were two errors in my comments, and while they are not crucial to the DEIS, I am submitting the following corrections. Although too late to be entered into the record, I am sending the corrections in the interest of accuracy.

J-178

In Section I), Part B), the second paragraph contained an error regarding WCS' storage and processing license. I stated that the current request for amendment is for permission to store and process 11e(2) byproduct material, when in fact the request is for an increase in levels of radioactivity allowed for 11e(2) material. A second license request is not for an amendment, but for permission to dispose of the higher concentration 11e(2) material. The paragraph should read as follows:

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Waste Control Specialists currently is licensed by the Texas Department of State Health Services (formerly the Texas Department of Health) to process and store low-level radioactive waste (Classes A, B, C, greater-than-class-C and sealed sources),

11e(2) uranium byproduct, and mixed hazardous and radioactive waste. Although the license includes 11e(2) byproduct material, WCS has requested an amendment which would allow it to store and process byproduct with much higher concentrations of radioisotopes (now being stored by DOE in Fernald, Ohio). WCS has also applied to TDSHS for a license to dispose of this highly concentrated form of 11e(2) material. The storage amendment request will probably be granted this spring, but a ruling on the disposal permit will take about another year.

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The fourth paragraph of Section I), Part B) also contains an error regarding the means by which LES' depleted uranium may be accepted for disposal by the Texas-Vermont Compact facility. I stated that LES may contract with the TX-VT Compact Commission, when in fact the contract must be arranged through the agency of the Rocky Mountain States Compact (or the DOE). The paragraph should read as follows:

****

The Texas-Vermont Compact states: "The commission may:...Enter into an agreement with any person, state, regional body, or group of states for the importation of low-level radioactive waste into the compact for management or disposal, provided that the agreement receives a majority vote of the commission..." [TX-VT Compact, Article III, Sec. 3.05(6)]. The definition of "person" includes any "...individual, corporation, partnership or other legal entity, whether public or private" [TX-VT Compact, Article II, Sec. 2.01(14). Because of this Compact "loophole," both Louisiana Energy Services and the Department of Energy may contract with the Compact Commission (six of whom will be from Texas, one from Vermont) to dispose of low-level radioactive waste at the Compact facility. However LES would need to receive permission from the Rocky Mountain Compact (of which New Mexico is a member) to use the WCS facility, or the contract

could be between the two compact commissions. There is no statutory limit on the volume or activity of waste that can be received at the Texas Compact site (limits apply only to Vermont), and the facility may receive any form of low-level waste that is accepted by TCEQ rules.

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I would appreciate your adding these corrections to my previous comments, and I look forward to a Final Environmental Impact Statement.

Sincerely,

Richard Simpson
P.O. Box 13101
Austin, TX 78711

J-179

Commenter 295

From: <contactus@cardnm.org>
To: <nrcrep@nrc.gov>
Date: Fri, Jan 7, 2005 10:33 AM

To whom it may concern,
Please review attached comments.

Chief Rules Review and Directive Branch
Mail Stop T6-D59
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

RE: Docket No. 70-3103

To whom it may concern,

I am representing Citizens for Alternatives to Radioactive Dumping, a statewide organization with its office in Albuquerque and constituents in Southeastern New Mexico. We are concerned that the proposed LES uranium enrichment plant will be a danger to the environment and the communities surrounding the proposed facility. One only has to look at the record of LES to understand the reasons for these concerns.

We would like to comment in some detail on the Draft Environmental Impact Statement. However, the only version of the DEIS available to us [the one on the NRC website] does not include public and occupational safety risks and transportation accident impacts which are the very subjects on which we wish to comment.

We request that NRC require that complete information concerning LES be made available for public comment and that this DEIS be declared inadequate.

Comment #295-1

Sincerely,

Janet Greenwald
Co-coordinator
Citizens for Alternatives
To Radioactive Dumping
505-266-2663
202 Harvard SE
ALB. NM 87106

J-180

Commenter 316

From: "Joseph Malherek" <jmalherek@citizen.org>
To: <nrcrep@nrc.gov>
Date: Fri, Jan 7, 2005 2:23 PM
Subject: PC-NIRS Comments on NEF DEIS

Attention: Anna Bradford

Attached you will find a PDF of the joint comments of Public Citizen and the Nuclear Information and Resource Service on the Draft Environmental Impact Statement for the National Enrichment Facility (NUREG-1790; Docket No. 70-3103).

To ensure delivery, these comments will also be submitted via fax and U.S. mail.

Please enter these comments into the official record on this proceeding. Thank you.

Sincerely,
Joseph P. Malherek

Joseph P. Malherek

Policy Analyst
Critical Mass Energy and Environment Program
PUBLIC CITIZEN
215 Pennsylvania Ave SE
Washington, DC 20003
Phone: 202-454-5109
Fax: 202-547-7392
E-mail: jmalherek@citizen.org

Public Citizen

NIRS

January 7, 2005

Chief, Rules and Directives Branch
U.S. Nuclear Regulatory Commission
Mail Stop T6-D59
Washington, D.C. 20555-0001

Re: Comments on the Draft Environmental Impact Statement for the Proposed National Enrichment Facility in Lea County, New Mexico (NUREG-1790); Docket No. 70-3103

To Whom It May Concern:

Enclosed you will find the joint comments of Public Citizen and the Nuclear Information and Resource Service (NIRS) on the NRC's Draft Environmental Impact Statement (Draft EIS) for the proposed National Enrichment Facility (NEF) in Lea County, New Mexico.

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Public Citizen and NIRS have jointly been admitted as a party to the licensing proceeding for the NEF, a proposed uranium enrichment plant proffered by a firm called Louisiana Energy Services (LES). As formal participants with standing in this proceeding, we hope that our comments and recommendations on the Draft EIS are considered seriously and taken into account before the NRC issues its final EIS on the NEF.

Please enter these comments into the official record on this proceeding.

Sincerely,

Joseph P. Malherek
Policy Analyst, Public Citizen's Critical Mass Energy and Environment Program

Michael Mariotte
Executive Director, Nuclear Information and Resource Service

[Enclosure]

Public Citizen: 215 Pennsylvania Ave SE • Washington, DC 20003 • (202) 546-4996 • www.citizen.org
NIRS: 1424 16th Street NW #404 • Washington, DC 20036 • (202) 328-0002 • www.nirs.org

A Note on the Public Comment Period

As a result of the NRC's security review of the documents posted on its website, the public was forced to submit comments under conditions that have greatly limited its ability to adequately review the environmental evaluation of the NEF as well as important related documents.

Included among these files were documents essential for preparing comments, including LES's license application for the NEF and the NRC's Draft EIS for this proposed plant. Additional items needed for drafting informed comments, such as the record of communications between the NRC and LES, were also restricted from public access.

Only recently have these documents been restored to the NRC's Web site, albeit in a limited form where parts deemed to contain sensitive security information have been removed. In the Draft EIS, the redacted portions include maps of the site and facility and all or parts of Sections 4.2.11.2 and 4.2.13, Tables 4-17 and 4-21, and large portions of Appendix C, which include evaluations of possible accidents at the NEF and their potential impacts on public and worker health. Moreover, a list of chemicals employed at the facility has been removed. This information is essential to public knowledge and understanding of the plant's operations and impacts. It is difficult to believe that an honest assessment of possible accidents and their consequences would be particularly useful to terrorists or others. Comment #316-1

These conditions have made it difficult to perform a comprehensive review of the NRC's Draft EIS; nevertheless, Public Citizen and NIRS hereby present our comments based on the information available.

General Comments

The site of LES's proposed NEF sits in a region already negatively impacted by various industrial activities: there is a quarry and a petroleum-industry solid-waste treatment and disposal facility to the north, a hazardous and radioactive waste dump to the east, a municipal landfill to the southeast, and a petroleum-contaminated-soil treatment facility to the west—all of this among a landscape littered with 33,700 oil wells, several oil processing facilities with flame-off towers, and hundreds of associated pumps, jacks, and rigs (Draft EIS, § 3.2; § 4.2.3). The region has been thoroughly tapped for oil and gas resources, the ecological scars of which remain.

Amidst this, NRC has determined in its Draft EIS that the environmental impacts from building and operating a uranium enrichment facility on the site would be mostly "small" to "moderate," and has recommended that the proposed license be issued to LES (Draft EIS, § 2.4). Public Citizen and NIRS do not agree with this assessment. Comment #316-2

It is also the view of Public Citizen and NIRS that the Draft EIS for the NEF falls short of the requirement of the National Environmental Policy Act (NEPA) that each federal agency must consider in an environmental impact statement "the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity" (42 U.S.C. Comment #316-3

§ 4332(c)(iv)). But the NRC staff merely notes that a "detailed analysis of the impact of the proposed NEF on connected actions that include the overall nuclear fuel cycle activities were not considered" (Draft EIS § 1.4.3). The cumulative hazards and dangers of the nuclear fuel cycle, nuclear power generation, and nuclear waste management deserve a thorough accounting in the EIS, which is lacking in this draft version, where there is only a cursory consideration of these factors in chapter 4 on "Environmental Impacts." Considering the enormous problem of properly disposing of irradiated nuclear fuel—one of the ultimate products of this plant—and isolating it from the environment, this omission amounts to an evasion of responsibility. While the NRC, in the context of drafting an EIS for a uranium enrichment facility, may not have a statutory obligation to consider the long-term management of wastes produced by nuclear power reactors, it is the opinion of Public Citizen and NIRS that this necessary stage in the production of nuclear fuel is a proper forum for a consideration of its ultimate destination. We request that this be remedied in the final version.

Comment #316-3 (cont.)

Furthermore, the analysis of "Alternatives to the Proposed Action" (Draft EIS, § 2.2) is perfunctory and myopic. NEPA requires agencies of the federal government to "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources" (42 U.S.C. § 4332(E)). Considering the fact that the problem of radioactive waste is, by virtually all accounts, an "unresolved conflict" (note the many years of contentious debate over the Yucca Mountain nuclear waste repository), the section covering alternatives to the proposed action should encompass a broader range of possibilities than merely other means of enriching uranium for use as fuel in nuclear reactors. The Final EIS should consider alternative energy sources—such as wind and solar—and the means required to employ them instead of nuclear power. Nuclear-generated power requires the use of finite resources while creating unique and dangerous environmental and health hazards; an alternative to this course should be evaluated before issuing a license for a nuclear fuel facility.

Comment #316-4

J-182

NEPA Requirements

Per the requirements of NEPA, an EIS is required to include a "detailed statement" on:

(i) the environmental impact of the proposed action,
(ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,
(iii) alternatives to the proposed action,
(iv) the relationship between local short-term uses of man's environment and the maintenance of long-term productivity, and
(v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented. [42 U.S.C. § 4332(2)(c)]

Comment #316-5

Chapter 4 of the Draft EIS does include a discussion of these things, but it is far from being a "detailed statement"; rather, it is cursory, perfunctory, and limited in scope and vision. For example, Section 4.7, titled "Relationship Between Local Short-Term Uses of the Environment and the Maintenance and Enhancement of Long-Term Productivity," fails to adequately consider the long-term hazards created by depleted uranium waste (not to mention irradiated fuel rods, the

ultimate destination of the proposed NEF's product) upon the long-term productivity of our natural resources. In the Final EIS, these NEPA-required statements of environmental impact should be expanded in scope and detail to address such important questions.

Comment #316-5 (cont.)

Site Selection

The description of LES's site selection process in Section 2.2.2.1 is misleading in that it only mentions certain objective criteria of respective sites and neglects the political situation that led to the selection of the site in New Mexico.

LES was opposed by many members of the communities in Louisiana, where it failed to attain a timely license for its proposed Claiborne Enrichment Center (CEC), as well as in Tennessee, where many local officials also opposed the project.

It has been reported that Sen. Pete Domenici of New Mexico, an ardent proponent of the nuclear industry, "wooed" the company to his home state when it was having trouble meeting zoning requirements established at its chosen site in Tennessee.[1] Officials at the federal, state, and local level in New Mexico were, unlike in Tennessee, generally favorable to the project.[2]

Comment #316-6

Yet nothing of this is mentioned in the Draft EIS; rather, the process used to select the site is described as a "multi-attribute-utility-analysis methodology" (page 2-35, line 5). Seven candidate sites were eliminated because of the risk of an earthquake (Draft EIS, Table 2-7), yet the site that was ultimately chosen lies in a seismically-active area near, possibly over, a geologic fault.[3] The site in Bellefonte, Alabama is said to have been eliminated because a "historic preservation assessment" may have been required (page 2-38, line 16); yet at the chosen site in Lea County, the presence of seven archaeological sites, each of which has been determined to be eligible for listing in the National Register of Historic Places, has been identified (page 3-9), requiring LES to negotiate a "Memorandum of Agreement" with the state of New Mexico (page 1-17). Also at the Bellefonte site, the "costly relocation" of high-voltage transmission lines is cited as a reason for lowering Bellefonte's rating below the Lea County site. Yet existing at the latter site is a high-pressure carbon-dioxide (CO_2) gas line that would have to be relocated before the site is developed (page 2-9). Additionally, potable water pipelines from the nearby cities of Eunice and Hobbs—8 and 32 kilometers in length, respectively—would have to be constructed to serve the facility; and two independent electrical substations and two 115-kilovolt overhead transmission lines stretching 13 kilometers would be required to serve the NEF (Draft EIS, § 2.1.6). Considering this, why did LES judge the Bellefonte site to be inferior to the Lea County site?

[1] "LES to set up plant in New Mexico," *Nuclear Engineering International*, Oct. 31, 2003: 3; "Full Review – Enrichment – The race is on," *Nuclear Engineering International*, Sept. 30, 2003: 12.
[2] "Nuke fuel factory planned for Lea County; environmentalists oppose it," *Associated Press Newswires*, Sept. 3, 2003.
[3] National Enrichment Facility Environmental Report, Revision 2, Table 3.3-3, July 2004; for an account of the geologic fault discovered under the Waste Control Specialists site, *see* Memorandum from Herman L. Graves to Joseph G. Gitter, "May 27-28, 2004, Meeting Summary: Louisiana Energy Services' In-Office Review, Hobbs, New Mexico and Site Visit, Eunice, New Mexico," June 29, 2004.

Proximity to Other Facilities
As shown in the maps presented in figures 4-5 and 4-6, the location of the proposed NEF is remarkably isolated from other related nuclear fuel cycle facilities, requiring the shipment of radioactive and hazardous materials over great distances, increasing the possibility of a harmful accident, which could produce adverse health effects in up to 28,000 people in an urban area (Draft EIS, Table 4-7). In fact, none of the waste processing/disposal facilities cited by LES is closer than 1,000 miles from the site.[4] Yet proximity to these sites does not appear to have been a criterion considered in the selection of the Lea County site (Draft EIS, § 2.2.2.1). Considering the fact that the two previous sites chosen by LES—in Louisiana and Tennessee—would have been much nearer to these related facilities, would it be correct to assume that this was a factor considered by LES but neglected in its most recent site selection?

