

Docket # 70-3103

From: <rod.krich@exeloncorp.com>
To: <tcj@nrc.gov>
Date: 10/17/03 5:35PM
Subject: NEF Briefing Material

Action Required:
Recommendation:

Tim,

Attached is the material that we have been providing to people in the Lea County area and to the media. Please contact me if you have any questions.

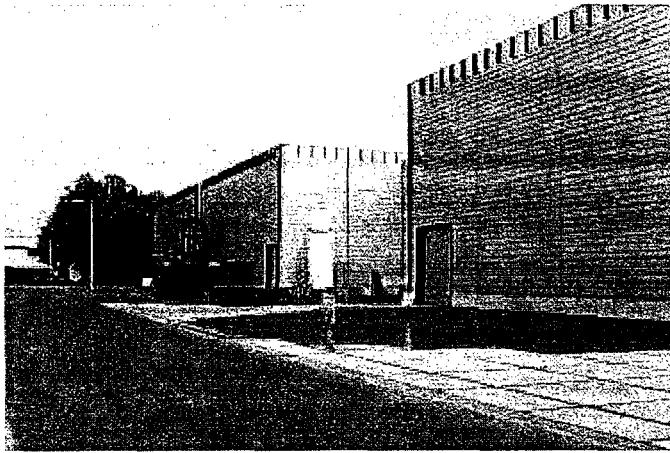
Rod Krich

<<Copy of NEF Project Description Final.pdf>> <<Copy of NEF Project Description Final.pdf>> <<Copy of NRC License.pdf>> <<Copy of Safety and Health.pdf>>

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National Enrichment Facility

LES is considering a site in Lea County, New Mexico to build a gas centrifuge uranium enrichment facility that will enable the United States to have a domestic source of enriched uranium for the country's commercial nuclear power plants. The Company is currently a partnership between leading global nuclear fuel corporation Urenco Ltd., three large utilities that together operate a significant portion of the U.S. nuclear power plants and a construction



SP5 Uranium enrichment facility – Almelo, Netherlands

company. In the near future, Westinghouse Electric Company, LLC, plans to become a co-partner with Urenco Ltd., in the Company project. The utility owners will either exit the partnership or transition to a significantly reduced role at that time.

The new National Enrichment Facility (NEF) will use the world's most advanced, energy-efficient and cost effective uranium enrichment technology. Developed by Urenco Ltd., the technology has been in use for over 30 years. It will be the only facility of its kind in North America.

Established in 1971, Urenco Ltd. is a consortium of British Nuclear Fuels, Ltd., the Dutch government and several German nuclear utilities. Urenco Ltd. operates three enrichment facilities -- in England, the Netherlands and Germany -- and provides 15 percent of the worldwide market in enriched uranium. Westinghouse Electric Company, LLC, a subsidiary of British Nuclear Fuels, Ltd., is a world leader in commercial nuclear reactor technology, including power plant design, nuclear fuel fabrication and related services. Close to 50 percent of the world's nuclear power plants are based on the 117-year-old company's technology.

National Enrichment Facility

Uranium that is slightly enriched, termed “low enriched uranium” (LEU), is essential for fueling commercial nuclear power plants. Nuclear energy supplies approximately 20 percent of U.S. electricity and is the second greatest source of the nation’s electricity after coal. Because it is greenhouse gas emission-free, nuclear power is often referred to as the most eco-efficient of energies.

NEF will provide a sustainable domestic supply of LEU, thereby substantially reducing U.S. reliance on the global nuclear fuel marketplace and encouraging competition within the U.S. market. USEC is the only other company currently producing enriched uranium in the U.S.

In 2001, the U.S produced only 12 percent of its needed supply of enriched uranium, behind Russia supplying 55 percent and Urenco supplying 16 percent of the U.S. demand. Full capacity operation of the NEF is expected to annually

produce 3 million separative work units (SWUs) of uranium, which is approximately one-fourth of current U.S. enrichment services demand.

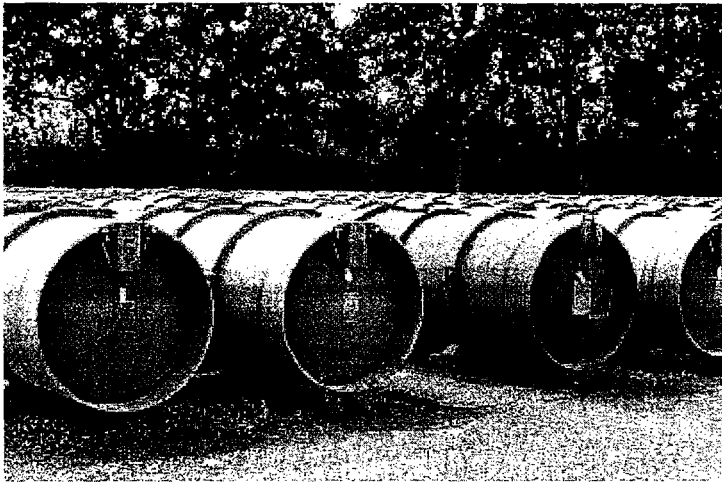


SP4 Uranium enrichment facility – Almelo, Netherlands

NEF will produce LEU using the Urenco-developed gas centrifuge technology, proven to be more cost effective and energy efficient than gaseous diffusion. The enrichment process involves the concentration of U-235, one of the isotopes in natural uranium. U-235, only 0.7 percent of the weight of natural uranium, is the needed isotope because it is the one that fissions (splits) inside the core of nuclear power reactors and releases energy in the process. The concentration of U-235 is increased slightly or “low-enriched” from 0.7 percent to 3 to 5 percent during the centrifuge process.

