June 4, 2007

Sent by email to: GNEP-PEIS@nuclear.energy.gov

Mr. Timothy A. Frazier
GNEP PEIS Document Manager
Office of Nuclear Energy
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585-0119

Re: Scoping Comments to the Notice of Intent to Prepare a Programmatic Environmental Impact Statement for the Global Nuclear Energy Partnership

Dear Mr. Frazier:

In the best interests for genuine global security, it is essential that all of the alternatives and potential impacts of the Global Nuclear Energy Partnership (GNEP) program be fully assessed before the Bush Administration and the Department of Energy (DOE) proceed.

The Notice of Intent (NOI) states that the Energy Information Administration "projects that the world's electricity consumption will double from 2003 to 2030." Yet, the President's Advanced Energy Initiative does not include energy conservation, a necessary ingredient in the energy needs debate. Therefore, the Advanced Energy Initiative and GNEP proposals are premature. The NOI must be withdrawn until such a time as DOE can clearly articulate the GNEP proposal, which must include energy conservation. DOE must analyze the impacts of investing the needed GNEP funding into energy conservation to determine whether GNEP is in fact needed.

In the alternative, Concerned Citizens for Nuclear Safety (CCNS) and the Embudo Valley Environmental Monitoring Group (EVEMG) respectfully submit the following general and specific scoping comments regarding the proposed Global Nuclear Energy Partnership (GNEP) Programmatic Environmental Impact Statement (PEIS):

General Comments

1982 Nuclear Waste Policy Act. The draft PEIS must comply with the 1982 Nuclear Waste Policy Act. This legislation was enacted for the safe and responsible storage and disposal of spent nuclear fuel, and not reprocessing. The serious long-term security concerns that are addressed by the legislation require that the health and safety of future generations be protected for at least hundreds of millennia. We are concerned that the spirit of this legislation is being ignored.

Global Commons. The "global commons" is mentioned several times in the NOI. Yet, DOE has not provided a definition. DOE must define "global commons" in the draft PEIS and provide examples.

Further, under what authority allows DOE to analyze the public health and environmental impacts of GNEP in the "global commons?" What criteria have been established to analyze for the impacts, including the cumulative impacts? Will the National Environmental Policy Act (NEPA) criteria for a draft PEIS apply?

Specific Comments

There is a Contradiction between the *Purpose and Need for the Agency Action* and the Proposal that Follows.

The NOI states: "DOE envisions that a nuclear fuel recycling center and an advanced recycling reactor could begin operation ***before*** DOE has fully completed its research and development of the transmutation fuel recycling at an advanced fuel cycle research facility. During this interim period, DOE may use a nuclear fuel recycling center to separate light-water reactor SNF and support the fabrication of fast reactor driver fuel that would be consumed in the advanced recycling reactor. This fuel could be made of uranium and plutonium, but would likely not contain other transuranics. Once DOE completes the R&D required to fabricate fuel containing other transuranic elements, it would use a nuclear fuel recycling center to fabricate fast reactor fuels containing other transuranics, and demonstrate the consumption of transuranic elements in an advanced recycling reactor. DOE would then separate the resulting spent transmutation fuel and fabricate new transmutation fuel in a nuclear fuel recycling center." [Emphasis added.]

The NOI states that DOE may begin operation of a reprocessing center and recycling reactor *prior* to the development of weapons resistant reprocessing and transmutation technology. Furthermore, NOI states that the fast reactor fuel "could be made of uranium and plutonium, but would likely not contain other transuranics." However, as a part of the *Purpose and Need for the Agency Action*, the NOI states "DOE will only assess as reasonable alternatives those technologies that do not separate pure plutonium."

Other statements throughout the proposed action must not contradict the purpose of the proposal. This is especially true as DOE forces significant delays in developing proliferation resistant transmutation fuel such that "the PEIS will analyze the environmental impacts of not developing transmutation fuel in a timely manner."

Under NEPA, the proposal must be developed in accordance with the statement of purpose and need. This contradiction indicates that the proposal is far too premature to go forward. How can a full environmental impact statement be performed when full knowledge of the proposed processes is not available? The NOI must be withdrawn.

In the alternative, please justify and explain this discrepancy in full. Please include the answers to the following questions in the draft PEIS:

1. If reprocessing begins before research and development (R&D) are completed, how will the GNEP proposal differ from simply beginning to reprocess with the current technology?

2. What justification can DOE provide for beginning reprocessing without the technology that will provide all the benefits stated in the NOI?

3. What processes will be used at the reprocessing facility and advanced reactor prior to the completion of R&D? Will the reprocessing facility separate pure plutonium?

4. Will the fuel containing other transuranics be fabricated and consumed at the same reprocessing and fast reactor facilities as performed the "interim" operations?

5. Will new facilities be required under the GNEP proposal? If so, will modifications be required to the facilities once the new technology is developed?