Comment #316-7

Contamination at Lea County Site
Samples taken by LES at the NEF site reveal that the U.S. Environmental Protection Agency's maximum contaminant levels are exceeded for several substances, including boron, chloride, iron, manganese, sulfate, uranium-234 as well as "gross alpha" radioactive constituents (Draft EIS, Table 3-11). Considering the existing contamination at the site, what cumulative health effects would arise from an additional industrial development that would produce, among other things, mass quantities of uranium-238? What impact would this combination of substances have on the safety of water resources?

Comment #316-8

Cesium-137, a man-made radionuclide produced by past atmospheric atomic weapons testing, is "ubiquitous in the environment" around the NEF site, according to an LES survey (Draft EIS, page 3-31, line 40). Considering the already pervasive presence of this radionuclide, what are the cumulative health effects are anticipated from the combination of NEF radiation exposures and this already-ubiquitous radioactive element?

Comment #316-9

J-183

Need for Facility

Net Energy Output
The NEF would require approximately 30 megawatts of electricity for operation (Draft EIS, § 2.1.6, line 35). The average nuclear reactor has a production capacity of just under 1,000 megawatts.[5] In the Final EIS, please calculate the length of time and the quantity of electricity consumed by the NEF before the fuel it produces creates electric power in excess of that which was used to enrich the fuel. Such a calculation is necessary to judge the value of this fuel source over others that may more quickly and efficiently recover the energy lost in attaining, capturing, refining, or exploiting a fuel.

Comment #316-10

Domestic Supply of Enriched Uranium
The discussion of the need for the NEF in Section 1.3 of the Draft EIS underestimates the value to American national security that comes from the United States' 1993 agreement with Russia—known as "Megatons to Megawatts"—to convert 500 metric tons of highly enriched uranium

Comment #316-11

[4] National Enrichment Facility Environmental Report, Table 4.13-1, Dec. 2003.
[5] U.S. Energy Information Administration, Table: "Monthly Nuclear Generation by State, 2003 (Megawatt hours)," <http://www.eia.doe.gov>.

(HEU) from dismantled nuclear warheads into low-enriched uranium (LEU) for use in domestic nuclear power reactors. This program is essential to preventing nuclear proliferation by diverting this dangerous material to a beneficial use, but if another source of enriched uranium is introduced in the U.S. market—as with the proposed NEF—prices may become depressed, thus threatening this crucial program as well as our national security. The exposure of the Abdul Qadeer Khan nuclear network highlights the urgent need to eliminate surplus HEU from the international supply.

Comment #316-11 (cont.)

Furthermore, the discussion of the "No-Action Alternative" (Draft EIS, § 2.2.1) should contain an evaluation of the benefits to public health (from deferred mining, for example) and non-proliferation that would come from an acceleration of purchases of HEU from Russia as well as use of other down-blended reactor fuel—including fuel that could come from the United States' surplus HEU inventory.

Comment #316-12

Future Nuclear Capacity
The Draft EIS states that "nuclear-generating capacity within the United States is expected to increase, causing an increase in demand for low-enriched uranium" (page 2-23, lines 46-47). Given the facts that (1) no new nuclear power reactor has been ordered in a quarter of a century; (2) no company has received a license to build a new reactor; (3) no company has expounded an explicit plan to build a new nuclear reactor; and (4) Wall Street does not seem to have an interest in funding a new generation of nuclear reactors, even with government support,[6] how does the NRC justify the claim that nuclear-generating capacity is expected to increase in the United States?

Comment #316-13

Socio-economic Impact

The NRC judges the socio-economic impact of the proposed NEF to be "moderate," citing benefits to Lea County and the surrounding region in the form of jobs and taxes (Draft EIS, Table 2-8, page 2-52; *see also* § 4.2.9.7). However, per the terms of the agreement between LES and Lea County on the $1.8 billion in industrial revenue bonds the county offered to finance the project, LES would not have to pay any property taxes for the duration of the operational life of the NEF—roughly 30 years—and it may be exempt from other taxes as well.[7] According to the Economic Development Corporation of Lea County, this kind of property tax exemption could be worth $3 million over 30 years for a $10 million project.[8] Considering that construction of the NEF is expected to cost $1.2 *billion* (Draft EIS, Table 2-8, page 2-52), what does the NRC expect the total property tax exemption for the NEF to be? That is, how much revenue will this exemption cost Lea County compared to the $177 million it is expected to earn from taxes on the NEF, according to LES estimates (Draft EIS, page 4-21, lines 9-11)? Such a calculation should

Comment #316-14

[6] *Time for a New Start for U.S. Nuclear Energy?*, Standard & Poor's, June 2004.
[7] Ben Neary, "Issues with LES Parent Company Might Be Red Flags," *The Santa Fe New Mexican*, Dec. 9, 2003: A4; Jim Carlton, "New Mexico Takes a New Look at Building of Uranium Plant," *The Wall Street Journal*, Jan. 7, 2004: B4B; see also Web site of the Economic Development Corporation of Lea County at the section entitled "Finance and Incentives: Industrial Revenue Bond," Nov. 24, 2004, <http://www.leanm.org/irb.asp>.
[8] Web site of the Economic Development Corporation of Lea County at the section entitled "Finance and Incentives: Property Tax Exemption," Nov. 24, 2004, < http://www.leanm.org/pte.asp>.

be integral to any assessment of alleged socio-economic benefits that the plant would bring to the community.

Comment #316-14 (cont.)

Moreover, the job benefits cited for the local community contradict a later admission that the "current labor force...cannot currently supply the specialized skills needed for the proposed NEF operations" (Draft EIS, S 4.2.9.7, lines 9-10). Indeed, the percentage of persons in the region employed in the "Professional, Scientific, Management, Administration, and Waste Management" fields—presumably applicable to jobs that would be created at the NEF—is less than half the averages for New Mexico and Texas (Draft EIS, Table 3-15, line 27). Similarly, the percentage of persons in the region who have attained at least a bachelor's degree is about have the averages for the two states (Draft EIS, Table 3-14, line 24). The EIS should make clear the reality that most, if not all of the higher-wage jobs available as a result of the facility would go to people outside the region, and even outside the United States.

Comment #316-15

"Environmental Justice"

The NRC staff judges that the impact of the NEF in the area of "environmental justice" will be "small" because "no disproportionately high adverse impacts would occur to minority and low-income populations living near the proposed NEF..." (Draft EIS, Table 2-8, page 2-53; *see also* § 4.2.9.8). Yet the criteria used to determine whether or not the effects on minority or low-income populations would be "disproportionately high" stem from the narrowly defined data analyses recommended in Appendix C of NUREG-1748 ("Environmental Review Guidance for Licensing Actions Associated with NMSS Programs").

The guidelines described in NUREG-1748 strictly limit what qualifies as a high concentration of minority or low-income persons near the proposed site of a nuclear facility. The author of the regulatory guidelines, the Office of Nuclear Material Safety and Safeguards (NMSS), recommends a review of the demographic composition of the area encompassing a four-mile radius from the site. A high minority or low-income population percentage is considered to be at least 20 percentage points higher than the average county or state percentages. But comparing the minority and low-income population percentages to county and state averages, rather than to national averages, skews the data. According to data from the 2000 U.S. Census, Hispanics make up 42.1 percent of the population of New Mexico—the highest percentage of any state—and 39.6 percent of the population of Lea County, but only 12.5 percent of the U.S. population at-large, a difference significantly greater than 20 percentage points. The total minority population of New Mexico is 55.3 percent, compared to 30.9 percent nationally, a difference of more than 24 percentage points. Likewise, Texas has a very large Hispanic population of 32.0 percent and a total minority population of 47.6 percent. Moreover, New Mexico also had the third-highest percentage of people living in poverty between 2000 and 2002 among all states, according to the U.S. Census Bureau.[9]

Comment #316-16

The NMSS document clearly states that the criteria it defines are only intended to be used as guidelines and should not be followed absolutely, suggesting that even in cases where the

[9] Proctor, Bernadette D. and Joseph Dalaker, "Poverty in the United States: 2002," *Current Population Reports* (U.S. Department of Commerce, Economics and Statistics Administration, and U.S. Census Bureau) Sept. 2003.

defined demographic data analysis does not indicate a disproportionately high low-income or minority population, an environmental justice review may be conducted if it becomes apparent through public comments or scoping activities that such a population may be adversely affected by the proposed action.

Comment #316-16 (cont.)

Furthermore, the Council on Environmental Quality, which drafted a guidance document for federal agencies to use in implementing the 1994 executive order that created a national "environmental justice" policy, identified a significant minority population as composing a population percentage "meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis."[10] While the NRC staff did adjust the methodology of its environmental justice evaluation to account for the extraordinarily large Hispanic and minority populations in New Mexico and Texas by considering U.S. Census "block groups" with minority and/or low-income population percentages at least as great as statewide percentages instead of 20 percent greater (Draft EIS, page 3-61, lines 1-4), per the NMSS recommendations, it still only compared these local groups to statewide populations, not nationwide populations, which would have produced a much greater disparity, presumably warranting a more detailed review. In the Final EIS, the NRC staff should consider the impacts of the NEF on minority and low-income populations, taking into account the fact that, relative to the rest of the country, these communities are highly concentrated in the area near the NEF site.

In Section 4.2.9.5, NRC staff describes the most significant kind of accident scenario involving the NEF, a release of uranium hexafluoride (UF_6), which could result in seven latent cancer fatalities. NRC staff reasons that, in such an event, "minority and low-income populations would not be more obviously at risk than the majority population" (Draft EIS, page 4-25, lines 29-30). Yet this rationale betrays a faulty logic: if this event is more likely to occur in a situation where the NEF is permitted to operate, and this dangerous facility is located in an area of the country with a disproportionately large minority population, then these minority groups are, in fact, presented disproportionately high risk of ill health effects.

Consultations with Effected Groups

The Draft EIS records that 72 census block groups within a 50 mile radius of the site "were identified as satisfying the criteria used in this analysis to consider environmental justice in greater detail based on their minority population" (page 3-63, lines 1-3). NRC staff goes on to note the "extra effort" that was made to meet with minority groups to determine the effects construction of the NEF would have on them (page 3-63, lines 5-8). The staff also conducted inquiries into these communities and discovered no potential ill effects from the facility (§ 4.2.9.5). Were these inquiries and meetings, or attempts to arrange meetings, the "extra effort" described by NRC staff towards the end of its consideration of these groups "in greater detail"? Were these meetings recorded in any way? In the Final EIS, please describe, in detail, the content of these meetings and other methods by which NRC staff considered environmental justice "in greater detail."

Comment #316-17

[10] Council on Environmental Quality, "Environmental Justice Guidance Under the National Environmental Policy Act," Dec. 10, 1997: 25.

Cumulative Impacts

The NRC staff should take into account the entire constellation of industrial facilities that surround the NEF site, which may contribute to cumulative health effects that would be compounded by the addition of the NEF. These industrial operations include quarry and a petroleum-industry solid-waste treatment and disposal facility to the north, a hazardous and radioactive waste storage and treatment facility to the east, a municipal landfill to the southeast, and a petroleum-contaminated-soil treatment facility to the west—all of this within a regional landscape littered with 33,700 oil wells and associated pumps, jacks, and rigs (Draft EIS, § 3.2).[11] Waste Control Specialists, LLC (WCS), which operates the hazardous waste facility just across the border in Andrews County, Texas (less than a mile from the NEF site), has recently submitted several applications to Texas state regulators for permits to allow it to expand the capacity and breadth of hazardous and radioactive wastes stored and processed at its facility.[12] In the Final EIS, the NRC should evaluate the cumulative health and ecological effects of these facilities, located in an area of the country with an extraordinarily high percentage of minority and low-income populations.

Comment #316-18

Water Resources

Municipal Water Consumption

The NRC estimates that, during the construction phase of the NEF, annual water usage would be approximately 2 million gallons, a figure "based on the design estimates for the formerly proposed Claiborne Enrichment Center [CEC]" (Draft EIS, § 4.2.6.1). Was this figure adjusted to account for the fact that the size of the proposed CEC was half that of the proposed NEF (Draft EIS, page 6-5, line 31)?

Comment #316-19

J-185

In Section 4.1.2 ("Utilities Impacts") of the NEF Environmental Report (ER), LES notes that, in addition to two new electrical transmission lines, the NEF will require the construction of two new potable water supply lines in Lea County—one from the city of Eunice and the other from the city of Hobbs. In the Draft EIS, the NRC observes that the water requirements of the NEF—which would average 240 m^3/day and peak at 2,040 m^3/day—are well within the capacity of the Eunice and Hobbs municipal water systems, which together have a capacity of 92,050 m^3/day and have excess water capacities of 66 and 69 percent, respectively (page 4-14 and § 3.8.2.2).

Comment #316-20

[11] *See also* National Enrichment Facility Environmental Report, Page 1.2-1, Dec. 2003.

[12] WCS filed an application in August 2004 with the Texas Commission on Environmental Quality (TCEQ) to construct and operate a low-level radioactive waste disposal facility that would dispose of low-level radioactive waste from the Texas Compact (an agreement between states to establish a common waste disposal facility), which includes Texas, Vermont, and Maine. Nebraska state officials are also conducting negotiations with Texas officials to send waste from the Central Interstate Low-Level Radioactive Waste Compact (which includes Nebraska, Kansas, Oklahoma, Louisiana, and Arkansas) to Texas for disposal, probably at the WCS site. The WCS application with the TCEQ would also permit the company to accept radioactive waste from the U.S. Department of Energy (DOE). In addition to this application, WCS has recently filed separate applications with the Texas Department of State Health Services that would (1) expand the volume of hazardous material that can be stored at the site and (2) permit WCS to accept for disposal uranium mill tailings waste, currently in possession of the DOE, derived from U.S. nuclear weapons programs. Texas is one of the NRC's "Agreement States," meaning that the federal agency has trusted the state with the authority to enforce its regulations in some areas.

Based on conversations with Eunice and Hobbs city officials, the NRC judges that the NEF would thus not affect local water uses.

Comment #316-20 (cont.)