National Enrichment Facility

The NEF will house thousands of centrifuges that spin uranium hexafluoride (UF₆) gas at high enough speeds to separate the fissile U-235 from the heavier U-238 isotope. By contrast, gaseous diffusion is based on the separation effect arising from molecular diffusion, i.e. the flow of gas through small holes to separate the isotopes. The NEF centrifuge-enriched uranium, with greater concentrations of U-235, is then ready to be converted into fuel.



Uranium byproduct cylinders (UBC's) – Almelo, Netherlands

The byproduct of the enrichment process is depleted uranium, containing about 0.3 percent U-235. LES will store the uranium byproduct in Uranium Byproduct Cylinders (UBCs) at the NEF site, just as Urenco has safely stored UBCs at its European facilities for 30 years.

This storage process will be regulated by the U.S. Nuclear Regulatory Commission (NRC), which will determine how many UBCs can be stored at the NEF site and the length of storage time. LES will also work with the New Mexico Environment Department to ensure compliance with the highest environmental standards.

LES is considering New Mexico as the site for its U.S. plant for several reasons, notably its history as a hub of scientific R&D and strong support from both Lea County leaders and businesspeople and state officials including U.S. Senator Pete Domenici, current chairman of the Senate Energy and Natural Resources Committee. "Nuclear technologies are well understood and appreciated in this area," says Domenici. Lea County is also geologically suitable to the new enterprise.

LES will soon apply for an operating license from the U.S. Nuclear Regulatory Commission. It is estimated that the approval process will take approximately two years. LES's goal is to produce 1 million SWUs at its New Mexico facility by the year 2009, and triple that by 2013.

National Enrichment Facility NRC Licensing

NRC Licensing Process Information Sheet

The U.S. Nuclear Regulatory Commission (NRC) is responsible for licensing fuel cycle facilities that help to produce nuclear fuel for use in nuclear power plants. These facilities include uranium enrichment facilities. The NRC is an independent federal agency that reports to the U.S. Congress.

Section 193 of the Atomic Energy Act establishes a single-step licensing procedure for the construction and operation of uranium enrichment facilities.

LES will submit an application to the NRC pursuant to the Atomic Energy Act's requirements as specified in the Code of Federal Regulation (C.F.R.), specifically 10 C.F.R. Parts 40 (source material)

Lea County delegation views site of a decommissioned uranium enrichment facility - Almelo, Netherlands

and 70 (special nuclear material) and applicable NRC staff guidance. The application includes both a safety analysis

report and an environmental report. Approximately 3,000 pages in 11 volumes, the NEF license application represents more than 104,000 person-hours of preparation. The application will include the following information:

- Amount and specifications of nuclear material to be used in the plant process.
- Technical qualifications of those who will design, build and operate the plant, and the financial qualifications to undertake such a venture.

National Enrichment Facility NRC Licensing

- A detailed description of the proposed procedures, equipment and facilities to protect worker and public health and minimize danger to life or property, such as personnel monitoring, hazardous materials disposition and emergency procedures in the event of an accident.
- A demonstration of the financial capability to decommission -- decontaminate and dismantle - the contaminated portions of the facility after its useful life or at any time that the plant would be permanently shut down.
- A complete plan of control and accounting for all nuclear materials and/or enrichment equipment to demonstrate that the materials and equipment will be secure.

Once submitted to the NRC, the application is available for inspection by the public through the NRC website or the local Public Document Room. The NRC will issue a press release to notify the public of the application's availability.

The NRC will require about two years to review every operation and safety system in and around the plant as described in the application and to prepare an environmental impact statement and safety evaluation. The review is intended to ensure that the proposed facility is designed and operated safely, and that its construction and operation does not adversely affect the natural environment. The process involves not only technical review, but public hearings and ongoing communication between the NRC and LES.

If the NRC grants a license to LES for operation of the NEF, the NRC will carry out announced and unannounced inspections of the facility to ensure compliance with all applicable federal regulations and license requirements.

*State Representative Don Bratton looks at UBC's, Almelo,
Netherland*

National Enrichment Facility

NEF Public Health and Safety Fact Sheet

The proposed LES National Enrichment Facility (NEF) will be both safe and environmentally sound. It will meet or exceed the most stringent industrial regulations in the world -- those set by the U.S. Nuclear Regulatory Commission (NRC) -- as well as other federal, state and local regulations in order to ensure the safety and health of the workforce, the surrounding community and the environment.

