



Congress Watch • Critical Mass • Global Trade Watch • Health Research Group • Litigation Group  
Joan Claybrook, President

May 2, 2006

Timothy A. Frazier  
NEPA Document Manager  
Office of Nuclear Energy, Science and Technology  
U.S. Department of Energy  
1000 Independence Avenue, SW  
Washington, DC 20585-0119

**Re: DOE's Advance Notice of Intent to Prepare an EIS for the Global Nuclear Energy Partnership Technology Demonstration Program**

Dear Mr. Frazier:

Public Citizen submits the following comments to the U.S. Department of Energy (DOE) regarding its Advance Notice of Intent (ANOI) to Prepare an Environmental Impact Statement (EIS) for the Global Nuclear Energy Partnership (GNEP) Technology Demonstration Program, published in the March 22, 2006 issue of the *Federal Register* (Vol. 71, No. 55).

**DOE Should Withdraw its Advance Notice of Intent to Prepare an EIS**

Public Citizen requests that DOE withdraw its Advance Notice of Intent to Prepare an EIS for the GNEP Technology Demonstration Program. An EIS on the proposed demonstration facilities would be inappropriate under the National Environmental Policy Act (NEPA). The three demonstration facilities under consideration in the ANOI, including a reprocessing plant, a fast neutron reactor, and a fuel fabrication plant, are an intrinsic part of the larger GNEP proposal. Given that GNEP proposes to make a 180 degree shift in U.S. radioactive waste management and global nonproliferation policies, and that the reprocessing and other necessary technologies are far from ready for demonstration, an EIS on the proposed demonstration facilities is highly premature.

According to NEPA, DOE must *first* prepare a Programmatic Environmental Impact Statement (PEIS) that would analyze the impacts of the *entire lifecycle* of the GNEP program. DOE cannot legally parse out the proposed EIS on the demonstration facilities before preparing a PEIS for the GNEP program as a whole. While claiming that this EIS is simply for a "demonstration" program, DOE and the U.S. State Department are clearly moving forward with the broader GNEP program. DOE has made it clear in public statements, in

congressional testimony, and on its website that the international aspect of GNEP – in which a consortium of “fuel supplier nations” would provide cradle-to-grave fuel leasing services to “user nations” – is a “critical component” to the program (see, for example, <http://www.gnep.energy.gov/gnepReliableFuelServices.html>). In fact, the U.S. State Department has already begun approaching countries, including Russia, Japan, France, about participating in GNEP, which is contrary to the intent of NEPA that impact analyses should be conducted *prior to* major federal actions.

The technologies under consideration in the GNEP program are all in very early stages of research. In the ANOI, DOE admits that that “it has not yet proven that these technologies will be feasible in demonstration-scale facilities.” Exactly how, then, does DOE intend to analyze the true impacts related to siting, construction or modification, and operation of the demonstration facilities? The level of research is not to the point that DOE can make any sensible or realistic analysis of the impacts. It appears that DOE is attempting to create momentum for GNEP and a sense of *fait accompli* in Congress by committing to immature technologies and creating constituencies before the technologies are close to ready for demonstration.

DOE has been extremely vague about its GNEP proposal, and specific plans and cost estimates continue to change in every public statement. For example, DOE’s cost estimates within the first month of announcing the program ranged from \$1 billion by 2009 (DOE Deputy Energy Secretary Clay Sell on February 6, 2006) to as much as \$6 billion in the first five years (DOE Secretary Samuel Bodman on March 8, 2006). According to a 1996 estimate by the National Academy of Sciences, reprocessing and transmutation in the U.S. will “easily” cost taxpayers \$100 billion, in addition to the cost of a geologic repository. The NAS estimate is only for existing U.S. irradiated fuel, and does not include waste produced as a result of 20-year license extensions, waste from new domestic reactors, or the importation of foreign waste to the United States for reprocessing, as proposed under the GNEP program.

A full programmatic analysis of the GNEP proposal must be done *before* more taxpayer money is wasted and *before* any other actions are taken on this program. A PEIS on GNEP must include an analysis of global nonproliferation issues, costs to taxpayers, and environmental, public health, and worker impacts, as well as alternatives (including “no action”).

### **DOE’s NEPA Process Appears to be a Sham**

Despite claiming in the ANOI to consider various possible technologies and demonstration sites, DOE seems to have already made many of the key decisions related to GNEP. This raises concerns about whether DOE is only making a pretense of going through the NEPA decision-making process. For example, in the ANOI, DOE states that the separation processes are “not necessarily limited to” the UREX+ technology. Yet, from DOE’s testimony to Congress, it is quite apparent that DOE has already chosen UREX+ and pyroprocessing as its separations technologies (for one recent example, see the statement of Shane Johnson, Deputy Director, Office of Technology in the Office of Nuclear Energy, before the Energy

Subcommittee of the Science Committee on April 6, 2006, available at <http://www.house.gov/science/hearings/energy06/April%206/Johnson.pdf>).