Yet this is a review of limited temporal scope: it totally neglects the severe long-term water shortage problem of Lea County, as documented in the *Lea County Regional Water Plan*. The majority of potable water in Lea County is drawn from the Lea County Underground Water Basin (UWB), which is part of the Ogallala aquifer—one of the largest aquifer systems in the world and an essential water source for agricultural irrigation, acknowledged by the NRC to be a "nonrenewable water source" (Draft EIS, § 3.8.2.1). According to the county's water plan, groundwater in the UWB is being withdrawn at a greater rate than it is being recharged, which has resulted in a water level drop of as much as 70 feet since the first use of groundwater in the 1920s. The report projects a doubling of water usage by 2040 and warns that "there is physically not enough water in the Basin to maintain an annual diversion of this magnitude."[13]

Moreover, the Draft EIS compares the NEF's lifetime water usage to the entire amount of Ogallala reserves in the State of New Mexico, rather than comparing NEF water usage to capacities in the Lea County Underground Water Basin; therefore, the anticipated "small" impact is based on a faulty comparison.

In an area with such finite water resources and a projected shortage, how can the NRC justify its judgment that the impact of the NEF on local water resources will be "small," especially considering the magnitude of this industrial operation and the acknowledgement that projected water shortages may force the NEF to comply with a drought management plan (Draft EIS, § 4.4.3)? In the Final EIS, please consider Lea County's documented long-term water shortage problem in evaluating the impact of the NEF on water resources in the region. Furthermore, in Section 4.7 ("Relationship Between Local Short-Term Uses of the Environment and the Maintenance and Enhancement of Long-Term Productivity"), please include a thorough consideration of the long-term effects of further depleting the Ogallala aquifer from a diversion of water to the NEF.

Effects of Seismicity

The site of the proposed NEF lies in the vicinity of several geologic faults, one of which was recently observed a mere mile from the project area at the waste processing and disposal site in Texas operated by Waste Control Specialists.[14] Moreover, earthquakes frequently occur around the designated NEF site, including one with a magnitude of 5.0 in 1992.[15] Despite this, the NRC has not conducted an investigation of the possible effects of earthquakes and faulting on groundwater flow; nor has it considered the possibility of contaminant infiltration into groundwater due to such seismic activity. In the Final EIS, we urge the NRC to record the results of a comprehensive analysis of such a possibility.

Comment #316-21

[13] *Lea County Regional Water Plan*, Prepared for the Lea County Water Users Association by Leedshill-Herkenhoff, Inc., John Shomaker & Associates, Inc., and Montgomery & Andrews, P.A. 7 Dec. 2000.

[14] Memorandum from Herman L. Graves to Joseph G. Gitter, "May 27-28, 2004, Meeting Summary: Louisiana Energy Services' In-Office Review, Hobbs, New Mexico and Site Visit, Eunice, New Mexico," June 29, 2004.

[15] National Enrichment Facility Environmental Report, Revision 2, Table 3.3-3, July 2004.

Groundwater Infiltration

Based on its investigations, the NRC reports that "no precipitation recharge (i.e., rainfall seeping deeply into the ground) occurs in thick, desert vadose zones with desert vegetation." Instead, the precipitation that infiltrates into the subsurface is "efficiently transpired by the native vegetation" (Draft EIS, page 3-35). Will this effect be compromised if the existing vegetation is removed in order to build the NEF, as one would expect? Alternatively, what precisely would be done to restore vegetation disturbed (Draft EIS, page, 2-9, line 41) by the construction of the NEF?

Comment #316-22

Even if the vegetation is restored, the purported effectiveness transpiration at the site appears to be questionable. For example, one of the subsurface borings drilled on the NEF site in September 2003 was described as "slightly moist" at 6 to 14 feet (ER Rev. 2, page 3.4-2), and boring B-2 revealed a stratum at 35 to 41 feet described as "moist" (SAR, Fig. 3.2-11). Moreover, the Draft EIS reports groundwater at the site at a depth of 220 feet within the Chinle Formation and a water-bearing sandstone layer at 600 feet below the surface (page 3-36). Also, notably, one well, MW-2, produced water that "continued to recharge throughout the monitoring period" (page 3-37). This well appears to be very near the proposed site of the storage pad that will host the Uranium Byproduct Cylinders (UBCs) containing DUF_6 (compare Draft EIS Figure 3-21 with NEF ER, Rev. 2, Figure 2.1-2).

Furthermore, the Draft EIS appears to indicate an assumption by the NRC that the liners employed to impound the contents of the NEF's wastewater basins will retain their integrity for the duration of the facility's operation, since there is no estimate of the likelihood of liner corruption and subsequent leakage of contaminated liquid effluents from the plant. How long does the NRC assume that the liners will contain the waste, and on what basis is this assumption made?

J-186

Geological Disturbance in Region

The proposed NEF is to be situated among several sites in which significant ground excavation has been performed. These sites are within a one-mile radius of the proposed NEF's center and would appear to have the possible effect of compromising the area's geological integrity. To the north of the NEF site, there is a sand and gravel quarry operated by Wallach Concrete; to the east of the site, just over the border in Texas, is a hazardous and radioactive waste processing and disposal facility operated by Waste Control Specialists, LLP, which includes a landfill with 11 million cubic yards of permitted disposal capacity[16]; to the southeast of the site is the Lea County Landfill (a municipal waste disposal site); and to the west lies the "DD Landfarm," a petroleum-contaminated soil treatment facility. In addition, much of the immediate region has been drilled by the oil and gas industry, which has produced more than 37,000 wells in southeastern New Mexico (Draft EIS, § 3.2)[17] and has contaminated groundwater in the region (Draft EIS, page 4-66, line 11).

Nevertheless, the Draft EIS gives only scant attention to these important factors in analyzing the site's hydrology. In the Final EIS, a full account of the effects of this kind of land-use on hydrology should be presented.

Comment #316-23

[16] Web site of Waste Control Specialists, LLP, Nov. 2, 2004 <http://www.wcstexas.com/facilities.html>.
[17] *See also* National Enrichment Facility Environmental Report, Revision 2, § 2.1.2.1, July 2004.

Preparation of the site for the NEF requires grading in order to create a level surface for the facility. This would require an excavation of up to 4 meters, cutting into the layer of caliche that lies below the surface. Moreover, a high-pressure CO_2 pipeline that crosses underneath the site would have to be relocated (Draft EIS § 2.1.4). What effect would these activities have on the permeability of the geologic formations that lie beneath the site? Could the excavation that is required to build the NEF increase the chance that site geology could be disturbed such that new pathways could be created through which contaminants could enter groundwater? Please consider this possibility in the Final EIS.

Comment #316-24

Regional Groundwater Quality

The NRC staff considers the proposed NEF's impact on water resources to be "small," reasoning, in part, that "groundwater resources under the proposed NEF site are not considered potable" (Draft EIS, Table 2-8, page 2-50). Yet the Santa Rosa aquifer, which lies below the NEF site,[18] has been described as "the principal source of ground-water for domestic and livestock uses in the southwestern portion of [Lea] County."[19] Moreover, the Draft EIS observes that "people in the area of the proposed NEF site do depend on ground water supplied from personal wells..." (page 3-63, lines 25-26). In the Final EIS, please address and/or resolve this apparent contradiction.

Comment #316-25

Waste Management

Waste Classification

On page 2-27, the NRC states that "[f]or the purpose of this Draft EIS, the NRC considers the DUF_6 generated by the proposed NEF to be a Class A low-level radioactive waste as defined in 10 CFR § 61.55(a)(6)."

Why is it assumed in the Draft EIS that DUF_6 is low-level waste when (1) LES itself has not yet determined whether the DUF_6 it produces will be considered a waste or a resource,[20] and (2) the NRC has not finally determined the proper waste classification of depleted uranium?[21] On such an essential issue, the NRC staff should not proceed on a hypothetical basis.

Moreover, it is the position of Public Citizen and NIRS that the NRC may not arbitrarily classify DUF_6 as low-level waste under the agency's regulations at 10 C.F.R. § 61.55, a rule which was proposed when the country's stockpile of depleted uranium was under the jurisdiction of the U.S. Department of Energy (DOE), not the NRC. The rule explicitly did not consider the classification of depleted uranium (DU) waste for this reason. The box on page 2-29 which concludes that DU is Class A low-level waste ignores the fact that the regulations it cites omitted consideration of DU when they were originally drafted. The NRC may not conveniently judge

Comment #316-26

[18] National Enrichment Facility Environmental Report, Revision 2, page 4.12-9, July 2004.
[19] Leedshill-Herkenhoff, Inc., et al., *Lea County Regional Water Plan*, Dec. 7, 2000.
[20] National Enrichment Facility Environmental Report, Revision 2, Section 4.13.3.1.3, July 2004.
[21] U.S. Nuclear Regulatory Commission, "In the Matter of Louisiana Energy Services, L.P. (National Enrichment Facility); Notice of Receipt of Application for License; Notice of Availability of Applicant's Environmental Report; Notice of Consideration of Issuance of License; and Notice of Hearing and Commission Order," Docket No. 70-3103; CLI-04-03, *Federal Register*, Vol. 69, No. 25, February 6, 2004.

depleted uranium to be Class A low-level waste as it does in Section 4.2.14.4 of the Draft EIS; there must be a formal rulemaking and environmental analysis under the statutory obligations of NEPA before this waste attains a proper regulatory classification.[22] Comment #316-26 (cont.)

In this arbitrary classification, the Draft EIS fails to recognize the Commission's repeatedly stated position that depleted uranium is not appropriate for near-surface disposal. The Final EIS for the Claiborne Enrichment Center (CEC) concluded that near-surface disposal of DU_3O_8 would not comply with 10 CFR Part 61 and suggested some form of deep disposal.[23] In 1995, during the scoping process for DOE's Programmatic EIS concerning long-term management of DU, NRC stated that large quantities of DU_3O_8 such as those derived from the DOE enrichment tailings inventory suggest the need for a unique disposal facility, such as a mined cavity or exhausted uranium mine.[24] On October 18, 2000, in commenting on the DOE Roadmap for management of DU, the Commission stated that "[s]hallow land (near-surface) disposal was not a likely option because a generic performance assessment indicated the dose requirements of 10 CFR Part 61 could be exceeded by a wide margin."[25] The Draft EIS for the NEF fails to account for the NRC's repeated positions on the subject of disposal of DU and simply assumes that disposal may occur at a near-surface site. An explanation of such a change in agency position is required. Comment #316-27

Finally, the Draft EIS attempts to estimate the impact of disposal of depleted uranium from the NEF in its modeling of the releases expected from the site (pages 4-58, 4-59 and Table 4-19). The Draft EIS fails to disclose the models used or the parameter values. The text suggests that models used in analyzing the CEC site were used; however, the results are unlike any reported in connection with the CEC facility. Further, the model addresses only two hypothetical disposal sites and fails to examine any actual location of disposal. Performance of a disposal site is highly site-specific. Comment #316-28

J-187

[22] The regulations in Part 61 were initially proposed in 1981; see "Licensing Requirements for Land Disposal of Radioactive Waste, Proposed Rule," *Federal Register*, Vol. 46, page 38081, July 24, 1981. At this time, depleted uranium was under the jurisdiction of the U.S. Department of Energy and thus not considered in the drafting of Part 61 regulations, as stated in the Draft EIS for the rule: "[A]ll DOE wastes are now disposed of at DOE owned and operated facilities which are not subject to NRC or Agreement State licensing authority. Such wastes are thus not addressed in this EIS." *See* Draft Environmental Impact Statement on 10 C.F.R. Part 61, "Licensing Requirements for Land Disposal of Radioactive Waste," NUREG-0782, Vol. 2, at 3-8, Sept. 1981. For a complete and thorough argument on this point, see "Brief on Behalf of Petitioners Nuclear Information and Resource Service/Public Citizen in Support of NIRS/PC Contention EC-3/TC-1," *In the Matter of Louisiana Energy Services, L.P., National Enrichment Facility*, U.S. Nuclear Regulatory Commission, Docket No. 70-3103, ASLB No. 04-826-01-ML, Sept. 8, 2004.

[23] CEC Final EIS at 4-67.

[24] *See* Croff, A.G., et al., Evaluation of the Acceptability of Potential Depleted Uranium Hexafluoride Conversion Products at the Envirocare Disposal Site, ORNL/TM-2000/355, at 12 (Dec. 2000).

[25] Letter, E. Leeds, NRC, to Depleted Uranium Hexafluoride Management Program, DOE, Oct. 18, 2000.

***Depleted Uranium is analogous to Greater than Class C Waste*[26]**

The assumption by the NRC staff stated in the Draft EIS that depleted uranium (DU) may be classified as Class A low-level radioactive waste (page 2-27) is imprudent. Instead, this waste should fall into the category of Greater than Class C Waste. Comment #316-29

The classification of low-level waste can apply only to waste that would clearly be appropriate for shallow land disposal and 100-year institutional control. DU meets neither requirement. Greater than Class C (GTCC) waste requires special disposal methods. DU consists of long-lived alpha-radiation-emitting uranium isotopes, mainly uranium-238. The specific activity of DU is about 400 nanocuries per gram. It varies and can be slightly more or slightly less, depending on the U-234 content of the DU, but is always greater than about 340 nanocuries per gram, even at the theoretical limit when all U-235 has been extracted from the uranium. The limit for long-lived alpha emitting isotopes above which waste is normally classified as GTCC waste is 100 nanocuries per gram. It is true that the specific alpha-emitting radionuclides mentioned in the regulation are transuranic radionuclides (with atomic number greater than 92, the atomic number of uranium). This is probably because DU has never been formally viewed as a waste. Throughout the nuclear era, uranium-238, the main component of DU, has been considered as a resource because it can be converted into plutonium-239 in breeder reactor blankets. For such reasons, many, including DOE personnel, still regard DU as a resource. However, now that plutonium dreams have become far too costly to be realized on a large scale, DU is on the verge of formally being considered a waste, and its classification must be based upon criteria that were used to classify other wastes.

The long half-life of all three uranium isotopes (the shortest half-life, that of U-234, is more than 200,000 years), the fact that they are all alpha emitters, and the specific activity of DU being well over 100 nanocuries per gram (U_3O_8, the suggested disposal waste form, has a specific activity of over 300 nanocuries per gram) all point to the classification of DU as GTCC waste.