6. If so, what will be the impacts and cost of these modifications?

7. State clearly the extent to which DOE can answer the above questions given that the technology in question has not yet been developed.

Overlap and Redundancies between Current R&D and Proposed R&D

In addition, the level of overlap and possible redundancies between the R&D proposed under GNEP and the R&D currently performed in other DOE programs concerns us. The NOI states that "GNEP would build upon" current R&D activities focused on: "the need to reduce and deal satisfactorily with nuclear wastes; improving economic performance; further advancing the safety of nuclear power generation; and addressing issues associated with the proliferation of fissile materials and sensitive nuclear technologies." Given the similarity between these activities and *The Purpose and Need for Agency Action* in the NOI, it may be more appropriate to say that GNEP will continue, subsume or duplicate these current R&D activities. DOE must clarify how the current R&D activities differ from the proposed R&D under the GNEP program. The relationship between current and proposed R&D and the term "build on" is unclear and potentially misleading. The draft PEIS must provide the following information in a table format for easy reference and comparison, as well as summarized in text form:

1. List the current R&D activities referenced in the NOI and where they are being conducted.

2. Detail which activities are or will be duplicated or transferred to the GNEP Program. Please provide a justification for the redundancy or transfer.

Need for Additional Alternatives

The underlying *Purpose and Need* for the GNEP proposal, as stated in the NOI, is to "encourage expansion of domestic and international nuclear energy production" while reducing the associated risks of nuclear proliferation and waste. Although we appreciate DOE's frank declaration of its underlying devotion to nuclear energy, the *Purpose and Need Statement* is inappropriately narrow.

Likewise, the proposed alternatives in the NOI are inadequate and incomplete. DOE includes one action alternative, which is its preferred GNEP proposal, and the required No Action Alternative. The *Purpose and Need* of this proposal must be broadened so that all possible alternatives can be considered for the safe storage disposal of spent nuclear fuel accumulating at power plants and DOE facilities and to resolve the nation's energy needs, including investing in energy conservation.

Alternatives for safe storage must be identified and analyzed. Furthermore, DOE must not consider any alternatives that would dispose of the waste in such a way that it is irretrievable. Given the possibility of future innovations that may provide for safer disposal or finding in the future a greater risk at any one site than had been previously foreseen, it is necessary that all disposal options be reversible. Although, many alternatives may exist, at a minimum, DOE must consider Hardened On Site Storage (HOSS) at existing nuclear power and weapons facilities.

While it is true that nuclear energy is an alternative energy source to be considered when addressing the issue of greenhouse gases in the environment, it is also true that it generates vast amounts of highly radioactive, hazardous and toxic waste that is far from clean. Life cycle radiological and non-radiological emissions and wastes, transportation, threat of accident or intentional attack, and proliferation risks are such extremely serious consequences, that it is highly irresponsible for a government agency to single out nuclear energy as the only viable solution to the problem of greenhouse gases. The draft PEIS must include sustainable and renewable energy alternatives, such as energy conservation, solar, wind, sustainable biomass, which offer a similar reduction of greenhouse gases, without the risks and radioactive waste singular to nuclear energy. It is the responsibility of government not to single out and promote a dangerous alternative, but to protect the lives of citizenry by providing an unbiased assessment of all alternatives.

The crucial role that DOE plays in overseeing the safety and health of citizens, demands that the agency act responsibly and give serious consideration to developing a Global Non-Nuclear Energy Partnership as an alternative.

Potential Environmental Issues for Analysis

We provide the following comments about the NOI list for the *Potential Environmental Issues for Analysis.* We request that the comments be addressed in the draft PEIS. We have also provided additional issues that must be considered in the draft PEIS:

1. Potential impacts to the general population and workers from radiological and nonradiological releases.

a. List all radiological contaminants that may be released from all of the proposed GNEP facilities and their human cancer and non-cancer health impacts. Include exposure levels associated with each of the proposed operating levels for a pregnant woman, fetus, infant, child, teenager, general population adult and workers.
b. Identify all non-radiological contaminants that may be released and their cancer and non-cancer health impacts. Include exposure levels associated with each of the proposed operating levels for a pregnant woman, fetus, infant, child, teenager, general population adult and worker.
c. What are the synergistic human health impacts of exposure to both the radiological and non-radiological contaminants? Include exposure levels inducing health impacts to a pregnant woman, fetus, infant, child, teenager, general population adult and worker.
d. Many of the proposed sites are currently the sites for other nuclear power and weapons operations, which have been contaminated from these operations. Such contamination must not be included as "background" radiation.

