



**Public Hearing Evaluation Form**

Please place a check mark in the box next to the public hearing attended:

- August 22, 2000  
American Museum of Science and Energy  
300 South Tulane Avenue  
Oak Ridge, Tennessee 37830
- August 25, 2000  
Westcoast Idaho Falls Hotel  
475 River Parkway  
Idaho Falls, Idaho 83402
- August 28, 2000  
Hood River Inn  
1108 E. Marina Way  
Hood River, Oregon 97031
- August 29, 2000  
Oregon Museum of Science and Industry  
1945 SE Water Avenue  
Portland, Oregon 97214
- August 30, 2000  
Washington State Convention and Trade Center  
800 Convention Place  
Seattle, Washington 98101
- August 31, 2000  
Best Western Tower Inn and Conference Center  
1515 George Washington Way  
Richland, Washington 99352
- September 6, 2000  
Crystal Gateway Marriott  
1700 Jefferson Davis Highway  
Arlington, Virginia 22202

Please circle the appropriate number:

|   | Very Good |   | Poor |   |   |
|---|-----------|---|------|---|---|
|   | 5         | 4 | 3    | 2 | 1 |
| Your Level of Knowledge about the PEIS before the Hearing | 5         | 4 | 3    | 2 | 1 |
| Your Level of Knowledge about the PEIS after the Hearing  | 5         | 4 | 3    | 2 | 1 |
| Time and Date of Hearing                                  | 5         | 4 | 3    | 2 | 1 |
| Location of Hearing                                       | 5         | 4 | 3    | 2 | 1 |
| Registration Process                                      | 5         | 4 | 3    | 2 | 1 |
| Clarity of Displays and Handouts                          | 5         | 4 | 3    | 2 | 1 |
| Clarity of Presentations                                  | 5         | 4 | 3    | 2 | 1 |
| Relevancy of Issues and Concerns Addressed                | 5         | 4 | 3    | 2 | 1 |
| Opportunities for Discussion                              | 5         | 4 | 3    | 2 | 1 |
| DOE Officials' Willingness to Listen                      | 5         | 4 | 3    | 2 | 1 |
| Knowledge/Responses from Staff Attending                  | 5         | 4 | 3    | 2 | 1 |

How could the public hearing format and materials be improved? *There seemed to be little or no questioning that the priorities & demands of DOE nuclear project are inappropriate or inconsistent with local & national public opinion.*

Was the public hearing helpful to you? *It was frustrating. I don't believe health & human welfare, the environment & the use of non-polluting safe energy options are receiving adequate consideration.*

*The PEIS is incomplete & inadequate.*

Please continue on the other side if you run out of space. Please return your completed evaluation form to the registration desk or mail or fax to the address below.

**OVER**

THANK YOU - YOUR FEEDBACK IS IMPORTANT TO US

For more information contact: Colette E. Brown, NE-60  
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874  
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592  
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/27/00

234-1

234-1: DOE notes the commentor's views. However, the furtherance of isotope production and nuclear research are consistent with good stewardship of the environment and human welfare. The NI PEIS is a complete evaluation of the environmental impacts of a range of reasonable alternatives for this proposed action. In addition to restarting the FFTF, the NI PEIS also evaluates alternatives that would either employ the use of existing facilities or rely on the construction of new facilities. Section 1.2 of Volume 1 was revised to clarify the purpose and need for the proposed action.

**Commentor No. 234: Anonymous (Cont'd)**

Although the missions of this project may be justifiable they are not without criticism, they are not justified just because they are justifiable. Nuclear reactors are just not consistent with human & environmental well-being, particularly not in the long-term. Our priorities should be to address existing problems, not to move forward on new ventures that just are not warranted or wanted. Existing reactors in other locations should be used & maximized if that makes sense. I don't understand why any needed materials cannot be gotten from Russia or any other location that provides them without starting new initiatives. How can you expect support when the track record of the DOE & safety & clean-up has been abysmal. The mission here should be on clean-up. It should certainly not be about any commercial objectives.