The conclusion that DU is analogous to GTCC waste fits squarely within the NRC definition for that category, if we focus on the substance of the rule. In 10 CFR 61.55 (3)(iii) and (iv), NRC defines wastes containing more than 100 nanocuries per gram of alpha-emitting transuranic radionuclides with half-lives of more than 5 years as "not generally acceptable for near-surface disposal." Indeed, such wastes are clearly comparable to the wastes defined as transuranic (TRU) waste by DOE and EPA (with small differences—the NRC definition is more stringent) (See 40 CFR § 191.02(i)). Such wastes must be disposed of in a deep geologic repository. The DOE is currently spending $20 billion to dispose of TRU waste in a deep repository; DU cannot

[26] The argument in this section is based in part of that developed by Dr. Arjun Makhijani, who is serving as an expert witness for Public Citizen and NIRS in our intervention against the LES license application for the NEF. Elements of the text in this section appeared in the Petition to Intervene by Nuclear Information and Resource Service and Public Citizen, *In the Matter of Louisiana Energy Services National Enrichment Facility*, Docket No. 70-3103, U.S. Nuclear Regulatory Commission, April 6, 2004: 29-31. Whatever the ultimate classification of depleted uranium may be, should it be declared a waste by the Commission, the disposal of DU through shallow land burial is extremely unlikely to be able to satisfy health and safety standards even under arid conditions and the disposal of depleted uranium in a deep repository should proceed under the assumption that DU is at least as risky as GTCC waste at the 100 nCi/gm threshold, and that DU must therefore be disposed of with a similar level of care in order to minimize the long-term impacts.

logically be considered in any other way than as being in a category that would mark it for deep geologic disposal.

UBC Storage

The Uranium Byproduct Cylinders (UBC) Storage Pad is described on page 2-6 of the Draft EIS. The UBCs would be stored on a concrete pad that could be expanded to a maximum size of 9 hectares, on which 15,727 cylinders could be stored. The stormwater collected in the UBC Storage Pad Stormwater Retention Basin would be monitored for contaminants (Draft EIS § 6.2.3), and the LES would institute a management program whereby UBCs would be inspected for such things as corrosion and valve leakage (Draft EIS, page 2-27, lines 14-17; § 4.2.14.3).

Why is it unfeasible or imprudent to house the UBCs in a contained, controlled environment in which they are not exposed to the elements and thus less likely to corrode or disintegrate? Would not such a measure create the desired "optimum storage conditions" (Draft EIS, § 4.2.14.5) to avoid the potential for public exposures from the "direct and scatter (skyshine) radiation" described on page 6-13 of the Draft EIS? Comment #316-30

Furthermore, it is stated in Section 4.2.7.2 that the "potentially highest exposures to wildlife are expected to be to small animals occupying the UBC Storage Pad." Again, would not an effective mitigation measure (which could be included in Table 5-2) be to impound the UBCs in a storage shelter, thereby isolating them from penetration by wildlife?

Ultimate Disposal of Depleted Uranium

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The Draft EIS lists as a second plausible disposition strategy a scenario in which LES would pay the U.S. Department of Energy (DOE) for conversion and disposal of its waste under Section 3113 of the 1996 *United States Enrichment Privatization Act* which states that the DOE "shall accept for disposal low-level radioactive waste, including depleted uranium if it were ultimately determined to be low-level waste..." (Draft EIS, page 2-31; the law is codified as 42 U.S.C. § 2297h-11). The NRC has yet to make a final determination on the waste classification of depleted uranium, as acknowledged in the Notice of Hearing[27] on the application for the NEF as well as in communications from officials at the NRC and DOE.[28] This being the case, transfer to the DOE cannot be considered a plausible option for disposal of DUF_6. Comment #316-31

[27] U.S. Nuclear Regulatory Commission, "In the Matter of Louisiana Energy Services, L.P. (National Enrichment Facility); Notice of Receipt of Application for License; Notice of Availability of Applicant's Environmental Report; Notice of Consideration of Issuance of License; and Notice of Hearing and Commission Order," Docket No. 70-3103; CLI-04-03, *Federal Register*, Vol. 69, No. 25, February 6, 2004.

[28] "NRC staff considers that Section 3113 would be a 'plausible strategy' for dispositioning depleted uranium tails *if NRC determines that depleted uranium is a low-level radioactive waste.* In that regard, the staff expects that LES will indicate in its application whether it will treat the tails as a waste or a resource." (Emphasis supplied.) Letter from Robert C. Pierson, Director of the NRC's Division of Fuel Cycle Safety and Safeguards, Office of Nuclear Material Safety and Safeguards, to Rod M. Krich, Director of Licensing for Louisiana Energy Services, March 24, 2003. A recent letter from a DOE official confirms that the agency will not accept depleted uranium waste for disposal until it is properly classified: "There has been no formal determination by NRC that depleted uranium is low-level radioactive waste for purposes of Section 3113 of the 1996 USEC Privatization Act. Consequently, the Department is not obligated to accept it for disposal unless and until NRC makes such a determination." Letter, W.D. Magwood, Director of the Office of Nuclear Energy, Science, and Technology, to M.J. Virgilio, Director of the Office of Nuclear Material Safety and Safeguards, July 25, 2002.

Furthermore, if LES is to abide by the terms of its agreement with the governor of New Mexico,[29] which necessitate a timely disposal of depleted uranium outside of the state, it would require a conversion facility that will not be burdened by an already enormous inventory of waste. Deconversion of DUF_6 at the DOE's facilities, which are not yet operational, cannot be considered a plausible strategy, because the DOE's existing DUF_6 stockpile is so great that the queue for conversion would preclude acceptance of LES's waste. DOE possesses 704,000 metric tons of DUF_6 and predicts that converting its own waste will take 25 years.[30] LES acknowledges this fact,[31] and the Draft EIS acknowledges that processing NEF waste could extend the operational life of one of the DOE facilities by as much as 15 years (page 4-56, lines 5-7). And this calculation does not even take into account the processing of DUF_6 waste from the American Centrifuge Plant proposed by USEC, Inc. Comment #316-32

Environmental Evaluation of Conversion Facility

The Draft EIS fails to discuss the environmental impacts of the construction and operation of a conversion plant for the DUF_6 waste. The Draft EIS entirely relies upon final EISs issued in connection with the construction of two conversion plants at Paducah, Kentucky, and Portsmouth, Ohio, that will convert the DOE's inventory of depleted uranium (Draft EIS, pages 2-28, 2-30, 4-53, 4-54). Such reliance is erroneous, because the DOE plants are unlike the private conversion plant contemplated by LES. Comment #316-33

LES has chosen to focus its planning for a private conversion facility on a process different from the process to be used in the DOE plants. LES will adopt a process that generates anhydrous hydrofluoric acid (AHF).[32] The process discussed in the EISs for the Paducah and Portsmouth conversion plants is a different one, which generate aqueous HF and calcium fluoride (CaF_2).[33]

Thus, the facilities and processes analyzed in the conversion plant EISs do not fully correspond to the configuration proposed for construction by LES. In particular, the use of a distillation process to upgrade the HF resulting from the conversion process to AHF is not considered in the EIS for either the Paducah or Portsmouth facilities. In addition, when the engineering analysis for these proposed facilities was conducted, the distillation option was not even commercially developed. The Draft Engineering Analysis Report for the Long-Term Management of Depleted Uranium Hexafluoride - Rev. 2, Lawrence Livermore National Laboratory (LLNL)(1997), which is included as supporting material to the conversion plant EISs, states:

> Distillation is a common industrial process and was the design basis for this suboption. The processing of the azeotrope and the process parameters for the conversion reactors were patterned after the General Atomics/Allied Signal response to the RFR and the

[29] National Enrichment Facility Environmental Report, Revision 2, Page 4.13-8, July 2004.

[30] Audit Report: Depleted Uranium Hexafluoride Conversion, DOE/IG-0642, U.S. Department of Energy, Office of Inspector General, March 2004.

[31] National Enrichment Facility Environmental Report, Revision 2, Page 4.13-15, July 2004.

[32] LES Answer to Petitions of NIRS/PC and New Mexico Attorney General, May 3, 2004, at 72.

[33] See Paducah EIS, DOE-0359, at S-19, 1-18; Portsmouth EIS, DOE-0360, at S-17, 1-19.

Sequoyah Fuels Corp. patented process. This representative process has not been industrialized, but the initial research and development have been completed.[34]

Comment #316-33 (cont.)

Therefore, the EISs for the DOE plants do not consider the impacts of the distillation process chosen by LES to generate AHF, nor the safety aspects of such operation, nor the impacts of sale, transportation, and use of AHF. The distillation process is not commercially established and projection of its impact will be speculative.

The conversion plant for the DUF_6 from the NEF would have much smaller scale than the DOE plants, creating different economics of operation and needed rates of return. The LLNL Report specifically estimates that a conversion plant of the size contemplated by LES—approximately 7,000 metric tons per year—would have costs nearly as high as the cost of operating a plant with a throughput of 28,000 tons per year.[35] The prospect of a high-cost facility raises the question what cost reductions will be attempted, and at what price to safety and the environment.

Comment #316-34

Depleted Uranium as a Resource

It cannot be assumed that this inventory of depleted uranium may have a beneficial use, since the current stockpile "far exceeds the existing and projected demand for the material" (Draft EIS, page 2-44, lines 12-13). Thus the DOE avenue of disposal cannot be considered plausible, and it should be eliminated as a possible DUF_6 waste management option (*see* Draft EIS, § 4.2.14.3). The Final EIS on the NEF should acknowledge this.

Comment #316-35

Jurisdiction of Radioactive Wastes

Regarding disposal options for waste generated by the NEF, the Draft EIS observes that, because New Mexico is not part of the "Texas Compact" agreement, "any radioactive wastes generated at the proposed NEF could not be shipped *directly* to [the Waste Control Specialists (WCS) disposal facility] for disposal" (emphasis supplied) (page 2-32, lines 34-35). Does this mean that some intermediary entity may take possession of the NEF's waste and, thereafter, transfer it to the WCS disposal site if DUF_6 is ultimately determined to be low-level waste and WCS's application for low-level waste disposal is approved? On the same page, in a discussion regarding WCS's request to become a Federal Waste Disposal Facility, the Draft EIS again states that "the proposed NEF would not be able to ship depleted uranium *directly* to the proposed WCS facility" (emphasis supplied) (lines 44-45). Is the implication here that the NEF would first transfer possession of its waste to the U.S. Department of Energy, whereupon it would then be qualified for disposal at the WCS facility if it achieves its license? In the Final EIS, please explain.

Comment #316-36

License Amendments

On page 4-34 of the Draft EIS, several deconversion and disposal alternatives are considered to address the depleted uranium waste that would be generated by the NEF. Included in this list is the possibility of disposal of U_3O_8 (the form to which DUF_6 would be converted for disposal) at

Comment #316-37

[34] J.W. Dubrin et. al., "DEPLETED URANIUM HEXAFLUORIDE MANAGEMENT PROGRAM: The Engineering Analysis Report for the Long-Term Management of Depleted Uranium Hexafluoride Volume I," Lawrence Livermore National Laboratory, May 1997 (UCRL-AR-124080 Vol. 1 Rev. 2), at 3-8.

[35] Hatem Elyat et al., "Cost Analysis Report for the Long-Term Management of Depleted Uranium Hexafluoride," UCRL-AR-127650, at Table 6.4 (May 1997).

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the Nevada Test Site, the U.S. Ecology site in Hanford, Washington, or the Envirocare facility near Clive, Utah. Would it be necessary to amend the operating licenses of these facilities in order that they may legally accept depleted uranium for disposal? If so, would it be necessary to perform an EIS to evaluate the effects of such an action at these sites, as suggested in Section 4.2.14.4?

Comment #316-37 (cont.)

Depleted Uranium as a Resource

In Section 2.2.2.4, titled "Alternatives for DUF_6 Disposition," it is stated that the Draft EIS "will not further evaluate DUF_6 disposition alternatives involving its use as a resource" (page 2-43, lines 36-38). Yet, on the same page, several "Beneficial Uses of Depleted Uranium" are acknowledged in a box. Included among these is employment of depleted uranium for use in munitions, where it can be used "for tank armor and armor-piercing projectiles," a demand which is said to be decreasing "as environmental regulations become more complex." Considering the widespread and continuing concerns regarding the adverse health effects arising from exposure to depleted uranium in the battlefield,[36] does the NRC consider this a viable use of depleted uranium? And, if, prior to the issuance of the final version of this report, LES demonstrates that this is a "viable use" of depleted uranium, would the Final EIS include an evaluation of the potential environmental hazards created by this military application of the uranium tails from the NEF? Further, if the EIS will not evaluate DUF_6 as a resource, then the "Beneficial Uses of Depleted Uranium" box is inappropriate to include.

Comment #316-38

Nonhazardous Waste

The Draft EIS states that nonradioactive materials such as wood, paper, packing materials, and scrap metal would be disposed of in a commercial landfill (page 2-22, lines 5-7). In Figure 2-11, which illustrates the disposal pathways of waste from the NEF, one of the destinations is "recycle." Does LES have a specific plan to recycle its nonradioactive wastes, such as paper and scrap metal? The development of a "waste recycling plan" is listed as a mitigation measure in Table 5-2, but no specifics are provided.

Comment #316-39

Cultural Resources

Section 3.3.4 of the Draft EIS acknowledges the presence of seven archaeological sites within the proposed project area, each of which has been determined to be eligible for listing in the National Register of Historic Places, based on the expectation that "buried cultural deposits exist and/or the surface data indicate a definite research potential" (page 3-9). The New Mexico Department of Cultural Affairs, Historic Preservation Division has determined that the NEF "will have an adverse effect on cultural resources" (Draft EIS, page B-26).[37] Two or perhaps three of these archaeological sites would be impacted by construction activities, but it is noted that a Memorandum of Agreement is being prepared, setting the terms of a "historic properties treatment plan" that would, supposedly, mitigate any adverse impacts on cultural resources from building and operating the NEF (Draft EIS, page 2-46; § 4.2.2).

Comment #316-40

[36] See, for example, Lee Glendinning, "Gulf war uranium tests too late for many, say veterans," *The Guardian*, Sept. 24, 2004: 10; Deborah Blum, "A Dark Magic in America's Silver Bullets," *Los Angeles Times*, June 1, 2003: M2.

[37] Michelle M. Ensey, letter to Matthew Blevins, U.S. Nuclear Regulatory Commission, Washington, D.C., April 26, 2004.

In the Final EIS, please describe, in detail, the terms of this Memorandum of Agreement and the historic properties treatment plan it would require. Would there be a comprehensive archaeological investigation and excavation prior to initiation of construction activities? Can the preservation of important artifacts embedded in the site be guaranteed, such that a "small" impact can be assured? Moreover, what is the precise nature of these artifacts? Is it possible that some of these artifacts cannot be removed from the site without damaging them or corrupting their integrity?

Comment #316-40 (cont.)