Similarly, DOE has apparently already chosen to pursue fast neutron reactors as its mode for transmutation (see the above reference, as well DOE Secretary Bodman's speech at the Carnegie Endowment for International Peace in Moscow on March 16, 2006 at [http://moscow.usembassy.gov/embassy/transcript.php?record\\_id=150](http://moscow.usembassy.gov/embassy/transcript.php?record_id=150)), despite the fact that fast neutron reactors have a terrible track record in safety and economics, and are not capable of solving the radioactive waste problem. (Public Citizen's fact sheet on the global experience with fast neutron reactors is submitted for the record, <http://www.citizen.org/documents/FastReactors.pdf>.)

Finally, DOE also seems to have already chosen the Savannah River Site (SRS) for a demonstration reprocessing plant, as indicated by two recent letters. First, a September 20, 2005 letter from DOE's SRS manager to DOE's site contractor, Washington Savannah River Company (WSRC), directs WSRC to cease work related to the decommissioning of the reprocessing F-Canyon at SRS. Second, a March 3, 2006 letter from DOE's SRS manager to WSRC directs WSRC "to designate a project manager and initiate preconceptual project activities in support of an Engineered Scaled Demonstration (ESD) of an advanced separations technology." DOE authorized \$2 million for these activities. Both letters were written before DOE sent out its public request for "expressions of interest" (EOI) for GNEP on March 17, 2006. The EOI request closed on March 31, 2006 – a ridiculously short period of time for a "public process" – and included no guidance documents for applying, which only bolstered the public's perception that the process is a sham.

### **DOE Has Identified an Unreasonably Narrow Scope for the EIS**

In the ANOI, DOE proposes to include in the EIS issues related to siting, construction or modification, and operation of the demonstration reprocessing plant, fuel fabrication plant, and fast neutron reactor. Even if an EIS on the demonstration facilities made sense at this time – which it does not – DOE has set out an unreasonably limited scope for this EIS. Reprocessing is the dirtiest part of the nuclear fuel cycle; yet, DOE is proposing to postpone its analysis (until the plants are built?) of the costs and associated technological problems with decontaminating and decommissioning.

U.S. taxpayers are still paying several billion dollars each year to clean up contamination from reprocessing programs in the 1960s and 1970s for nuclear weapons at the Hanford Site (WA) and the Savannah River Site (SC), as well as the reprocessing of naval irradiated fuel at the Idaho National Laboratory (ID) and commercial reprocessing at West Valley (NY). Cleanup at these sites have been far from successful (for example, the Hanford vitrification plant and the reclassification of tank waste at SRS that will allow million of curies of radioactivity to migrate to the Savannah River). It is absolutely unacceptable for DOE to attempt to artificially parse out this crucial and integral analysis on the cleanup of these facilities for "one or more future NEPA analyses."

## **GNEP Cannot Meet Any of its Touted Goals**

The ANOI cites 4 goals for the GNEP program, but they do not make sense. For example, reprocessing and increased dependence on nuclear power will do little to decrease our dependence on foreign sources of fossil fuel, because (1) oil is the United States' primary import of fossil fuel and it is used largely for transportation (only 1.2% is used for electricity generation); and (2) we do not run our vehicles on nuclear power (the hydrogen economy being at least 50 years away).

According to DOE's website, GNEP has three goals: "to enable an expansion of nuclear power in the U.S. and around the world, to promote non-proliferation goals, and to help resolve nuclear waste disposal issues."<sup>1</sup> GNEP cannot attain these goals either, because it is too expensive, too dangerous, and too polluting.

### **1. Reprocessing is extremely expensive**

Approximately \$100 billion has been spent globally trying to commercialize plutonium, about \$40 billion of which has been used to reprocess commercial and fast reactor irradiated fuel.<sup>2</sup> The French, English, Russian, Indian, and Japanese commercial reprocessing facilities are heavily subsidized by their governments. A July 2000 report commissioned by the French government concluded that reprocessing costs about \$25 billion more than a "once-through" fuel cycle and will do little to reduce the amount of long-lived radionuclides in the waste.<sup>3</sup> In England, a recent leak of 20 tons of uranium and plutonium fuel from the government-owned THORP reprocessing plant has led to the plant's operator calling on the government to permanently close the facility, which has been losing money even when operational. Meanwhile, the Japanese company, Japan Nuclear Fuel Ltd., recently started up its Rokkasho reprocessing plant, which cost \$20 billion (three times more costly than initially estimated) and has taken 12 years to build. The facility has had a less than stellar beginning: less than two weeks after starting tests on the facility, 10.5 gallons of radioactive water leaked due to human error. The resulting MOX fuel in Japan will be at least 20 times more expensive than low enriched uranium fuel.<sup>4</sup> Clearly, the cost of reprocessing (and cleanup) would be fully borne by U.S. taxpayers, because experience shows the nuclear industry that it is not a profitable enterprise unless paid for by taxpayers.