234-1  
(Cont'd)

**Response to Commentor No. 234**

The United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Consistent with the mandates under the Atomic Energy Act, DOE seeks to fulfill its responsibility to ensure that there is a reliable supply of isotopes in the U.S. to meet future demand. DOE does not subsidize commercial producers. DOE encourages the commercial sector to privatize the production of medical isotopes in certain instances, and does this by turning over production of certain isotopes to commercial entities once DOE has established that commercial production is economically viable. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed action are relatively low and are discussed in detail in Chapter 4 and Appendixes H, I, and J in the Final NI PEIS. The proposed action would not have an impact on the cleanup missions at the candidate sites.

Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Commentor No. 235: Anonymous

Response to Commentor No. 235

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



**Public Hearing Evaluation Form**

Please place a check mark in the box next to the public hearing attended:

- |  |  |
|--|--|
| <input type="checkbox"/> August 22, 2000<br>American Museum of Science and Energy<br>300 South Tulane Avenue<br>Oak Ridge, Tennessee 37830     | <input type="checkbox"/> August 30, 2000<br>Washington State Convention and Trade Center<br>800 Convention Place<br>Seattle, Washington 98101        |
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| <input type="checkbox"/> August 28, 2000<br>Hood River Inn<br>1108 E. Marina Way<br>Hood River, Oregon 97031                                   | <input type="checkbox"/> September 6, 2000<br>Crystal Gateway Marriott<br>1700 Jefferson Davis Highway<br>Arlington, Virginia 22202                  |
| <input checked="" type="checkbox"/> August 29, 2000<br>Oregon Museum of Science and Industry<br>1945 SE Water Avenue<br>Portland, Oregon 97214 |  |

Please circle the appropriate number:

|   | Very Good | 4   | 3   | 2   | Poor |
|---|-----------|-----|-----|-----|------|
| Your Level of Knowledge about the PEIS before the Hearing | 5         | 4   | 3   | (2) | 1    |
| Your Level of Knowledge about the PEIS after the Hearing  | 5         | (4) | 3   | 2   | 1    |
| Time and Date of Hearing                                  | 5         | (4) | 3   | 2   | 1    |
| Location of Hearing                                       | 5         | (4) | 3   | 2   | 1    |
| Registration Process                                      | 5         | (4) | 3   | 2   | 1    |
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| Clarity of Presentations                                  | 5         | 4   | (3) | 2   | 1    |
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| Opportunities for Discussion                              | 5         | (4) | 3   | 2   | 1    |
| DOE Officials' Willingness to Listen                      | 5         | (4) | 3   | 2   | 1    |
| Knowledge/Responses from Staff Attending                  | 5         | (4) | 3   | 2   | 1    |

How could the public hearing format and materials be improved? *Stop nuclear reactors and save everyone all the time + energy*

Was the public hearing helpful to you? *yes*

Please continue on the other side if you run out of space. Please return your completed evaluation form to the registration desk or mail or fax to the address below.

THANK YOU - YOUR FEEDBACK IS IMPORTANT TO US

For more information contact: Colette E. Brown, NE-50  
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874  
 toll-free telephone: 1-877-362-4593 • toll-free fax: 1-877-362-4592  
 E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/27/00

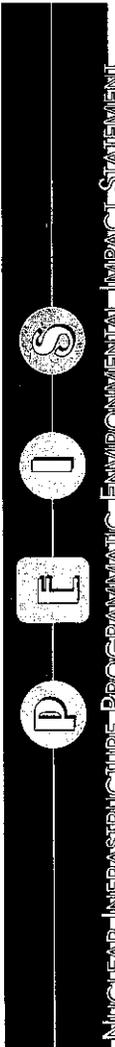
235-1

235-1: The commentor's opposition to nuclear reactors is noted. This PEIS evaluates a number of alternatives to produce radioisotopes, including plutonium-238. Some of the alternatives use an accelerator and not a nuclear reactor.