Also, please justify the impact assessment on historical and cultural resources of "small *to moderate*" under the "no-action" alternative (Table 2-8, page 2-46; § 4.8.2). What evidence is relied upon to make the judgment that, in lieu of construction of the NEF and its concomitant "mitigation measures," "historical sites identified at the proposed NEF could be exposed to the possibility of human intrusion" (Table 2-8, page 2-46)? Is this mere conjecture? Since these sites have been identified, can they not be protected if the NEF is not constructed?

Comment #316-41

Land Use

In Section 2.1.4 and in Figure 2-6 of the Draft EIS, the site of the NEF is described and represented. About one-third of the total site area would be disturbed by construction of the NEF (Draft EIS, page 2-8, line 34; § 4.2.1.1, lines 24-28). Is this unused area necessary to the operation of the NEF? How likely is it that, following the 30-year lease period between LES and Lea County, when the ownership of the land is transferred from the State of New Mexico to LES (Draft EIS, § 4.2.1; page 4-3, lines 22-27), the remainder of the site property will be subjected to industrial development? The Draft EIS does acknowledge that "[t]his parcel of land would likely remain industrial even after the facility is decontaminated and decommissioned" (§ 4.5, lines 39-40). According to the Draft EIS, following decommissioning of the NEF, "only the building shells and site infrastructure would remain" (page 2-24, line 12). What potential use could these remaining structures serve? Would the site remain a brownfield?

Comment #316-42

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Site Geology

According to the Draft EIS, "small" environmental impacts are those that "are not detectable or are so minor that they would neither destabilize nor noticeably alter any important attribute of the resource" (box, page 4-1). Yet, in the section describing the proposed NEF's impact on geology and soils, despite the fact that construction of the facility would require grading the site to make it flat and introducing a very large industrial facility covering 83 hectares that may require penetrating the subsurface soils and even the clay layer of the Chinle Formation—the average depth of which begins at 12 meters (Draft EIS, Table 3-8, lines 17-18)—NRC staff judges the impact of the facility to be "small" because "site preparations and construction result in only short-term effects to the geology and soils" (page 4-10, lines 21-22). Is such an action not more suitable for at least a "moderate" impact assessment, where the environmental effects are "sufficient to noticeably alter...important attributes of the resource"? The NEF will fundamentally alter the geology and soils of the site, far beyond the site preparations and constructions phase; it is thus inappropriate to consider the impacts of site preparation and construction separate from the operational phase (considered in § 4.2.5.2)—this approach ignores the long-term effects of the initial development of the NEF.

Comment #316-43

Comment #316-43 (cont.)

Atmospheric Emissions

The Draft EIS notes that the NEF would annually discharge 440 cubic meters of helium, 190 cubic meters of argon, 53 cubic meters of nitrogen, 610 liters of methylene chloride, 40 liters of ethanol, 0.8 metric tons of volatile organic compounds, 0.5 metric tons of carbon monoxide, and 5.0 metric tons of nitrogen dioxide (page 2-23, lines 4-13). What mitigation measures are in place to limit these emissions, and what negative environmental and public health impacts would their dispersal into the atmosphere contribute to?

Comment #316-44

Cumulative Impact

Section 4.2.4.2 of the Draft EIS describes the air emissions—including hydrogen fluoride, acetone, volatile organic compounds, carbon monoxide, nitrogen dioxide, and particulate matter—that would be produced by the proposed NEF. NRC staff justifies the designation of a "small" environmental impact from these emissions because each pollutant is expected to fall below regulatory requirements for emissions. But how does NRC staff judge the *cumulative* impact of these emissions?

Comment #316-45

Diesel Generators

According to the Draft EIS, the NEF's emergency diesel generators have the potential to emit more than 90,700 kilograms of a "regulated air pollutant." What pollutant is this? What is the experience of comparable uranium enrichment plants, such as those operated by Urenco in Europe, in terms of reliance on these emergency diesel generators? Annually, what quantity of air pollutants do these generators typically emit?

Comment #316-46

Chlorofluorocarbons

Please indicate in the Final EIS whether any chlorofluorocarbons (CFCs and/or HCFCs) would be used, produced, or released by the NEF, as is the case at other uranium enrichment plants.

Comment #316-47

Decommissioning

Section 2.1.8 of the Draft EIS describes the processes of decontamination and decommissioning of the NEF, the operating license of which would expire in 30 years. The regulations at 10 C.F.R. § 70.33 allow for renewal of operating licenses for facilities such as the NEF. What is the likelihood that the operating license of the NEF would be extended after this initial 30-year period? What has been the duration of the operational life of the comparable facilities operated by Urenco in Europe?

Comment #316-48

Monitoring

During the course of the NEF's nine-year decommissioning period, it is estimated that more than 5,000 cubic meters of radioactive waste would be generated and disposed of in low-level radioactive waste facilities (Draft EIS, page 2-25). How will the NRC monitor the

Comment #316-49

decommissioning process to assure that all radioactive waste materials are disposed of properly rather than being shipped to unlicensed landfills or recycling facilities? Comment #316-49 (cont.)

Impacts on Wildlife

The Draft EIS refers to a field survey of the proposed NEF site conducted by LES in the fall of 2003 that "did not locate any lesser prairie chickens" (page 3-47, lines 44-45), yet the duration of this survey and the methodology was employed is not discussed.[38] A similar concern about the adequacy of this assessment was expressed by Lisa Kirkpatrick, Chief of the Conservation Services Division for the State of New Mexico's Department of Game and Fish, in a February 23, 2004 letter to the NRC responding to the Environmental Report on the NEF submitted by LES.[39] Ms. Kirkpatrick questioned the adequacy of the survey, noting that "the area around the project has not been adequately surveyed for lek [breeding area] sites" and "[s]urveys should be conducted in the spring," not the fall. But despite this criticism, it does not appear that NRC staff has supplemented this initial, inadequate survey for the Draft EIS, determining that "[t]here are no onsite important ecological systems...that contain important species habitats such as breeding areas..." (page 3-50, lines 6-7; *see also* § 4.2.7). Further, this statements appears to contradict a later admission that the swift fox (*Vulpes velox*) and the western burrowing owl (*Athene cunicularia hypugea*)—two "species of concern"—may have their habitats and livelihoods threatened by the construction and operation of the proposed NEF (§ 4.2.7). Please remedy this in the Final EIS. Comment #316-50

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The Draft EIS provides further rationale for the moderate impact of the proposed NEF in that only one-third of the total site area would be impacted by construction and operation activities, allowing "highly mobile resident wildlife located within the disturbed areas of the proposed NEF site an opportunity to relocate to undisturbed onsite areas" (page 4-17, lines 16-18). Would these species—and please specify which species this statement refers to—be able to subsist solely within the site boundaries, or, if not, would they be able to freely pass through, under, or over the fence that would be erected at the perimeter of the site? If, for any species, the answer to these questions is "no," it seems that this habit would be rendered unsuitable. Comment #316-51

Moreover, it is questionable to consider the "permanent elimination" of 73 hectares of wildlife habitat a "small" impact (Draft EIS, § 4.3.7). Comment #316-52

Accidents

Release of Uranium Hexafluoride

The Draft EIS describes the most significant accident scenario at the proposed NEF to be an accidental release of uranium hexafluoride (UF_6), which could cause seven latent cancer fatalities. NRC staff judges that the risk of such exposures would increase if the winds were Comment #316-53

[38] The survey referred to is mentioned in the National Enrichment Facility Environmental Report (Dec. 2003) at § 3.5.6. Details provided on the survey are scant.
[39] Lisa Kirkpatrick, letter to Chief, Rules and Directives Branch, U.S. Nuclear Regulatory Commission, Washington, D.C., Feb. 23, 2004.

from the south at the time of the accident, sending the plum of UF_6 towards Hobbs and Lovington, New Mexico (Draft EIS, page 4-25, lines 21-30). The local wind patterns documented in Section 3.5.2.4 and represented in Figures 3-8 and 3-10 show that southerly winds are predominant in the area; thus, the likelihood of this worst-case scenario, which is contingent upon winds from the south, is increased. Comment #316-53 (cont.)

Tornadoes

The frequency and severity of tornadoes in the vicinity of the NEF is described in Section 3.5.2.5 of the Draft EIS. Has the NRC staff evaluated the damage that an F5 tornado would cause to the NEF? Comment #316-54

Operations

The Draft EIS states that the proposed NEF "*currently* has no plans for internal cleaning or decontamination of the [UF_6] cylinders" (emphasis supplied) (page 2-15, line 36). Does this mean that it is possible that LES may decide, at some point in the future, to engage in the cleaning and decontamination of the emptied UF_6 cylinders at the NEF? If so, would the NRC undertake an evaluation of the environmental impacts of this practice? In the Final EIS, please consider the environmental effects of cleaning and decommissioning the Type 48X or Type 48Y cylinders that have contained UF_6. Comment #316-55

Miscellaneous

The summary descriptions of the "proposed action" under the categories "Transportation" and "Public and Occupational Health," part of Table 2-8 at pages 2-55 and 2-56, appear to be truncated. Please correct this error in the Final EIS. Comment #316-56

Conclusion

In the areas described above, the NRC's Draft EIS for the National Enrichment Facility (NEF) falls short of a complete evaluation of the environmental impacts of the proposed facility as required by the National Environmental Policy Act. Until the above questions and criticisms are adequately addressed and resolved, the NRC staff's recommendation that the license for the NEF be approved is premature. Comment #316-57

Commenter 343

From: "Birnie" <birnie@gci-net.com>
To: <nrcrep@nrc.gov>
Date: Mon, Jan 10, 2005 5:47 PM
Subject: Comment on NEF (NUREG-1790)

Tucson Branch of the
Women's International League for Peace and Freedom
Patricia Birnie
5349 W. Bar X Street
Tucson, AZ 85713

Attn: Anna Bradford
To Chief, Rules Review and Directives Branch
United States Nuclear Regulatory Commission
Mail Stop T6-D59
Washington, DC 20555-0001

Re: Comments on the Draft EIS for the proposed National Enrichment Facility in Lea County, New Mexico (NUREG-1790); Docket No. 70-3103

To the Commissioners and Staff:

We are dismayed that the NRC could conclude that the proposed NEF would have "small" or "low" impact on a variety of considerations that we feel have received grossly inadequate review. *Comment 343-1*

First, the NEED for the facility is far from proven. We have heard no information that indicates that there will be an increase in demand for low-enriched uranium since no new U.S. reactors have been ordered since the 1970's, nor are the banks keen on loaning money for new construction. With many reactors facing an end to their legal operating lives, with doubtful renewal expected, the logical conclusion is that there will be a diminished demand for low-enriched uranium. This same would apply in case the promoters are planning to offer LEU for sale abroad. *Comment #343-2*

Second, the site selection process was greatly flawed, with a number of the criteria ignored or are in obvious conflict. These include seismic activity (Lea County is located over a geologic fault), the historical preservation assessment (Lea County has seven archeological sites within the area proposed for the NEF location), and costly relocation of existing service provisions (the high-pressure carbon-dioxide gas line that would have to be relocated). The site selection process used gives the impression that politics had more influence rather than scientific weighing of the criteria. We believe the site selected has too many risk factors involved for it to be given NRC approval. *Comment #343-3*

Third, the availability of water for use at the proposed NEF, as reported in the DEIS, totally ignores the assessment of the Lea County Regional Water Plan, which projects a doubling of water usage by 2040, warning that there is not enough water in the Basin to maintain an annual diversion of this magnitude (since water is being withdrawn at a greater rate than it is being recharged). Droughts are becoming more common in the Southwest, especially as we are feeling the effects of global warming. It is irresponsible to build a new project that would be a water-intensive user under these circumstances. *Comment #343-4*

Fourth, we are concerned about toxic emission of the proposed plant, both air and water discharges, and disposition of toxic solid wastes. Have there been adequate studies conducted about the health impact of the atmospheric emissions, and whether their impact affects minority residents (or workers) (environmental justice issues). Are there plans to mitigate these toxic emissions? Would water contaminants leach into the groundwater (would liners for wastewater basins retain their integrity for the duration of the plant's operation)? Has the NRC made a ruling about the waste classification of depleted uranium, DUF6, and how it should be properly isolated? Or is DU being considered a "resource?" Please clarify this for us. From definitions we have read in other materials, DU is considered a radioactive waste, and must be disposed of in a manner consistent with regulations for other radioactive waste. In addition, *Comment #343-5*

Comment #343-6

we feel that possible accidents, releasing toxic hexafluoride (UF6) to the area is an unacceptable risk. We are concerned about the health and welfare of workers and residents within the air shed of the proposed facility. Why endanger these people when there is no demonstrated need for the product which is proposed to be processed and made at the NEF.

Next, we are concerned that the economic impact on the community would be less favorable than the impression given in the DEIS. Since the NEF would be tax exempt for its life, the main benefit to the community would be from the salaries earned by the employees. Yet, the number of jobs generated appear to be half of what other types of businesses would create. It appears to us, on a practical level, that just on economic terms, it would be disadvantageous to have NEF located in Lea County. That coupled with probable health costs due to toxic emissions and toxic waste, adds up to an undesirable cost to the community, rather than an economic benefit. *Comment #343-7*

Even if the Cultural Resources, or cultural impact, were the only criteria of importance, it is unacceptable to destroy the seven archaeological sites that are within the proposed project area. Each of these sites is eligible to be listed in the National Register of Historic Places. *Comment #343-8*

IF the NEF is needed, there are too many objections for it to be located in Lea County, New Mexico.

The NRC is supposed to protect the lives of the public, not be advocates for the nuclear industry. Too often we have interpreted the rulings of the NRC as being industry-supporting, at the expense of protecting the health of the public. *Comment #343-9*

Thank you for the opportunity to comment on the proposed NEF.

Patricia Birnie, Legislative Chair, Tucson Branch
Women's International League for Peace and Freedom

Commenter 355

From: "Cyrus Reed" <cr@texascenter.org>
To: <nrcrep@nrc.gov>
Date: Fri, Jan 7, 2005 4:25 PM
Subject: comments on DEIS -- Anna Bradford

Please accept these comments on the DEIS for the LES proposed site in New Mexico. I have done them in simple text (note pad) for ease. Please let me know if I need to also send in a hard copy by mail.