2. Impacts of emissions on air and water quality.

a. What will be the air emissions from commuter traffic traveling to and from the proposed GNEP facilities?
b. What will be the air emissions from infrastructure needs to operate the facilities?
c. What will be the air emissions from increased population moving to an area for GNEP-related jobs?
d. What type of monitoring systems will be used at the proposed GNEP facilities for air emissions and water discharges? Please include an analysis for DOE providing funding for independent citizen-based environmental monitoring of air, soil and water in the areas surrounding all potential operations, waste disposal sites and along transportation routes. The monitoring must begin before operations commence in order to establish a baseline for future impacts and analysis.
e. Please include maps with all the surface and ground water resources within a 100-mile radius of the area surrounding the proposed or existing sites. Please

label these maps clearly.

f. List all natural habitats within a 100-mile radius of the proposed GNEP sites.
g. Many of the proposed sites are currently the sites of other nuclear operations. When analyzing the impacts, DOE must identify the original level of background radiation before any operations began at the sites. The cumulative impacts to air and water must be accounted for from that point before any operations began at the facilities.
h. Please identify the water source and the specific quantity of water required in all processes associated with the GNEP proposal.
i. Please indicate the air emission and water discharge standards that will be applicable for each proposed or existing GNEP facility.

3. Potential impacts on flora and fauna of a region.

a. List all radiological contaminants that may be released from all of the proposed GNEP facilities and their cancer and non-cancer health impacts to flora and fauna. Include exposure levels associated with each of the proposed operating levels for flora and fauna in the surrounding area of the proposed or existing GNEP facilities.
b. Identify all non-radiological contaminants that may be released and their cancer and non-cancer impacts to flora and fauna. Include exposure levels associated with each of the proposed operating levels for flora and fauna in the surrounding area of the proposed or existing GNEP facilities.
c. What are the synergistic health impacts of exposure to both the radiological and non-radiological contaminants? Include exposure levels inducing health impacts to flora and fauna in the surrounding area of the proposed or existing GNEP facilities.
d. Many of the proposed sites are currently the sites for other nuclear power and weapons operations, which have been contaminated from these operations. Such contamination must not be included as "background" radiation. Background radiation must reflect the levels prior to any nuclear operations at the proposed or existing sites.

4. Potential impacts from transportation—in the United States and across the "global commons."

a. The draft PEIS must define "global commons" and provide examples.
b. What types of transportation will be used to and from the proposed and existing GNEP facilities? Air? Water? Ground? Analyze accident scenarios for all possibilities and for all facets of the GNEP proposal.
c. A thorough Environmental Justice analysis must be performed for all of the impacts along the proposed transportation routes, including in the "global commons."
d. Why are the impacts of transportation within other nations excluded? Will those nations themselves transport the waste to the border for it to be retrieved by the suppliers?

e. What will be done if a land locked nation would like to participate in the proposed GNEP program?
f. What will be the impacts of an accident or attack during transportation? What emergency response services are going to be available should this happen? Please provide an analysis of the existing emergency response capabilities of the communities along the transportation routes.
g. Environmental monitoring must be performed along these transportation routes before any transportation activities take place in order to establish an environmental baseline.

5. **Potential impacts from treatment, storage, and disposal of radioactive materials and waste.** The draft PEIS must consider all risks associated with long-term storage of radioactive, hazardous and toxic materials at proposed or existing GNEP facilities. We are concerned that GNEP as proposed would not resolve the problem of risks associated with on-site storage of spent nuclear materials, but would simply transfer the risk to the storage location, thus adding transportation risks to the storage risks.
   a. The draft PEIS must identify all waste streams from the entire nuclear life cycle and analyze all proposed disposal options.
   b. The amounts and types of waste, if any, that existing facilities, such as the Waste Isolation Pilot Plant (WIPP) or any other disposal sites, must be fully analyzed.
   c. It is essential that the draft PEIS estimate the amount of nuclear material that is likely to be stored at the reprocessing facility under the GNEP program, taking into account:
      (i) A realistic time frame for constructing reprocessing facilities,
      (ii) The number of reactors necessary to utilize the reprocessed nuclear materials,
      (iii) The length of time required to construct that number of reactors, taking into account past experience with such efforts, and
      (iv) DOE's stated intention, regardless of the pace at which fast reactors are constructed, to store strontium and cesium above ground for hundreds of years to allow it to decay.
   d. Does DOE intend to begin GNEP operations before a geologic repository has been identified and constructed?
   e. Disposal must not include "cap and cover" of unlined waste dumps.
   f. The NOI predicts a continued need for permanent geologic repositories. The draft PEIS must address this statement, taking into account:
      (i) Past attempts made at construction and operation of geologic repositories and the associated difficulties,
      (ii) Role of existing repositories, such as WIPP,
      (iii) Length of time required for construction,
      (iv) Cost of construction and operation,
      (v) Long term environmental monitoring

g. Hardened On Site Storage (HOSS) must be evaluated as one potential alternative.

