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Public Comment Form
Draft Environmental Impact Statement
for the Proposed National Enrichment Facility in Lea County, New Mexico
NUREG-1790

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Comment:

The NEF license should be issued. The plant would have minimal environmental impact and substantial positive socioeconomic impact on its region, and would benefit the whole state. Energy independence for America is a further consideration that would be enhanced by operation of this plant, not only from the domestic fuel feed it produces but also for its significant help in diversifying and cleaning up our energy supply.

The plant's value is easily demonstrated. Calculations show that the 5% U-235 content in a single 7-foot long, 30-inch diameter, NEF product cylinder containing 2 1/2 tons of uranium hexafluoride has the same potential energy release when fissioned as the burning of over one million barrels of oil or the burning of 250,000-300,000 tons of good to medium grade coal. In full production, the NEF would supply up to 250 of these product cylinders annually, equivalent in energy to 250 million barrels of oil costing 12 billion dollars at current prices.

Failure to construct this plant might have national socioeconomic impacts down the road. Our current 104 nuclear plants and their indispensable electricity generation would be more vulnerable to arbitrary and unassailable fuel cost increases, because 85% of our enriched fuel supply now comes from foreign sources beyond US control. Supply shortages might also result from growing international competition (as nuclear power plant numbers increase abroad), or from foreign political actions - e.g., if cooling international relations led to the reduction or cessation of the supply of highly enriched uranium (HEU) from Russia to the US for "blend down" under present "megatons to megawatts" agreements. These are risks we need not and should not accept. The NEF could supply as much as 25% of our domestic needs.

To submit your comment, please give this form to an NRC representative at tonight's meeting, or mail to: Chief, Rules and Directives Branch, Division of Administrative Services, Mailstop T-6D59, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001

Your comments should be mailed in time to reach the NRC by November 6, 2004

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The NEF would have negligible local environmental impacts from the temporary storage of UBCs (uranium byproduct containers), regardless of their number or duration. They contain relatively little radioactivity, because their uranium was stripped of its accumulated chain decay products when its ore was purified at the mill, and these will not fully regenerate for tens of thousands of years. For similar reasons, the low level plant wastes can be disposed of readily at existing sites. More importantly, the UF₆ in the UBCs is solid to temperatures much higher than any ambient temperatures at the site and the containers can neither support nor propagate a fire.

This plant should have zero nuclear proliferation risks. The plant lacks the capability to produce uranium product remotely approaching the enrichments needed for nuclear weapons and could not do so without extensive enlargement.

and immediately detectable modifications. But the fuel grade enriched uranium needed to supply US power plants must be and will be produced by a plant either in the US or abroad. That demand is fixed. Building or not building the NEF will not change it, but having the enrichment plant under US observation and regulation is best for our economy and our security.

Much more nuclear power is needed for the US, not only to diversify our energy supply and reduce our dependence on foreign sources, but also to assure extraordinarily small impacts on the environment and displace vastly more polluting sources.

To illustrate, nuclear energy produces absolutely no global warming gases or sulfur dioxide (acid rain), and has an exceedingly small waste stream. The fuel pellets removed from a reactor contain the entire radioactivity from their energy-producing fission events, and do not exceed the volume of the material initially used to form them. Though one would not do so, the roughly 2 1/2 tons of "spent fuel" pellets derived from an original 7-foot long, 30-inch diameter, NEF enriched-product cylinder could be physically fitted back into that space. In an almost unimaginable contrast, getting the same amount of energy from burning coal would produce roughly one million tons of CO₂ (and some SO₂), along with 30,000 tons of ash and slag!

As the US and the world move tentatively but increasingly to the use of hydrogen as a very low pollution fuel for automobiles and trucks, it must be remembered that hydrogen is only a carrier of energy, not a free source found in nature. We must make it to use it. Because of imperfect process efficiency, more energy is always required for its production than it can deliver in end use.

The electricity to make it - e.g., by electrolysis of water - must come either from fossil fuel (coal, oil, or gas) or from nuclear generating stations.

Using fossil fuels as energy sources to make hydrogen merely moves the sites of pollution (from vehicles to power plants) and changes its type to some degree, but does not particularly lower greenhouse gas emissions nor the potential for global warming. The pollution reducing advantages of using nuclear power for hydrogen production (as just shown) are very clear.

The so-called "alternative" energy sources also cannot meet this need. Hydrogen plants are big, complex, and very capital-intensive. If they tried to deal with the changing power availability of the wind or the diurnal variation in

the sunlight, let alone the wild short-term fluctuations in solar supply from intermittent bright patches on cloud-swept days or its total loss on cloudy days, they could not function properly. The steady 24 hours per day, 7 days per week, baseload electricity and long interval between refuelings in nuclear power plants again makes them nearly ideal for this application and by far the best long-term hope for economic or pollution-free hydrogen production.

Thus, quite apart from its low environmental impact and its obvious and acknowledged economic benefits to regional employment and to the state tax base, in the national picture, the NEF offers a non-trivial and relatively important step toward a cleaner, stabler, and more independent US energy supply.