Thanks,

Cyrus Reed
Director
Texas Center for Policy Studies
44 East Ave, Suite 306
Austin, TX 78701
512-474-0811
512-474-7846 (fax)
cr@texascenter.org
cyrus_reed@mail.utexas.edu
www.texascenter.org
www.texasep.org (Texas Environmental Profiles)

TCPS
44 East Ave, Suite 306
Austin, Texas 78701
512-474-0811
cr@texascenter.org

January 7, 2005

Chief, Rules Review and Directives Branch
Division of Administrative Services, Office of Administration
U.S. Nuclear Regulatory Commission
Mail Stop T6-D59
Washington, DC 20555-0001

RE: Docket No. 70-3103; NUREG 1790, Draft Environmental Impact Statement for the Proposed National Enrichment Facility in Lea County, New Mexico

Dear Sirs:

As a 501-C-3 non-profit research and policy organization headquartered in Austin, Texas, the Texas Center for Policy Studies does not usually comment on DEIS's in other states, or in federal issues such as radioactive facilities. However, given the possible impact on Texas's aquifers, land and air, as well as the possible disposal of the waste resulting from the proposed Uranium Enrichment Facility, we feel compelled to offer these brief comments on the Draft Environmental Impact Statement in the above captioned matter. Please enter these comments into the official record of the proceeding.

We wanted to make two substantive comments on the DEIS, both of which we believe, necessitate either rejection of the present proposal or at the very least, a substantially better and more inclusive final EIS. The first issue involves the physical environment of the proposed site and the failure of the EIS to accurately consider this environment and the possible cumulative impact. The second related issue is the failure to accurately consider the WCS Texas Disposal option and its potential impacts since it would be located within a few miles of the site.

First of all, we believe there is not sufficient detail to the physical geographer of the site. In particular, the DEIS shortchanges a discussion of the potential effects of extreme weather conditions (e.g. high winds, tornados, flash floods, high heat) on operations and transportation related to the proposed LES/NEF. Only last year, a sudden rainfall prevented locals from leaving towns in the area due to the high water. While this may have been an unusual rain event, the data used from the Hobbs, NM rainfall data used as a basi for
other parts of the analysis (DEIS, 3-13, Table 3-3) show that half of the maximum monthly measurements have occurred in the last twenty years, and three quarters of the minimum measurements occurred in the first ten years of record-keeping. This may indicate that rainfall in the area is generally increasing or could also indicate earlier record-keeping was faulty. In either case, the data suggests that using the 90-year "average" of the Hobbs Station may not be the scientifically correct one. We would suggest revisiting these rainfall measurements, and augmenting them with data from other stations nearby, and potentially "weighting" the analysis toward newer readings suggesting higher rainfall measurements, since rainfall measurements impact interpretations of runoff, surface and below surface hydrology.

Comment #355-1

Similarly, we do not believe the geohydrological assessment performed is accurate or sufficient. The analysis only considers the potential impacts of the site in the immediate area, but does not -- at least in terms of what is contained in the public DEIS -- look at cumulative impacts of the site -- with its associated infiltration and stormwater ponds -- the nearby oil and gas industries, a nearby rockcrushers, and perhaps most importantly, the interplay between the proposed site and WSC just next door. Although oil deposits are much deeper than the water bearing formations at issue,the presence of thousands of wells and numerous fault pathways that connect widely separated strata makes the hydrology of the site impossible to characterize without more extensive data.In effect, the DEIS acts as if the border with Texas and New Mexico is a geographic border, and does not adequately explore possible subsurface connections between Monument Draw and the West Platform to the South, nor the possible contamination of the Ogallala Aquifer to the east. Instead, we call on the EIS to conduct a full geohydrological assessment of the entire area, including portions of Texas, and to consider the cumulative impact of the industries in the area, including WCS.

Comment #355-2

We are particularly considered that the type of red clay soil relied upon in the DEIS to prevent any substantial movement of material could be undermined both by the on-site water retention facilities, as well as by the possible disposal of mixed -- radioactive and hazardous -- waste at the WCS facility, allowing for the red clay soils to be breached. The DEIS clearly fails to identify these potentials.

Comment #355-3

Thus, in summary, the DEIS sheds no light on the potential for water to move through the NEF and neargby sites, such as WCS (or for that matter vice-versa). Because there are known faults in the area, and the site islocated above the West Platform Fault Zone, a detailed study of potential pathways should be completed before a final EIS is issued. In addition to polluting the Ogallala Aquifer, water from the site may reach the Pecos River Valley surface water,groundwater from the Capitan Reef formation, and possibly other sources of fresh water in Texas. Again, we call of a full geohydrological assessment of the entire area, not just the site itself.

Comment #355-4

Our second and related concern is the failure to adequately explore the option to dispose of the depleted uranium at the WCS, and the potential impacts this could have on the site itself. There are simply too many holes and unknowns at present to accurately portray whether or not the waste could be disposed of at WCS, and whether such disposal might provide hazards to public health and the environment of both Texans living near the WCS sites, and even New Mexicans living just a few miles away from the WCS site.

There is considerable confusion in the community and within the DEIS itself as to whether WCS -- once permitted by TCEQ -- could take the waste and if so, how much of it. If the waste is indeed considered "low-level radioactive waste," WCS could -- in its permitted "compact" site -- take it all, since there are presently no volume limits. However, though there is the assertion that this depleted uranium is low-level waste, we do not believe current law supports this assertion. In several places, the DEIS asserts that depleted uranium is a Class A low-level radioactive waste (DEIS, @2-29, insert, lines 1-19) based upon language in 10 CFR, Part 61.55(a), which is the default provision for unclassified wastes. The determination should be thoroughly explained and justified by NRC before the license procedure continues. Although the same declaration was made in the EIS for LES' Claiborne Enrichment Center application, it has never been supported by NRC analysis commensurate with its significance. The NRC's default declaration that DU is a Class A low-level radioactive waste is misleading and should be revisited before waste disposition policy is defined for a uranium enrichment facility. The DEIS is setting a dangerously low standard of environmental protection when it assumes that shallow land burial of depleted uranium byproduct will have no significant impact upon the environment (for 4.5 billion years?).Again, the DEIS should determine what classification the waste would be and why or the factors determining its classification.

If, on the other hand, the DOE assumes responsibility of the waste once generated, and it is considered a federal DOE waste, it could be shipped to WCS to the federal waste site (again if permitted). In this case, the limits on volume could impact WCS's ability to take all the waste generated again depending upon their receipt of other types of waste at the site. In addition, depending upon definitions and standards, then

Comment #355-5

the waste could either be deposited directly for disposal or be required to go through a deconversion facility before disposal. While one does not presently exist on site at WCS, getting one would only require an amendment to the permit.

Comment #355-5 (cont.)

In any case, the disposal options discussed fail to identify what impacts the likely disposal of the waste in WCS will have in the area. In other words, the DEIS falls to evaluate the fact that waste generated by LES in Lea County, New Mexico may never leave the vicinity (although its disposition may be in Texas, not in New Mexico). We know from news reports that WCS and LES have already held discussions on the subject. This pattern of development associated with WCS/Andrews and southeast New Mexico suggests that it is unreasonable to assume that the proposed LES/NEF would not have cumulative impacts far beyond the level proposed in the DEIS, Section 4.4, pages 4-65 to 4-68. For this reason, the NRC should also re-evalute the potential for cumulative impacts of the proposed LES/NEF and related disposal of waste at WCS.

Comment #355-6

TCPS appreciates the opportunity to comment on this DEIS and wants our comments to be entered into the record. We believe that the permitting and operation of the LES/NEF site, as well as the likely disposal of waste generated in Andrews County, Texas at the WCS site will have major impacts on public health and the environment in the area and would urge you to reject the application. At the very least, we hope that the final EIS will provide a geohydrological analysis of the entire area -- not just the site -- and the very real possiblity that all waste generated will be stored and disposed of within a few miles of the site will be considered as part of a real consideration of cumulative impacts.

Sincerely,

Cyrus Reed
Director

Commenter 356

SIERRA CLUB
FOUNDED 1892
Lone Star Chapter

January 7, 2005

Chief, Rules & Directives Branch
U.S. Nuclear Regulatory Commission
Mail Stop T6-D59
Washington, D.C. 20555-0001

Re: Comments on the Draft Environmental Impact Statement for the Proposed Uranium Enrichment Facility in Lea County, New Mexico (NUREG-1790); Docket No. 70-3103

To Whom It May Concern:

J-195

It is the contention of the Lone Star Chapter of the Sierra Club that the NRC's Draft EIS does not adequately address the potential problems with the proposed uranium enrichment plant. *Comment #356-1*

There are several areas where the NRD's determination that the environmental impacts of the facility would be small to moderate seems unwarranted. In addition, the opinion in the Draft EIS that there is a need for this facility because of an "expected ... increase in demand for low-enriched uranium" is not supported by the facts. *Comment #356-2*

Considering the enormous problems this country is already facing regarding disposal of the wastes generated by nuclear power, as well as the potential security threats associated with this industry, it is incumbent upon the NRC to exercise extreme caution in its considerations of this proposal. *Comment #356-3*

Regarding the classification of the waste that will be produced by this facility, it is disturbing that the NRC is essentially declaring this waste will be Class A low-level radioactive waste(LLRW) without the absolutely necessary analysis and deliberation. As you are aware, there is currently a license application with the Texas Commission for Environmental Quality for a LLRW disposal facility in far west Texas. The rules for the operation of that facility were written to provide for the wastes currently classified as low-level and do not in any way account for the disposal of depleted uranium. As the Sierra Club opposes the creation of a private LLRW dump in Texas because of the health, safety, and environmental threats it poses, we certainly would not concur with a specious assignment of a "low-level" label to the DUF6 waste. *Comment #356-4*

The issue of groundwater contamination by this facility is of extreme concern to us. The NRC's disregard of the potential for groundwater contamination as a result of seismic activity, in addition to its apparent assumption that the liners employed to impound the contents of the facility's wastewater basins will retain their integrity for the duration of the facility's operation, clearly indicate the inadequacy of the Draft EIS. Indeed, it is unclear what the justification for choosing this site as appropriate for a uranium enrichment facility is, as other sites were rejected due to earthquake risks on par with Lea County's. *Comment #356-5*

The Draft EIS must include a *regional* analysis of threats to groundwater – water flows do not stop at state lines. *Comment #356-6* *Comment #356-7*

Water is a critical resource, particularly in this very dry part of the country. Both Texas and New Mexico have water plans that assess the current and future uses of this life-sustaining element. In this area (eastern New Mexico and west Texas), reliance on groundwater sources is already creating the potential, even likelihood, of shortages in the near future. Any water required by this new industry will only compound this problem. *Comment #356-8*

These are only some of the issues regarding which we maintain that the Draft EIS is incomplete or mistaken in its conclusions. The Lone Star Chapter of the Sierra Club requests that the NRC's staff recommendation for approval of the license for the uranium enrichment facility be withdrawn and the EIS be revised and expanded to address these and other valid concerns. *Comment #356-9*

Sincerely,

Margot Clarke
Outreach Coordinator
Sierra Club, Lone Star Chapter

Commenter 358

SOUTHWEST RESEARCH AND INFORMATION CENTER
P.O. Box 4524 Albuquerque, NM 87196 505-262-1862 FAX: 505-262-1864 www.sric.org

January 7, 2005

Chief, Rules Review and Directives Branch
Mail Stop T6-D59
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

RE: Docket No. 70-3103
DEIS Comments

Dear People,

Southwest Research and Information Center (SRIC) is a private nonprofit, educational organization based in Albuquerque, New Mexico, that has been involved in issues related to uranium development in New Mexico for decades. As a result of its more than 30 years of work, including analyzing and experiencing the enormous and continuing extremely negative impacts of uranium mining and milling on people's health and the water, soil, air, and spiritual environment in New Mexico, SRIC has great interest in the proposed LES Gas Centrifuge Uranium Enrichment Facility.

J-196

SRIC submitted scoping comments for NRC's environmental impact statement (EIS) of the LES plant. SRIC submits the following comments related to the original DEIS and the "redacted" DEIS, which are grossly legally and technically deficient.

1. The Draft Environmental Impact Statement (DEIS) is legally insufficient; a supplemental DEIS must be prepared and made available for at least 45 days of public comment.

Under NEPA caselaw, it is well established that in an EIS, the agency must "take a hard look at the environmental consequences before taking a major action." *Baltimore Gas & Electric Co. v. Natural Resources Defense Council, Inc.*, 462 U.S. 87, 97 (1983), citing *Kleppe v. Sierra Club*, 427 U.S. 390, 410, n. 21 (1976). *Comment #358-1*

> It [The EIS] ensures that the agency, in reaching its decision, will have available and will carefully consider detailed information concerning significant environmental impacts; it also guarantees that the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision. *Robertson v. Methow Valley Citizens Council*, 487 U.S. 332, 349 (1989).

> Publication of an EIS, both in draft and final form, also serves a larger informational role: It gives the public the assurance that the agency "has indeed considered environmental concerns in its decisionmaking process," *Baltimore Gas & Electric Co., supra, at* 97, and perhaps more significantly, provides a springboard for public comment, see L. Caldwell, Science and the National Environmental Policy Act 72 (1982). *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989).

Certainly, any adequate DEIS must include a "hard look" analysis of public and occupational health impacts from accidents during operations at the enrichment plant. Yet, the "redacted" DEIS has no such analysis. Thus, the public does not have the required information on such impacts and cannot appropriately comment except to point out that fatal deficiency. A supplemental DEIS must be issued to correct that fatal flaw. *Comment #358-1 (cont.)*

Any adequate DEIS must have a "hard look" analysis of the impacts of transportation accidents. Yet the "redacted" DEIS has no such analysis. Thus, the public does not have the required information on such impacts and cannot appropriately comment except to point out that fatal deficiency. A supplemental DEIS must be issued to correct that fatal flaw.

Any adequate DEIS must include a "hard look" analysis of the impacts of the nearby natural gas and CO_2 pipelines. Yet the "redacted" DEIS has no such analysis, although it briefly mentions that the site has "an underground carbon dioxide (CO_2) pipeline (p. 2-2). The "redacted" DEIS has even eliminated several figures that show the existing nearby pipelines, thus leaving the totally inaccurate implication that no such pipelines exist and that there is no hazard from such pipelines. Thus, the public does not have the required information on such impacts and cannot appropriately comment except to point out that fatal deficiency. A supplemental DEIS must be issued to correct that fatal flaw.

Those and other deficiencies are especially egregious since the issues were identified in SRIC's scoping comments (and perhaps by other commentors). In its Notice of Intent, NRC committed to analyzing "[p]otential public and occupational consequences from construction, routine operation, transportation, and credible accident scenarios (including natural events)." 69 *Federal Register* 5375 (February 4, 2004). On page 18 of the Scoping Summary Report (DEIS, Appendix A), the NRC committed: "The draft EIS will analyze the potential environmental impacts resulting from credible accidents at the NEF." The "redacted" DEIS does not meet those commitments or the legal requirements. Thus, the public is mislead into thinking that the environmental impacts of credible accidents are analyzed in the DEIS, when, in fact, no such analysis is provided.