6. **Potential impacts from postulated accidents, as well as potential impacts from acts of terrorism or sabotage.**
   a. An environmental baseline must also be provided for emergency preparedness and emergency response.
   b. Please provide written protocols and procedures for emergency responders within a 100-mile radius of the proposed or existing GNEP facilities.
   c. Please provide written protocols and procedures for emergency responders along the transportation routes.
   d. Design Basis Threat Analysis: Nuclear technology is a target for terrorism. GNEP could very well exacerbate existing terrorism locally, regionally and internationally. The presence of the United States in other countries has had a long history of being a prime terrorist target. How would GNEP, controlled by the United States, be an exception to this well-known fact? Any and all possible terrorism attacks must be considered.
   e. Please include an analysis of possible terrorist attacks on the proposed or existing GNEP facilities and on all transportation to and from those facilities.
   f. Please include an analysis of how terrorism could be reinforced by GNEP. Moreover, how does the United States plan to fight the war on terror and simultaneously create new terrorist targets? Please include an analysis of how new terrorists and terrorism like activities will be created by GNEP.
   g. All accident scenarios must be analyzed in full, including those in the global commons.
   h. Please consider the accident at Myak, where the Russian reprocessing facility exploded as an example of the impacts from one of the proposed or existing GNEP facilities.

7. **Potential disproportionately high and adverse effects on low-income and minority populations (environmental justice).** DOE must establish meaningful dialogue with the impacted communities surrounding the sites and along transportation routes regarding their current, traditional and foreseeable future use of the land, air, water and other resources in that area, including on the proposed or existing site itself.
   a. DOE must consult with low-income and minority populations for information regarding medicinal use of local plants, spiritual use of local plants and geographic areas, along with hunting, gathering activities.
   b. The corporations, which proposed to have the site located in that area, are not the community members with whom DOE must establish this meaningfully dialogue.
   c. It will be important to conduct two analyses for Los Alamos, New Mexico. One would exclude Los Alamos from the analysis of the character and income of the population living around the LANL. Los Alamos County was recently

named the richest county in the nation, but is surrounded by some of the poorest. In addition, Los Alamos has a disproportionately high percentage of Caucasian/Anglo residents. The other analysis would include Los Alamos County.

8. Potential Native American concerns (cultural and archaeological).

a. Discover and speak with all tribes and communities who use the land and resources surrounding the proposed sites for sacred purposes about the GNEP proposal. These peoples may live quite a distance from the site itself.
b. Every phase of the nuclear industry is on or near reservations: from mining or processing to nuclear waste storage and disposal. Please analyze the impacts of continuing to commit genocide on native culture on this context. While silent, this genocide is not invisible.
c. Analyze the impacts from performing GNEP R&D, which is in total disruption of native cultural beliefs on sacred and traditional land. The native cultural belief of honoring all living things is in direct opposition to nuclear operations, which are bent on destruction of life to its minutest particles, going so far as to split the atom.
d. Impacts to native cultures who will no longer have access to sacred sites must be analyzed.
e. The GNEP NOI states that eventual disposal is intended to happen at Yucca Mountain. However, Yucca Mountain is located on Western Shoshone land. DOE must include the Western Shoshone perspective on Yucca Mountain and offer alternatives that would be considered when we begin to respect their rights, wishes and beliefs.

9. Potential short-term and long-term land use impacts.

a. What will be the short-term impacts to the land from the construction and operation of proposed GNEP facilities?
b. What will be the short-term impacts to the land from the operation of existing GNEP facilities, including contamination?
c. What will the long-term land use impacts from the construction and operation of the proposed and existing GNEP facilities, including contamination?
d. What are the cleanup costs for the contamination of the land?
e. What other uses could there be for the land in the realm of energy conservation, solar, wind, biomass activities? What would be the short-term and long-term land use impacts, including contamination?

10. Compliance with applicable Federal and state regulations.

a. Please state the costs for complying with state and federal regulations, including for air emissions and discharges to water, storm water compliance, pollution prevention measures, waste disposal. Please compare to facilities used for solar, wind, biomass and energy conservation.

11. Long-term health and environmental impacts.

a. Please analyze the amount and costs of waste disposal for the proposed and existing GNEP facilities.
b. How long will the radioactive, hazardous and toxic waste remain hazardous to human health?
c. What are the non-reversible impacts of these operations?
d. Please identify the times of peak activity for all waste streams.
e. Because we cannot predict what the future will hold, all clean up must be done to the standard where a pregnant farmer and her children can live on the land, grow food and drink the water now and in the distant future.

12. Long-term site suitability.

a. What is the proposed lifetime for these facilities?
b. Increased occurrences of natural disasters and extreme weather conditions are predicted due to global warming. Should this occur, what will be the impact to each of the sites given their location? The draft PEIS must analyze for the worst case scenarios caused by global warming. We suggest using worst case scenarios used by Lloyds of London.

13. Consumption of natural resources and energy.

a. Water is a scarce and precious resource in New Mexico. Please provide anticipated amounts of water that will be used by the proposed and existing GNEP facilities.
b. Please include a detailed analysis of the energy needs for the proposed GNEP activities, including reprocessing and transmutation.
c. What is the net energy of the nuclear life cycle as proposed by GNEP? How much energy is used throughout the entire nuclear life cycle compared to what is generated? Please include the costs of extracting uranium from the ground.
d. Please include the costs for cleanup, including the consumption of natural resources and energy, from past reprocessing activities at Hanford, Idaho, Savannah River and West Valley.