### **2. Reprocessing would undermine global nonproliferation efforts**

About 250 metric tons of plutonium from commercial reprocessing—equivalent to more than 30,000 nuclear bombs—has been separated globally, leaving it vulnerable to theft.<sup>5</sup> Both the

---

<sup>1</sup> See <http://www.house.gov/science/hearings/full06/Feb15/bodman.pdf>

<sup>2</sup> Arjun Makhijani, *Plutonium End Game Managing Global Stocks of Separated Weapons-Usable Commercial and Surplus Nuclear Weapons Plutonium*, Institute for Energy and Environmental Research, January 2001, p. 27, <http://www.ieer.org/reports/pu/index.html>.

<sup>3</sup> Annie Makhijani, "French Report Doubts Merits of Reprocessing and MOX," *Science for Democratic Action* Vol.9, No.2, February 2001, [http://www.ieer.org/sdfiles/vol\\_9/9-2/charpin.html](http://www.ieer.org/sdfiles/vol_9/9-2/charpin.html).

<sup>4</sup> Citizens' Nuclear Information Center and the Institute for Energy and Environmental Research, "Japanese Government Should Halt Construction of Plutonium Extraction and Fuel Fabrication Plant, Say Two Independent Groups in Japan and the U.S.," Joint Press Release, <http://www.ieer.org/comments/rokk-pr.html>.

<sup>5</sup> Steve Fetter and Frank N. von Hippel, "Is U.S. Reprocessing Worth the Risk?" *Arms Control Today*, September 2005, p. 6-12, [http://www.armscontrol.org/act/2005\\_09/Fetter-VonHippel.asp](http://www.armscontrol.org/act/2005_09/Fetter-VonHippel.asp).

Ford and Carter administrations instituted a “no reprocessing” policy in the U.S. in order to convince other countries to forego this technology. Recommending reprocessing in the U.S. would send a signal to the rest of the world that the U.S. intends to extract plutonium that could be used in nuclear weapons, at a time when the United States is seeking to discourage other nations (such as North Korea and Iran) from acquiring such technologies.

Lack of sufficient fissile material is the primary obstacle keeping non-weapons states and terrorist organizations from creating and using nuclear weapons. Implementing reprocessing would increase the risk that terrorists could obtain plutonium. Furthermore, the “proliferation-resistant” reprocessing technologies currently being researched by DOE are not sufficient to prevent theft by terrorists. Moreover, both technologies can easily be undone to obtain pure plutonium using the old, 1940s technology (PUREX).

### **3. Reprocessing is polluting and cannot solve our country’s nuclear waste problem**

Reprocessing will make more waste streams that must be managed and does not eliminate the need for a geologic repository. Reprocessing creates high-level radioactive liquid and sludge that must be managed as high-level radioactive waste. It also results in uranium waste – the vast majority of the volume of the waste – that should also be put in a geologic repository, and not dumped in shallow landfills. DOE has been quite vague about what it would do with the uranium waste. Reprocessing also results in “short-lived” radioactive waste that must be stored for thousands of years (a very long time compared to a human lifespan).

The only private commercial reprocessing facility in the United States, West Valley in New York, resulted in radioactive waste that is still threatening the Great Lakes watershed more than 30 years later and will cost \$5.2 billion to clean up.<sup>6</sup> U.S. taxpayers are also on the hook for more than \$100 billion to clean up the reprocessing waste at the U.S. nuclear weapons sites that reprocessed to get plutonium for nuclear weapons, as well as reprocessed naval fuel.<sup>7</sup> These weapons sites now have over 100 million gallons of high level reprocessing waste sitting in leaking underground tanks that threaten important water resources, including the Savannah River and the Columbia River. Further reprocessing will only add to DOE’s existing problems with managing high level waste.

### **Scoping Meetings Must Be Held Nationwide**

Should DOE unwisely choose to pursue an EIS for the demonstration facilities before a programmatic EIS, DOE must hold scoping meetings across the country, because GNEP would affect nearly every state due to transportation of waste. To name just a few specific states, hearings should be held in various locations in South Carolina and Georgia (impacted by SRS), as well as in Utah (which could receive reprocessing waste), Nevada (which is slated to receive reprocessing waste), Illinois (hardest hit by transportation), Washington and

---

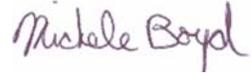
<sup>6</sup> Department of Energy, West Valley Demonstration Project Draft Waste Management Environmental Impact Statement, May 2003.

<sup>7</sup> United States General Accounting Office, Report to the Chairman, Subcommittee on Oversight and Investigations, Committee on Energy and Commerce, House of Representatives, Nuclear Waste: Challenges to Achieving Potential Savings in DOE’s High-Level Waste Cleanup Program, GAO-03-593, June 2003.

Oregon (currently impacted by reprocessing waste), and New York (currently impacted by reprocessing waste).

Thank you for taking these comments into account. Please enter them into the official record.

Sincerely,



Michele Boyd  
Legislative Director, Energy Program

Cc: Carol Borgstrom, Director, Office of NEPA Policy and Compliance