The public cannot even know which DEIS it is commenting on – the original DEIS issued in September 2004 or the "redacted DEIS" issued in December 2004. SRIC has asked that the following matters be made public in an email of December 29, 2004: *Comment #358-2*

1. The criteria used to remove "potentially sensitive information" (the phrase used in the December 21 *Federal Register* notice). No criteria or rationale is included in the "redacted" DEIS. The public should be able to comment on the criteria in commenting on the DEIS.

2. What is the status of the September 2004 DEIS? The "redacted" version has much less information and analysis than the September 2004 version that it effectively replaces..

3. Will NRC make available to the public all of the comments received on the DEIS, including those comments related to "redacted" portions of the DEIS? If not all public comments will be made available, what is NRC's legal authority to withhold such comments?

Comment #358-2 (cont.)

4. How will NRC respond to comments on the DEIS related to "redacted" portions? For example, are comments related to "potentially sensitive information" deemed unavailable to the public or outside of the scope of the DEIS?

Anna Bradford of the NRC called Don Hancock on Tuesday, January 4, 2005 in response to those requests. But she provided no response to the requests other than to say that the comment period will not be extended beyond January 7, 2005. SRIC reiterates its objections to the illegally and improperly short 14-day comment period on the "redacted" DEIS and the less than 45-day comment period when sources were available on the original DEIS.

NRC should answer those questions in releasing a supplemental DEIS for public comment, as the public should have an opportunity to comment on NRC's rationale for "redacting." Under NRC's rules, a minimum of a 45-day comment period must be provided on the DEIS and any supplemental DEIS. 10 CFR 51.73.

J-197

Further, as will be discussed below, the original DEIS also does not meet the requirements for an adequate DEIS. Once again, a supplemental DEIS must be released for public comment.

2. <u>The "redacted" DEIS is not a legally or technically adequate DEIS, and there is no adequate basis given for the redactions.</u>

Many pages of the original DEIS have been "redacted." According to the "redacted" DEIS, the portions were eliminated "under 10 CFR 2.390." However, that regulation makes no mention of NEPA documents, so the NRC has not provided an adequate basis for removal of portions of the DEIS based on NEPA. NRC should make its screening criteria available with the "redacted" DEIS so that the public can understand the basis for removals and comment on both the criteria and whether specific redactions are warranted. While Tim Johnson of the NRC staff said in a telephone conversation with Don Hancock on December 29, 2004 that the basis was subsection (d) of that regulation, that provision in fact does not apply to much of the material that has been removed from the DEIS. For example, how is an earthquake accident analysis related to "commercial or financial information" under 10 CFR 2.390(d)?

Comment #358-3

There is nothing in NRC's own NEPA regulations (10 CFR 51) that allow for having two DEIS's on the same facility, nor for "redacting" a DEIS in the way that it has been done.

Comment #358-3 (cont.)

In releasing a supplemental DEIS, the NRC should describe the specific basis for any "redactions" or failures to include required environmental analyses. It should also describe any other situations in which it has released two versions of a DEIS for public comment at the same time, since SRIC believes that there is <u>no</u> other circumstance that such a situation has occurred. SRIC believes that there has been no adequate basis expressed to remove any of the information in the "redacted" DEIS.

3. <u>The "redacted" DEIS does not discuss many significant environmental impacts and it does not include required mitigation measures to address potential impacts.</u>

Again, caselaw is clear that mitigation measures must be included and that the public must be able to comment on them.

Comment #358-4

> To be sure, one important ingredient of an EIS is the discussion of steps that can be taken to mitigate adverse environmental consequences. [footnote omitted] The requirement that an EIS contain a detailed discussion of possible mitigation measures flows both from the language of the Act and, more expressly, from CEQ's implementing regulations. Implicit in NEPA's demand that an agency prepare a detailed statement on "any adverse environmental effects which cannot be avoided should the proposal be implemented," *42 USC § 4332(C)(ii)*, is an understanding that the EIS will discuss the extend to which adverse effects can be avoided. See D. Mandelker, NEPA Law and Litigation § 10:38 (1984). More generally, omission of a reasonably complete discussion of possible mitigation measures would undermine the "action-forcing" function of NEPA. Without such a discussion, neither the agency nor other interested groups and individuals can properly evaluate the severity of the adverse effects. *Robertson* at 351-352.

Despite that legal requirement, the "redacted: DEIS has <u>no</u> mitigation discussion or analysis of some issues, and a very truncated analysis of those for which data have been removed.

4. <u>The "redacted" DEIS is incomplete, inaccurate, and misleading, is technically and legally inadequate; a revised supplemental DEIS must be issued for public comment.</u>

Comment #358-5

Among the many examples of incomplete, inaccurate, and misleading portions are the following::

* On page 2-4, the "redacted" DEIS states that the "[p]rincipal structures within the proposed NEF are shown in Figure 2-4." However, there is <u>no</u> Figure 2-4, as page 2-5 of the "redacted" DEIS states: "Figure removed under 10 CFR 2.390." Thus, the text of the document is inaccurate, and the public is not provided that drawing of the site. Without such a figure, among other things, the public cannot adequately comment on the layout of the facility, including the possibility of structures conflicting with each other in ways that could cause accidents, measures that could be taken to mitigate those accidents, and to identify overall environmental impacts of the facility layout.

* On page 2-6, the "redacted" DEIS states that the "UBC Storage Pad (Item 1 in Figure 2-4) would be constructed on the north side of the controlled area to store transportation cylinders and UBCs." Of course, as noted above, there is no Figure 2-4 Item 1. There is no figure showing the controlled area.

* Repeatedly on pages 2-6, 2-7, 2-8, 2-9, and 2-10, the "redacted" DEIS refers to "Items" on "Figure 2-4" even though no Figure 2-4 is included in the document. Thus, the "redacted" DEIS is repeatedly inaccurate in what it states.

* On page 2-9, the "redacted" DEIS states that a "high-pressure CO_2 pipeline crosses the site diagonally from the southeast to the northwest. It would be relocated during the site preparation for safety considerations." The "redacted" DEIS contains no figure showing the location of the existing high-pressure CO_2 pipeline nor does it include a figure showing where that pipeline will be relocated. Thus, the public cannot appropriately comment on whether the relocation should be done to a different location, whether the relocated pipeline would pose safety considerations, and whether it could be relocated to other locations to better mitigate against any adverse impacts. *Comment #358-5 (cont.)*

* Page 2-9 of the "redacted" DEIS states that Figure 2-6 is "Construction Area for the Proposed NEF Site." However, there is no actual Figure 2-6, which is "removed under 10 CFR 2.390." Thus, the "redacted" DEIS is inaccurate, and the public is not able to appropriately comment on the construction area, and whether construction could be handled to reduce adverse environmental impacts and on mitigation measures that should be taken.

* On page 3-2, the "redacted" DEIS states that "[a]n underground natural gas pipeline is located along the southern property line (Figure 3-2)." However, there is no Figure 3-2, as it is "removed under 10 CFR 2.390." Thus, the "redacted" DEIS is inaccurate. The text could have referred to Figure 3-21, which does show the location of the natural gas pipeline, but it does not. Neither is there any explanation of why Figure 3-2 is removed and Figure 3-21 is not.

* On page 4-41, line 1, the "redacted" DEIS contains a sentence fragment that makes no sense. The first part of the sentence is on page 4-40 and has been "removed under 10 CFR 2.390." There is no explanation of why the first part of the sentence is removed and the last part is not. But the result is that the "redacted" DEIS is incomplete and inaccurate, and the public cannot comment other than to note that the sentence makes no sense and that required information is missing from the "redacted" DEIS.

* On page 4-57, the "redacted" DEIS states that Tables 4-17 and 4-18 show the environmental impacts from conversion of DUF6. However, there is no table 4-18, which is "removed under 10 CFR 2.390." Thus, the "redacted" DEIS is inaccurate, and the required information about the impacts of depleted uranium conversion is not included. The public is not provided that information or the data related to possible impacts from accidents at the facility.

* On page 6-1, the "redacted" DEIS states that figure 6-1 show the locations of proposed release locations for gaseous and liquid effluents. However, there is no figure 6-1, which has been "removed under 10 CFR 2.390." Thus, the "redacted" DEIS is inaccurate, and the public is not provided information on the location of effluent releases and cannot comment on such locations or the kind of mitigation that could occur by relocating or eliminating such locations.

* The table of contents of the "redacted" DEIS shows that from pages C-14 to C-29 there is discussion of public and occupational health impacts from accidents during operations.

J-198

However, 13 of those 16 pages are blank - "removed under 10 CFR 2.390." And major portions of the remaining three pages also are blank, "removed under 10 CFR 2.390." Thus, the "redacted" DEIS is inaccurate and contains no description of operational accidents, no analysis of the impacts of such accidents, no information about the methodology and used to generate any analysis. Thus, the public is able only to point out that the LES facility is obviously extremely dangerous, so much so that neither the kind of accidents – natural or human-made – nor their results can be shared with the public. The only legitimate conclusion for the public to make is that the facility is obviously too dangerous to be licensed in New Mexico or elsewhere. *Comment #358-5 (cont.)*

5. The original DEIS and the "redacted" DEIS do not consider all reasonable alternatives, as required by NEPA.

Neither the original DEIS nor the "redacted" DEIS consider the alternative of limiting on-site storage of Uranium Byproduct Containers (UBC) to one year. As briefly mentioned in the DEIS on page 4-52, LES has committed to the State of New Mexico that UBCs will not be stored at the LES facility indefinitely. To ensure that waste does not remain stored on-site indefinitely, the DEIS should analyze the alternative of limiting the amount of UBC storage to one year of production Since the DEIS states that full production would generate 7,800 metric tons per year or 627 UBCs per year (p. 2-27), the DEIS should consider the alternative of limiting the storage capacity of the UBC Storage Pad to 627 UBCs. Such an analysis should include environmental impacts, including occupational and public impacts, as well as impacts on the operations of the facility. Such impacts could be compared with similar impacts of 30-year storage capacity or other more limited storage options. *Comment #358-6*

The DEIS should also consider the alternative of purchasing low-enriched uranium from foreign sources, an alternative which the DEIS and the "redacted" DEIS reject (p. 2-39). U.S. nuclear power plants have been purchasing low-enriched uranium from foreign sources for years, and the DEIS does not indicate that there have been any problems from that option. Indeed, such a practice will continue for many years, whether or not the LES facility is built. Moreover, the basis in the DEIS and the "redacted" DEIS for rejecting the alternative is the "national energy policy objective" from the Department of Energy (DOE) Report to Congress on Maintenance of Viable Domestic Uranium, Conversion and Enrichment Industries. However, that report does not support the development of the LES plant. That report's enrichment recommendation is to "build an advanced centrifuge demonstration plant at Portsmouth" and "to place the Portsmouth GDP on cold standby for a 5-year period (p. 21)." Those actions have been taken. No where does the report state a policy of LES building an enrichment plant in Eunice, New Mexico or any other location. Thus, the rationale used in the DEIS and "redacted" DEIS is spurious. The alternative of purchasing low-enriched uranium from foreign sources is reasonable and must be fully considered. *Comment #358-7*

Moreover, it is not reasonable to state that allowing European companies (who own LES) to build LES in Eunice, New Mexico could ever be considered a "domestic" enrichment source. If NRC maintains that a domestic uranium enrichment plant is necessary, it should consider the proposed USEC centrifuge plant at Portsmouth as a reasonable alternative to LES. *Comment #358-8*

An additional alternative that must be considered, which is not, and was included in SRIC's scoping comments is the alternative of storage of up to 15,727 UBCs beyond the operational lifetime of the facility. Since there remains no viable alternative storage or disposal location for the DUF_6 from the LES facility, this alternative and its environmental impacts must be fully analyzed. SRIC in no way endorses this alternative as a preferred one, because it poses unacceptable long-term risks to New Mexico, but it is a reasonable alternative, and neither the DEIS nor the "redacted" DEIS consider the alternative nor describe why it should not be considered.

Comment #358-9

Conversely, NRC's preferred alternative is not reasonable, even from an economic standpoint. The "market" does not consider LES to be needed, since without the $1.8 billion Industrial Revenue Bond, the facility admittedly would not be built because there would be no financing. The supplemental DEIS must discuss how LES, which is not a financially viable alternative is NRC's preferred alternative.

Comment #358-10

7. The original DEIS and the "redacted" DEIS do not discuss important mitigation measures. As noted in #3 above, the "redacted" DEIS is grossly deficient in not providing information on many issues and providing inadequate or no discussion of possible mitigation measures.

The original DEIS is also seriously deficient. For example, limiting UBC storage pad capacity to 627 UBC (one year's production) would mitigate concerns about long-term storage of UBCs at the LES facility after the end of the operating license and mitigate the environmental, occupational and public risks associated with UBC storage. Such a mitigation measure must be considered in the supplemental DEIS.

Comment #358-11

J-199

8. The discussion and analysis of waste conversion and disposal is totally inadequate in both the original DEIS and in the "redacted" DEIS.

New Mexico has the world's first geologic repository, the Waste Isolation Pilot Plant (WIPP), and the waste and contamination from the production of about 50% of the U.S. uranium supply over the past 60 years. As a result, New Mexicans are very concerned about any additional long-term storage or disposal sites. In addition to those strong citizen concerns, as already noted, Governor Richardson has stated that there can be no long-term waste storage or disposal in New Mexico. Neither the original nor the "redacted" DEIS discuss that historic role that New Mexico plays, another deficiency in the documents.

Comment #358-12

Although both the original DEIS and the "redacted" DEIS provide some discussion of conversion and disposal facilities, it is incomplete and totally inadequate. First, the DEIS states that NRC considers the DUF_6 from LES "to be a Class A low-level radioactive waste as defined in 10 CFR 61.55(a)(6) (p. 2-27)." Neither the DEIS nor the "redacted" DEIS provide any citation for that conclusion. SRIC does not agree with that conclusion. Importantly, SRIC notes that in neither this DEIS nor in any other NRC EIS has such a conclusion described and analyzed. SRIC believes that NRC must conduct a rulemaking, including an EIS process to support whatever decision that it makes about the classification of waste from LES and other similar facilities.

Comment #358-13

Second, in the original DEIS and the "redacted" DEIS, "it is assumed that the proposed conversion facility would use the same technology adapted for use by DOE in its conversion facilities (p. 2-28)." There is no adequate basis for such a conclusion. It has not been definitely established that the same technology would be used. Thus, the supplemental DEIS must consider the option that the LES conversion facility would use a different technology and fully describe the conversion technology to be used for LES waste as compared with that from the existing U.S. enrichment plants.