14. Socioeconomic impacts to potentially affected communities.

a. How will the commercially run facilities work in terms of hiring?
b. Will people be brought in from outside of the area to work at these facilities? What job titles will they fill?
c. Please state if Los Alamos County is expected to continue to receive a disproportionably large percentage of the economic benefits from Los Alamos National Laboratory (LANL) and remain the richest county in the U.S.
d. Impacts to tourism must be analyzed.
e. Impacts to property value must be analyzed.

15. Cumulative impacts

a. All communities in the 100-mile radius surrounding the sites must be contacted

for this analysis.

b. Please address the impacts of the 50-mile radius over lapping DOE facilities, including Sandia National Laboratories, current LANL operations, draft SWEIS LANL expanded operations and Complex 2030 activities.
c. What will be the synergistic impacts of siting all of these facilities in New Mexico? For example, Lea/Eddy County, Triassic Park and LANL - either two or all of the sites?
d. Please be specific as to cumulative impacts to Water, Air, Soil and Sediments impacts, Environmental Justice, Transportation, Economic Impacts including tourism, Emergency Preparedness, and Waste for the three New Mexico sites.
e. Reasonably Foreseeable Future Operations. What would be the impacts of full implementation of the GNEP proposal in order to satisfy the nation's future energy needs? Include all impacts from the full life cycle of nuclear energy and weapons, including storage. Compare this to the impacts from generating this energy from sustainable and renewable sources and instituting a nationwide energy conservation program with resources equivalent to the proposed GNEP.

16. Pollution prevention and waste management practices.

a. Please include analysis of the impacts of a site being the next storage site for 100, 1,000 and 10,000 years or more.
b. Analyze for Harden On-Site Storage (HOSS).
c. Include storm water runoff prevention plans where appropriate.
d. What air filters will be placed on the facilities? Please include comparison of alternatives.
e. Make comparison of waste disposal needs if renewable sources of energy, instead of nuclear, were being proposed.

17. Potential impacts from decontamination and decommissioning (D&D) of facilities.

a. What is the proposed time line for D&D of proposed and existing GNEP facilities?
b. What will be the impact to workers and the general public from emissions during D&D?
c. What air monitoring will be performed during these activities?
d. What quantities of waste will be generated? What types of waste will be generated? What are the plans for waste disposal?
e. All sites must be cleaned up so that a pregnant subsistence farmer and her children could grow food and drink the water now and for future generations.
f. Clean up must not include "cap and cover" of unlined waste dumps.

Other issues:

1. Independent Review of Siting Studies. The 11 commercial and public consortia "volunteered" potential GNEP sites were funded by DOE to prepare detailed siting studies to demonstrate their sites feasibility. These reports will be used in preparation of the EIS. We believe this situation allows for conflicts of interest. We request a public independent review of the GNEP siting studies, perhaps by the Government Accountability Office.

2. Impacts to Air, Water, Soil and Sediments. Impacts of emissions on air and water quality: This section should include impacts to soil and sediments as well.

Please include a section on the existing contamination to air, water, soil and sediments from previous U.S. attempts at reprocessing at the Hanford, Idaho and Savannah River DOE facilities and the commercial facility at West Valley, New York. Include costs to date and expected costs for complete cleanup of the air, water, soil and sediments.

3. Past Reprocessing in the United States. Please explain how the proposed GNEP activities, including R&D and reprocessing, are different from those used at the DOE facilities at Hanford, Idaho and Savannah River and the commercial facility at West Valley, New York.

4. Privately Owned Nuclear Fuel Recycling Center. Please provide detailed information about how a privately owned nuclear fuel recycling center, or other privately owned GNEP facilities, would operate. How would these facilities be financed? Would their operations be covered under the Price Anderson Liability Act?

Comments about the International Implications of the GNEP Proposal

The GNEP proposal only further exaggerates the disparity and increases the tension between nuclear and non-nuclear States by requiring non-nuclear States to be dependent on nuclear States for their source of energy. The majority of nations that signed on to the GNEP agreement possess nuclear weapons. What assurances will supplier nations give that materials separated during reprocessing will not be used to make new or "replacement" nuclear weapons? If the international agreements and procedures are not firmly established between all interested nations, people all over the world could be exposed to nuclear, hazardous and toxic materials and contaminants without their consent.

GNEP is global in scope, therefore, the U.S. government must first participate in an extended dialogue led and moderated by an international body, such as the International Atomic Energy Agency (IAEA). These dialogues should be motivated by a serious desire to assess and debate the viability of nuclear energy expansion.