Air Quality

In addition to the NRC, LES will work diligently with federal and state agencies including the State of New Mexico Environment Department (NMED) Air Quality Bureau to ensure compliance with emissions standards.

Water Quality

It is estimated that the NEF will use approximately 75 acre-feet of water annually, although this number may change based upon facility engineering. The majority of the facility's water will be used to supply the cooling units and will not come into contact with uranium.

An 18-hole golf course uses approximately 70 acre-feet of water per year, a neighborhood of 210 homes uses 75 acre-feet of water per year, and Intel's Albuquerque fabrication plant uses 4,000 acre-feet of water per year. The New Mexico State Engineer estimates that more than an average of 180,000 acre-feet of water evaporates from New Mexico's Elephant Butte Lake per year.

A very small percentage of water used by the facility will have the potential to come into contact with uranium. That water will be collected, monitored and treated in compliance with the NRC and NMED to ensure that it is below applicable regulatory limits. Only then will the water be released from the facility. No water will be released that is not at or below applicable regulatory limits.

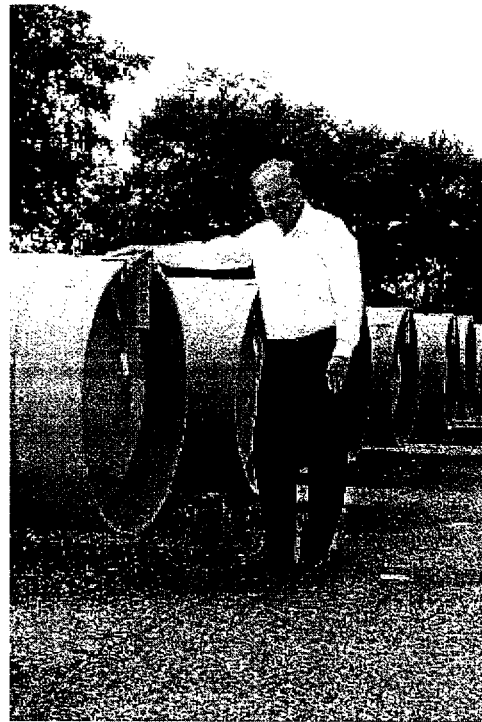
National Enrichment Facility

Radiation

Because emission of radiation at uranium enrichment plants is relatively low, containers of natural, enriched and depleted uranium, or uranium byproduct, can be easily handled. In fact, emissions are so low that if an individual stood at the NEF fence line 24 hours a day, for 365 days, that individual would be exposed to less than 25 millirem, a millirem being a thousandth of a rem, which is the unit for measuring absorbed doses of radiation.

As a point of reference, the average annual exposure of the U.S. population to all sources of radiation, most of them natural, is about 360 millirem. The NRC limits workers in U.S. nuclear facilities to doses of no more than 5,000 millirem of radiation per year. However, according to the U.S. Nuclear Energy Institute, the average occupational exposure of those employed in the U.S. nuclear energy industry, is below 500 millirem.

Experience at Urenco's operating enrichment facilities in Europe show worker occupational exposure to be around 20 millirem per year.



Byproduct Cylinders in Almelo, Netherlands

National Enrichment Facility

Emergency Planning

As a standard safeguard, LES will coordinate emergency planning measures with federal, state and local emergency response agencies as well as local law enforcement, fire departments and hospitals on both sides of the New Mexico/Texas State Line. The Eunice Fire Department services the area, with Hobbs, NM and Andrews, TX fire departments providing backup support. The Lea Regional Medical Center in Hobbs and the Permian Regional Medical Center in Andrews are both equipped with trauma services. LES will provide specific training to these organizations as needed in order to fully safeguard NEF operations.

The NEF will have a lifespan of about 30 years at which time the facility will be decommissioned. This involves decontaminating and dismantling the radiological portions of the facility, as well as the final disposal of any Uranium Byproduct Cylinders (UBCs) on site. The NRC will not issue an operating license to LES until it is certain that the funds to complete this effort will be in place once the plant begins operations. This funding will increase as necessary in relation to UBCs storage.

Management of the decommissioning program will ensure that proper training and procedures are implemented to guarantee worker health and safety. These procedures will focus heavily on minimizing waste volumes and worker exposure to hazardous and radioactive materials. A radiation protections program will identify and control sources of radiation, establish worker protection requirements, and direct the use of radiation survey and monitoring instruments.

From: "PHILLIP BARR" <pharb2@msn.com>
To: <mcohen@nefnm.com>, "Timothy Johnson" <TCJ@nrc.gov>
Date: 12/26/03 1:51PM
Subject: proposed Louisiana Energy Services enrichment plant in Lea County, New Mexico
(Question to Les Corporation)

Good Morning,

Concerning the proposed LES plant near Eunice, New Mexico. Could you give me a rough estimate of how many waste cylinders (tails) you will produce in one year and will need storage for.

Will your company honor its pledge to Governor Richardson not to store the waste in the State Of New Mexico?

Where will you store the waste?

I live in Lea County.

Phillip Barr

CC: <ron_curry@nmenv.state.nm.us>, <letters@time.com>, <fredhiatt@washpost.com>