Comment #358-14

Third, the original DEIS and the "redacted" DEIS presume that a private sector conversion facility is possible (p. 2-29). There is no basis for such a conclusion as there has never been such a facility in the United States, as the original DEIS and the "redacted" DEIS acknowledge (p. 2-29). The only two conversion facilities being planned are DOE funded facilities at Paducah, Kentucky and Portsmouth, Ohio. Thus, it is not a reasonable alternative to consider that they would be a private sector conversion facility, especially since the financing of such a facility is not included in the cost estimates for LES. Therefore, the private sector conversion facility is, at best, a speculative option and should not be included in the supplemental DEIS unless LES make a firm financial guarantee to finance such a facility.

Comment #358-15

Fourth, the original DEIS and the "redacted" DEIS include as an option using the two planned DOE conversion facilities at Paducah, KY and Portsmouth, Ohio (p. 4-55). The Paducah facility is stated to operate until 2031 to convert the existing wastes there. Thus, it would take more than ten years to convert all of the LES wastes, if it could do so. Portsmouth would operate until 2024 and it would take until about 2040 to convert all of the LES wastes, if it could do so. In either case, UBCs could be left at LES well after the end of the 30-year license in 2036. This possibility and its impacts must be fully discussed in the supplemental DEIS, or the supplemental DEIS must describe in detail what would be required to avoid such a possibility. In addition, the supplemental DEIS must discuss the changes that would be needed in the conversion technology used at those two facilities in order for them to be able to handle LES's wastes, which will be different in composition compared with those wastes to be converted from the existing enrichment plants. SRIC also understands that LES has not even determined what conversion technology could be used (and which technologies could not be used) for the LES wastes. All of these matters must be discussed in the supplemental DEIS.

Comment #358-16

Fifth, the original DEIS and the "redacted" DEIS include a private sector option that is not in the LES application – Option 1b, locating a conversion facility nearby. There is no basis to include such an option, and it must be eliminated from the supplemental DEIS. There is no proposal for such a facility. It has not been demonstrated that there is a suitable site for such a facility and neither the original DEIS nor the "redacted" DEIS include any such analysis.

Comment #358-17

Sixth, there is no viable disposal location for wastes from LES. As noted above, the classification of the waste is in doubt. The original DEIS and the "redacted" DEIS state that the current viable disposal facilities are Hanford or Envirocare. However, neither document discuss the fact that the State of Utah has prohibited 11(e)(2) waste from Fernald from coming to

Comment #358-18

Envirocare, so it is clearly possible that LES waste would not be allowed at Envirocare. Moreover, if, as noted above, there is no viable private conversion facility, Hanford also could not take the waste. Moreover, under the DOE conversion option, given the problems with the State of Utah regarding Envirocare, the only possible disposal option is the Nevada Test Site. But again, the State of Nevada has not allowed 11(e)(2) waste from Fernald, and it is not at all assured that it would accept LES waste. Indeed, neither the original DEIS nor the "redacted" DEIS include any documentation showing that either disposal facility and their affected states would accept waste from LES or that they even consider DUF_6 to be "low-level waste" and acceptable for disposal. Moreover, the original DEIS and the "redacted" DEIS dismiss the LES preferred disposal option in "an exhausted uranium mine (the Cotter Mines in Colorado)." (LES Environmental Report, Page 4.13-8). The stated rationale is that no existing mine is currently licensed (p. 2-31). Based on that rationale, clearly Barnwell and WCS must be excluded from consideration because they also are not currently licensed to take LES waste.

Comment #358-18 (cont.)

Seventh, the original DEIS and the "redacted" DEIS include Waste Control Specialists (WCS) as a possible disposal facility (p. 2-32). There is no basis to include that facility. It was not included in the LES application. It cannot now legally accept LES wastes. It does not meet the spirit or letter of the commitment to dispose of LES's wastes outside of New Mexico, since the site is immediately adjacent to New Mexico and its impacts would affect New Mexico. The supplemental DEIS should exclude the WCS facility for its discussion and analysis.

Comment #358-19

9. The original DEIS and the "redacted" DEIS discussion and analysis of water quantity issues are grossly inadequate.

As an initial matter, the original DEIS and the "redacted" DEIS provide contradictory information about the amount of water that LES would use. Page 4-15 states that LES could use up to "2.63 million cubic meters (695 million gallons) of the Ogallala waters." Page 4-24 states that LES "would use up to 2.6 million cubic meters (687 million gallons) of water from the Ogallala Aquifer during its operation." While for the NRC, 8 million gallons of water may be insignificant, it is very significant for semi-arid New Mexico, where the State of New Mexico has had to pay billions of dollars to Texas for compensation for Pecos River water not delivered to Texas and where people have been killed for much less water than that.

Comment #358-20

The estimates are not limits, so the supplemental DEIS should discuss the maximum amounts of water that LES could use and their impacts. The original DEIS and the "redacted" DEIS state that the peak water use requirements for LES are 2,040 cubic meters (539,000) gallons per day (pp. 2-14 and 4-14). Since LES must operate continuously, the peak use for an entire year (365 days) is 744,600 cubic meters (196.735 million gallons). Give that the original DEIS and the "redacted" DEIS state that LES would operate at full capacity for 14 years (p. 2-2), those 14 years at the peak use 10.424 million cubic meters (2.754 billion gallons) or four times as much as the original DEIS and the "redacted" DEIS estimate. Given the proposed 30-year license (and there would be water use during those additional 16 years), the supplemental DEIS must discuss and analyze the impacts of using at least four times more water than currently estimated.

Comment #358-21

J-200

Moreover, that peak use is about 40 percent of the total daily usage of Eunice (5,600 cubic meters per day - page 2-14). Since there is no current requirement that LES receive its water from both municipalities, the supplemental DEIS must analyze the impacts of the peak LES use on the Eunice system. Such impacts would be major and unsustainable, and the supplemental DEIS should so state.

Comment #358-22

The original DEIS and the "redacted" DEIS do not discuss the impacts on LES operations of a reduction or cutoff of water use for hours or days. The supplemental DEIS must consider that realistic possibility. Alternatively, the supplemental DEIS must state what measures will be taken to ensure a redundant water supply (onsite wells, in addition to the two proposed water pipelines) and its requirements (permitting, for example) and impacts.

Comment #358-23

Comment #358-24

10. The original DEIS and the "redacted" DEIS use a grossly inaccurate funding requirement for waste disposal.

New Mexico has great experience with operators of uranium facilities not providing adequate funding for decommissioning and waste disposal. The private uranium mines, mills, and tailings sites in the state did not provide adequate funding, so federal and state funding has been required for the decommissioning of those sites. And many of the sites are still not adequately remediated, decades after their use. That results in continuing water contamination, air contamination, and health effects of thousands of people that have not been funded. Thus, waste disposal is an important issue, not only that it be done outside of the State (as required by the governor), but also that it be adequately funded to ensure that it is paid for and done well, and does not constitute a future burden on federal and state taxpayers.

Comment #358-25

The original DEIS and the "redacted" DEIS use LES's $5.50 per kilogram of uranium funding estimate (p. 7-4). As an initial matter, the supplemental DEIS should use a more complete citation method, since the two sources are not easily available. While SRIC does have a copy of the LES Environmental Report, that document is three volumes and hundreds of pages. The basis for that $5.50 per kilogram of uranium funding amount is not readily seen in that document, for example in Section 3.12 regarding waste management and in Section 7.4 Cost-Benefit analysis. The other source – June 4, 2004 letter from James Curtiss - is apparently not available, as SRIC has attempted without success to find it in the NRC online document sources.

Comment #358-26

SRIC's understanding is that the $5.50 per kilogram estimate is based on Urenco's European experience, which is not applicable to LES. Among other things, that number does not include all costs of conversion and disposal. Additionally, European costs and regulatory requirements are different than in the U.S.

In the supplemental DEIS (not just in the Safety Evaluation Report as is stated on page 7-4), there must be a complete description and analysis of waste disposal costs. More realistic and higher cost (SRIC estimates that a doubling of the cost is likely) estimates must be used and justified in detail, so that the public can fully comment on the adequacy and reliability of those estimates and the funding mechanisms that will be required.

Comment #358-27

11. In addition to the inadequate and illegal "redacted" DEIS, other source documents are not available.

As noted in #4 above, the "redacted" DEIS is totally inadequate and does not provide required information to the public. As noted in #10 above, at least one important source document on waste disposal costs is unavailable. Many other documents cited as sources are not available to SRIC and other members of the public as there is no public document room in New Mexico and the electronic public document room has been unavailable for much of the comment period for the original DEIS and the "redacted" DEIS. *Comment #358-28*

All documents used as sources must be available to the public for at least the required 45-day comment period on the supplemental DEIS.

12. The impacts of LES would not be "small to moderate," they are so major that the public cannot be appraised of the impacts.

The original DEIS and the "redacted" DEIS state repeatedly in Chapter 4 that the impacts of LES would be "SMALL" or "SMALL to MODERATE." Much of the discussion and analysis of important impacts – operational accidents and transportation – is totally missing and serious deficient in the "redacted" DEIS. Some of those instances have been noted above. *Comment #358-29*

J-201

The original DEIS states that potential chemical consequences from severe railroad accidents for DUF6 is "adverse health effects" for 28,000 in urban areas, such as Albuquerque. That estimate is cited to the Paducah and Portsmouth EISs. SRIC believes that generic estimate is low. But it certainly is not specific to LES's waste and railway and meteorological conditions in New Mexico. SRIC, therefore, believes that they are underestimates. Nonetheless, 28,000 people suffering health effects in Albuquerque or any other urban area should not be considered "SMALL to MODERATE" (p. 4-40). *Comment #358-30*

The original DEIS states that health effects from a hydraulic rupture of a UF_6 cylinder would be a 12,000 person-rem collective dose (p. 4-49). Again, the original DEIS considers that to pose "SMALL to MODERATE" impacts. Since that would be one of the largest nuclear releases in the history of New Mexico, the public and State of New Mexico would not consider it to be less than a MAJOR impact. (Even the original DEIS states that 7 latent cancer fatalities would have HIGH consequences.) The supplemental DEIS should compare a release of that amount with releases from other nuclear and uranium-related facilities within the state to provide a context for citizens as to the relative nature of such an accident. *Comment #358-31*

The actual effect of any such accidents would be a strong public outcry to shut the facility down, even if that was not NRC's position at that time. The supplemental DEIS should consider not only the health effects, but also the economic impacts of such an accident, and compare that with other accidents that have occurred at licensed NRC facilities, including Three Mile Island-II. *Comment #358-32*

Further, the cumulative effects of such accidents is not captured by the analysis provided. The supplemental DEIS should include an adequate cumulative effects analysis, including both chemical and radioactive health effects, as well as economic and socioeconomic (including public perception) impacts. *Comment #358-33*

Comment #358-33 (cont.)

Clearly, the LES facility is too dangerous to be built and operated in New Mexico or any other location, it is not needed, and it is not financially viable. The supplemental DEIS should reach the same conclusion. *Comment #358-34*

Thank you for your publication of these comments and full consideration of all of these issues.

Sincerely,

Don Hancock

From: Don Hancock <sricdon@earthlink.net>
To: <nrcrep@nrc.gov>
Date: Wed, Dec 29, 2004 12:11 PM
Subject: Docket No. 70-3103 - Request for extension of time

Dear People,

Southwest Research and Information Center (SRIC) is a private nonprofit, educational organization based in Albuquerque, New Mexico, that has been involved in issues related to uranium development in New Mexico for decades. As a result of its more than 30 years of work, including analyzing and experiencing the enormous and continuing extremely negative impacts of uranium mining and milling on people's health and the water, soil, air, and spiritual environment in New Mexico, SRIC has great interest in the proposed LES Gas Centrifuge Uranium Enrichment Facility. SRIC submitted scoping comments for NRC's environmental impact statement (EIS) of the LES plant.

In response to your Federal Register notice of December 21, 2004 (page 76485), SRIC has examined the "redacted" LES DEIS on your website. SRIC requests at least a 30-day extension of the comment period, beyond the approximately two weeks (until January 7, 2005) being provided. *Comment #358-35*

Moreover, the comment period extension should be from the time that NRC makes publicly available the following information: *Comment #358-36*

1. The criteria used to remove "potentially sensitive information" (the phrase used in the December 21 FR notice). No criteria or rationale is included in the "redacted" DEIS. The public should be able to comment on the criteria in commenting on the DEIS. *Comment #358-37*
2. What is the status of the September 2004 DEIS? The "redacted" version has much less information and analysis than the September 2004 version. *Comment #358-38*
3. Will NRC make available to the public all of the comments received on the DEIS, including those comments related to "redacted" portions of the DEIS? If not all public comments will be made available, what is NRC's legal authority to withhold such comments? *Comment #358-39*
4. How will NRC respond to comments on the DEIS related to "redacted" portions? For example, are comments related to "potentially sensitive information" deemed unavailable to the public or outside of the scope of the DEIS?

Thank you for your prompt response to this request.

****

Don Hancock
Southwest Research and Information Center
PO Box 4524
Albuquerque, NM 87196-4524
(505) 262-1862
(505) 262-1864 (fax)
www.sric.org

J-202

Commenter 365

Chief, Rules and Directives Branch
U.S. Nuclear Regulatory Commission
Mail Stop T6-D59
Washington, D.C. 20555-0001

Re: Comments on the Draft Environmental Impact Statement for the Proposed National Enrichment Facility in Lea County, New Mexico (NUREG-1790); Docket No. 70-3103

To Whom It May Concern:

The NRC supposes the environmental impacts from building and operating a uranium enrichment facility in Lea County would be "moderate" at worst. Seven archeological sites would be affected. *Comment #365-1*

Lea County is possibly over a fault, and is in a seismically vulnerable place. *Comment #365-2*

The safety and widespread promise of wind and solar power makes nuclear reactors obsolete. We are already incapable of safely handling old nuclear reactor wastes. *Comment #365-3*

The water required for this project will certainly not be available, neither now nor in the future. *Comment #365-4*

The project would be exempt from taxation and offer a handful of jobs to local citizens. *Comment #365-5*

The danger of contaminating land, air and water by the emission of tons of carbon monoxide, nitrogen dioxide, and volatile compounds is not acceptable to American citizens. *Comment #365-6*

An accidental release of uranium hexafluoride would be devastating. *Comment #365-7*

The National Environmental Policy Act requires that environmental impacts be discovered, revealed, and taken into consideration before approval of a project of this nature. *Comment #365-8*

We believe the national Enrichment Facility will not pass the test. *Comment #365-9*

Please enter these comments into the official record on this proceeding.
Sincerely,

Jan Saecker

Jan Saecker
W2771 Circle Drive
Markesan WI 53946