The recent ministerial meeting, which DOE hosted, did not fulfill its purpose. As none of the nations that will potentially receive fuel services were invited to participate in these meetings, the concerns that these countries have were not addressed. This meeting did, however, result in the People's Republic of China, France, Japan, Russia and the United States issuing a Joint Statement in support of GNEP. In fact, by bringing together a select group of the nuclear fuel cycle states to discuss GNEP and its goals of increasing the use of nuclear power worldwide, DOE has demonstrated that the GNEP proposal is limited to the needs of the nuclear states.

If, as stated, the underlying purpose and need for the GNEP proposal is to "encourage expansion of domestic and international nuclear energy production," then the draft PEIS must justify its decision to encourage expansion by including a full analyses of the international impacts. Our scoping comments are directed to this end.

1. Will NEPA apply? Under what criteria will impacts to the international, or "global commons," be analyzed in the draft PEIS? Will the National Environmental Policy Act (NEPA) apply?

2. Ministerial meeting. The draft PEIS must address:
   a. The version of the proposed GNEP discussed,
   b. How a joint statement in favor of GNEP can be issued for a program that does not have a Record of Decision, and
   c. The possibility that the Statement of Support may prejudice the entire GNEP PEIS process.

3. Cost. The draft PEIS must answer the following questions:
   a. How will the financing of an international GNEP program be determined and negotiated?
   b. What will supply nations receive in return for fuel services? Please state this clearly.
   c. What financial commitments will the U.S. be making under the GNEP proposal?
   d. Who will pay for the future cleanup for air, water, soils and sediments?

4. Fuel services: The draft PEIS must answer the following questions:
   a. How reliable will the reliable fuel services program be?
   b. How will the supplying nations assure that the spent nuclear fuel will be stocked and removed on schedule?
   c. Please include analysis of what the impact to communities will be if this waste is not removed or delivered on time.

5. Storage. The draft PEIS must answer the following questions:

a. What environmental standards will regulate the storage of spent nuclear fuel on international lands?

b. What environmental and public health monitoring will be performed?

6. Emergency Preparedness and Response. The draft PEIS must answer the following questions:

a. How will the local population be protected during an accident?

b. What training, equipment and written policies and procedures will be provided to the local population?

c. What role will the Department of Homeland Security play in providing training, equipment, written policies and procedures and emergency response?

7. Siting process. The draft PEIS must answer the following questions:

a. What will the siting process be for international facilities?

b. What will the siting process for the power plants in host countries?

c. Will the environmental impacts of a particular site be considered?

d. Will the public of the impacted communities be involved?

e. Where would the reprocessing take place?

f. Where would the fuel be disposed?

g. Will a supplemental or additional NEPA document be prepared should the international GNEP proposal move forward?

8. Responsibilities of supplier nations. The following issues must be addressed in the draft PEIS:

a. List in full the services that DOE envisions providing under the reliable fuel service program and the reactor program.

b. Will these services include environmental monitoring, cleanup, emergency preparedness training, security, emergency response, health monitoring, construction of storage facilities and related matters?

9. Define "proliferation-resistant nuclear power reactors suitable for use in developing economies."

The Proliferation Risks of Both Domestic and International Alternatives Must Be Fully Evaluated.

1. Proliferation resistant technology. The NOI proposes to separate all transuranic elements as a group during reprocessing. Could these be used to create nuclear weapons? Recently, LANL created a neptunium bomb.

2. Storage Sites. Security at storage sites nationally and internationally. How can it be guaranteed that all nuclear materials in any country would not fall under the control of the host country for the timeframe that GNEP would exist?

3. Do as we say, not as we do is not a viable foreign policy. What is the proliferation risk associated with beginning reprocessing before the proliferation resistant technology has been developed? See above.

4. Supplier nation use of materials. What ways will supplying nations give assurance that they will not use separated fissile materials to make new or "replacement" weapons.

Cost analysis

1. Life-cycle cost analysis: The draft PEIS must address the following:

a. What will be the entire life cycle costs of the GNEP proposal?

b. Please include the cost of the siting process, construction, all operating costs, all radiological and non radiological waste disposal facilities, interim storage, environmental monitoring using the most sensitive sampling and analysis methods, transportation, health costs for workers and members of the general public, security, accident cleanup and victim health care and compensation and relocation.

2. Cost Comparison. In addition, the long-term costs of investing in nuclear energy must be analyzed. Include a cost comparison of the life cycle cost for generating enough nuclear power to replace carbon emitting plants vs. the cost of the generating the same capacity through renewable sources, including solar and wind and sustainable biomass.

Please note the recent French government report that states that reprocessing and fast reactor is more expensive than a once through fuel cycle.

Proposed Facilities

1. Time Line. The draft PEIS must include a timeline for the GNEP proposal for the proposed and existing facilities. This timeline must show the commencement and conclusion of activities at all three facilities relative to one another, including construction, material transfer, waste removal, operations and D&D. In particular, it must indicate where along this continuum the R&D is to be completed, when international elements are intended to begin, and the anticipated conclusion of the GNEP project as a whole (if this exists).