Commentor No. 236: Anonymous

Response to Commentor No. 236

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



**Public Hearing Evaluation Form**

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| Time and Date of Hearing                                  | (5)       | 4   | 3   | 2    |
| Location of Hearing                                       | 5         | 4   | 3   | (2)  |
| Registration Process                                      | 5         | 4   | (3) | 2    |
| Clarity of Displays and Handouts                          | 5         | 4   | 3   | 2    |
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| DOE Officials' Willingness to Listen                      | 5         | 4   | 3   | 2    |
| Knowledge/Responses from Staff Attending                  | 5         | 4   | 3   | 2    |

How could the public hearing format and materials be improved? \_\_\_\_\_

Was the public hearing helpful to you? Only to let me tell you to quit this dangerous FFTR project.

Please continue on the other side if you run out of space. Please return your completed evaluation form to the registration desk or mail or fax to the address below.

THANK YOU – YOUR FEEDBACK IS IMPORTANT TO US

For more information contact: Collette E. Brown, NE-50  
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toll-free telephone: 1-877-562-4592 • toll-free fax: 1-877-562-4592  
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/27/00

236-1

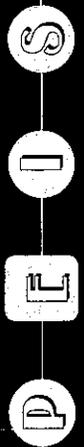
236-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTR. DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and holding public hearings is an essential and required part of the NEPA process. DOE takes this participation seriously. In preparing the Final NI PEIS, DOE has carefully considered and responded to all comments received from the public during the comment period, regardless of how or where they were received. DOE's responses are contained in the NI PEIS Comment Response Document.

Commentor No. 237: Gay Arpan

Response to Commentor No. 237

Draft PEIS Comment Form

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



We need FFTF, please restart it. This facility is already built and good for central storage of service. Ltr uses some of our basic resources instead of importing everything we need.

237-1

237-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
returning this comment form to the registration desk at the meeting or to the address below
calling toll-free and leaving your comments: 1-877-562-4593
faxing your comments toll-free to: 1-877-562-4592
commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Gay Arpan

Organization:

Home Organization Address (circle one): PD Box 38

City: Alzada State: MT Zip Code: 59311

Telephone (optional): 406-828-4517

E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

**Commentor No. 238: Kenneth Norris  
Fluor Hanford, Inc.**

08/31/00 THU 15:44 FAX 509 372 3150 A LEGAL SERVICES 001

**Draft PEIS Comment Form**

The Fast Flux Test Facility represents over \$1 billion in taxpayer investment that has operated efficiently and according to design. Changing the mission from one of applied research to radioisotope production for medical use is a prudent use of this capital resource. Critics are simply "non-nuclear" without regard to the chest X-rays and microwave ovens that all rely on nuclear science. Do the right thing: re-commission FFTF.

238-1

238-1: DOE notes the commentor's opinion.

238-2: DOE notes the commentor's support for radioisotope production for medical use.

238-3: DOE notes the commentor's support for Alternative 1, Restart FFTF.

238-2

238-3

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Kenneth Norris  
 Organization: Fluor Hanford, Inc.  
 Home/Organization Address (circle one): P.O. Box 1000  
87-15  
 City: Richland State: WA Zip Code: 99352  
 Telephone (optional): 509/776-4400  
 E-mail (optional): Kenneth.Norris@flg.com

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Celia E. Brown, NE-50  
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874  
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592  
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

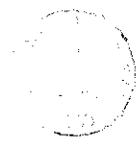


**Response to Commentor No. 238**

**Commentor No. 239: Valorie Blaser**

**Response to Commentor No. 239**

Hanford Watch  
2285 SE Cypress  
Portland, Oregon 97214



Ms. Colette Brown  
U.S. Department of Energy  
Office of Space and Defense Power Systems  
NE-50  
19901 Germantown Road  
Germantown, Maryland 20874-1290

76



**Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)**

I am opposed to restart of the Fast Flux Test Facility reactor because:

Stop using the planet and  
all creation on it as a personal  
experiment - No FFER  
here or anywhere,

Name Valorie Blaser

Address 1050 W 28

City, state Eugene, Ore Zip 97405

239-1

239-1: DOE notes the commentor's opposition to Alternative 1, Restart FTFE.