2. Design Build. Will any of the facilities be constructed with design build? We are strongly opposed to design-build due to its history of cost over runs and uncertainty for

one-of-a-kind facilities. The public must have the opportunity to comment on the facility design.

Reprocessing Facility

1. **Historical Reprocessing.** The PEIS must analyze:
   a. Previous reprocessing facilities in the U.S., including their costs, environmental impacts and status of cleanup,
   b. Local, national and international accidents or near accidents that have or may have occurred related to their operation**.**

2. **PUREX**: The PEIS must evaluate past alternative reprocessing technology, such as PUREX, and its costs, environmental impacts, history with proliferation and waste since that is the technology that the U.S. has experience and may be used in GNEP.

We understand that the PUREX technology makes it more difficult to keep track of the plutonium. Please explain how DOE will keep track of the plutonium if the PUREX technology is used. Please also provide an analysis of how the PUREX technology has been used historically in the U.S. and internationally.

3. **Closed Fuel Cycle.** The PEIS must analyze:
   a. Risks associated with repeated reprocessing of SNF,
   b. The NOI states that separated uranium would be enriched under the GNEP proposal.
   c. If this is the case, the full impacts of the enrichment, including cost, environmental, health, proposed locations and enrichment methods, waste steams and risks, must be evaluated.

Fast Reactor

1. **Historical Fast Reactors.** The PEIS must analyze:
   a. Previous fast reactors in the U.S., including their costs and environmental impacts,
   b. United States experience with the operation of a sodium fueled fast reactor,
   c. Local, national and international accidents or near accidents that have or may have occurred related to their operation.

2. **Current Fast Reactors.** The PEIS must analyze:
   a. The prevalence of fast reactor use both nationally and internationally,
   b. Waste disposal practices, including if Fast Reactor waste is reprocessed.

3. **Energy Generation.** The PEIS must analyze:
   a. What will be done with the energy generated during the use of the GNEP Fast Reactor?
   b. Who will receive the profits from any sale of the energy?

Advanced Fuel Cycle Research Facility

1. **Status of Proposed Technology.** The draft PEIS must answer the following questions:
   a. What is the current status of the technology to be developed at this facility?
   b. What difficulties will be associated with transferring technology from the laboratory to production scale operations?
   c. The NOI also states that it will analyze the environmental impacts of "not developing transmutation fuel in a timely manner." The draft PEIS must fully explain what is meant by this statement, including:
      (i.) Provide a timeline indicating foreseen progress,
      (ii.) At what point DOE expects to have the research completed, and
      (iii) At what point will DOE abandon the research?

2. **SNF needed for activities.** At the GNEP scoping hearing, a DOE official stated that 100 metric tons of spent nuclear fuel might be transported to the research facility. The DOE must fully analyze the materials that will be used for R&D at the research facility. This analysis must include:
   a. A full list of all materials that will be used during R&D and the quantity,
   b. Impacts from transportation,
   c. Proposed type and site of waste storage,
   d. The impacts from construction (if this storage facility must be constructed),
   e. Impacts of D&D,
   f. The environmental protections that will be put in place to protect the workers and public,
   g. A description of the environmental monitoring that will be performed to ensure the releases do not exceed regulatory limits.

3. **Throughput.** The draft PEIS should discuss the requirements for success of a small pilot program to test and prove the proposed technology. No industrial sized throughput should be allowed until the small pilot program has been proven.

4. **Waste Streams from R&D.** DOE must fully analyze the waste that will be generated during R&D. This analysis must include:
   a. A frank discussion of the extent to which DOE can predict the waste streams given that they will be performing R&D,

b. A list of all waste streams, including the quantities and health and environmental impacts,
c. A full analysis of waste storage prior to disposal,
d. Proposed sites for eventual disposal,
e. Impacts of transportation to disposal facilities,
f. Impacts from waste storage and disposal

Los Alamos National Laboratory (LANL) is not an appropriate site for the Advanced Fuel Cycle Research Facility

1. Lack of Nuclear Safety and Security at LANL. Please refer to the House Energy and Commerce Oversight and Investigations hearings for safety and security issues at LANL. There have been many hearings about these issues, including the latest on April 24, 2007.

2. Environmental Concerns at LANL. An environmental emergency is currently emerging at LANL. We enter the following documents as an addendum to our comments, all of which are available on the CCNS website at www.nuclearactive.org:

a. CCNS and EVEMG comments regarding the 2006 Draft LANL Site-Wide Environmental Impact Statement (SWEIS),
b. March 20, 2007 letter from CCNS to LANL Environmental Programs Associate Director, and its appendixes, concerning radionuclides in drinking water wells in Los Alamos County and the City of Santa Fe, and
c. 60-day Notice of Intent to Sue DOE for Clean Water Act violations at LANL.

3. 2006 Draft LANL SWEIS. The PEIS must include a thorough discussion of the impact and interaction of the GNEP proposal on the draft LANL SWEIS NEPA process, including:

a. Specific citations of where these projects are discussed in the draft SWEIS itself or its reference documents,
b. The NOI states that "GNEP includes project specific proposals to construct and operate three facilities," including an Advanced Fuel Cycle Research Facility proposed for LANL. Is this facility included in the analysis of the Draft LANL SWEIS? If not, how will the impacts be analyzed?

3. Unaccounted for Plutonium at LANL. LANL has not adequately addressed the issues raised by the Institute for Energy and Environmental Research (IEER) regarding the discrepancies in the plutonium accounts at LANL. For more information, please see www.ieer.org. The PEIS must address this issue more fully than in the draft LANL SWEIS.

4. Facilities at LANL: LANL states that existing facilities, such as the Los Alamos Neutron Science Center (LANSCE), the Plutonium Materials and Science Laboratory,

and the Chemistry and Metallurgy Research facility (CMR) will be used to complete the R&D activities if the AFCR is sited there. January 2007 publication of "1663 Los Alamos Science and Technology Magazine," which may be found at http://www.lanl.gov/science/1663/global.php)

CCNS and EVEMG are very concerned about GNEP activities being conducted at these three facilities. The PEIS must state explicitly all facilities at or currently proposed for LANL that will be used in the event that the AFCR is sited there and what activities will be performed.

LANL stated that the **Materials Test Station proposed for the LANSCE facility** would be utilized. The PEIS must address the following issues with the LANSCE facility:

a. When LANSCE is operating, over 90% of the off-site radiation dose is emitted from the facility. Any additional operation of this facility will significantly contribute to the impact of LANL operations. What are proposed air emissions from such activities?
b. The inner ring of air monitoring stations surrounding the LANSCE facility has been shut down. The dispersion rule states that contaminants dissipate at a rate of the inverse square of the radius, showing how crucial these monitoring stations are for determining the impact to air and water that will be caused by additional emissions from the facilities.

Furthermore, there are problems with the **Plutonium Materials and Science Laboratory,** including the 50% increase in seismic activity. Please see the April 27, 2007 report of the Defense Nuclear Facilities Safety Board at LANL for more information.

LANL stated that the **Hot Cells in the CMR facility** would be utilized. The PEIS must address the following issues with the CMR facility:

a. The draft LANL SWEIS states that the CMR is slated for demolition after the construction of the Chemistry and Metallurgy Research Replacement Building. Will the GNEP proposal include continued operation of this facility?
b. The CMR is not build to seismic standards and therefore cannot be used for any continued storage or operations.

The draft PEIS must be easily accessible to the public

1. Definitions of scientific terms. In order for the document to be *understandable and easily accessible*, scientific terms must be defined the first time they are used in each of the chapters; this can be done either in the text or in a text box on the side. Likewise, the health impacts and half-life of a radioactive or hazardous material must be listed the first time it is mentioned in a chapter. These terms and definitions must also be included in a cumulative glossary at the end of the document.

2. Cost analysis. DOE must include a cost analysis or estimate for proposed actions within the document. Monetary amounts will summarize the proposed project in a *concise, understandable* and *easily accessible* manner for the general public.

3. State unknowns. In order for the draft PEIS to be *understandable and easily accessible* it must be as unambiguous as possible. When something is not known, DOE must state so clearly. For example, state clearly what technologies require additional R&D. Use of the conditional passive tense (would) is misleading as it implies that the benefits of undeveloped technologies have been achieved.

4. Appropriate use of terminology. In order for the draft PEIS to be *understandable* it is essential the public be provided with the appropriate terminology for what is being proposed. DOE must not use language that softens the connotation of proposed activities. For example, in the NOI 'Recycling' is defined as the "separation of used nuclear fuel" into its components. Recycling is a broad term with many connotations, none of which being the generation of acidic highly radioactive liquid waste. The separation of spent nuclear fuel has a name, it is reprocessing. In order for the document to be *concise,* DOE must not use redundant yet comforting words, for example the word "reliable" in "reliable fuel service."

Reference Documents

1. In order for the public to make meaningful comment, DOE must make all reference documents available to the public on the website as soon as possible. They must be available when the comment period begins.

2. Hard copies of the reference documents should be available in the DOE Reading Rooms.

Thank you for your careful review of our comments and answering our questions in the draft PEIS. Please contact us should you have any questions or require additional information.

Sincerely,

Joni Arends, Executive Director – jarends@nuclearactive.org
Kalliroi Matsakis, Media Network Director – kmatsakis@nuclearactive.org
Sadaf Cameron, Public Education and Outreach Director – scameron@nuclearactive.org
Concerned Citizens for Nuclear Safety
107 Cienega
Santa Fe, NM 87501
505.986-1973
Fax: 505.986-0997

Sheri Kotowski – serit@cybermesa.com
Embudo Valley Environmental Monitoring Group
P. O. Box 291
Dixon, NM 87527
505.579.4076