## Commentor No. 240: Virginia J. Morrison

### Draft PEIS Comment Form

Please consider the following in regards to restarting the Fast Flux Test Facility in Southeastern Washington:

- This facility can provide isotopes for many special purposes such as medical research and therapy, as well as deep space probes.
- This facility can produce these isotopes at the least cost and in the shortest time.
- There is still a 20 year lifetime in this facility and it makes no sense to simply destroy such a useful and needed resource.

*Virginia J Morrison*

240-1

240-1: DOE notes the commentor's support for Alternative 1, Restart FFTF. It should be noted that the FFTF would be operated for 35 years under this proposed action if selected in the Record of Decision.

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Virginia J Morrison

Organization: \_\_\_\_\_

Home/Organization Address (circle one): 6412 W. Willamette

City: Rennewick State: WA Zip Code: 99336

Telephone (optional): \_\_\_\_\_

E-mail (optional): \_\_\_\_\_

**COMMENTS MUST BE POSTMARKED BY September 11, 2000**

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U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874  
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E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



Commentor No. 242: Patricia Sims

Aug. 30 '00 23:06 PAI SIMS FAX 2538590 P. 1

Public Hearing Evaluation Form

Please place a check mark in the box next to the public hearing attended:

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| Your Level of Knowledge about the PEIS after the Hearing  | 5         | 4    | 3 2 1 |
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| DOE Officials' Willingness to Listen                      | 5         | 4    | 3 2 1 |
| Knowledge/Responses from Staff Attending                  | 5         | 4    | 3 2 1 |

How could the public hearing format and materials be improved? *Address The Issue of Leaking Toxic Material That is Already a Danger to the Northwest*

Was the public hearing helpful to you? *Made me realize that the DOE is not truthful and is not concerned w/ the safety or even of the interests of the residents of Northwest citizens. Also made me realize that it is the nuclear energy interests that are behind this program.*  
Please continue on the other side if you run out of space. Please return your completed evaluation form to the registration desk or mail or fax to the address below.

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7/27/00

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Response to Commentor No. 242

242-1: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The Secretary of Energy will make the final determination on the alternative or combination of alternatives to satisfy the NI PEIS missions. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

242-2: DOE is committed to discharging its responsibilities in an open manner and providing the public with comprehensive environmental reviews of its proposed actions. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the environmental impact analysis of DOE's proposed alternatives for meeting mission requirements. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

242-3: The comment on the credibility of environmental impacts is noted. The environmental impacts associated with operation of the Hanford facilities during normal operations and from postulated accidents are presented in Section 4.3 of the NI PEIS. The assessments were made using well established and accepted analytical methods, as described in Appendixes

Commentor No. 242: Patricia Sims (Cont'd)

Aug. 30 '00 2:05 PM PAT SIMS FAX 2532590 P. 1

Draft PEIS Comment Form

While I do not pretend to understand the complexities of this issue, there are several factors which have come into my vehement opposition to restart of the FFTF reactor.

- 1- The toxic mess presently at Hanford must be cleaned up!! Your statement that environmental impacts are minimal is Absurd.
- 2- Your commitment made years ago to clean up this Hanford mess has not been honored - leakage into the Columbia River is now imminent.
- 3- DOE is not credible - your claim of the need for medical isotopes is not valid and your claim for NASA's needs is distorted.
- 4- DOE is not paying attention to the message of northwest residents - WE DO NOT WANT THIS REACTOR RESTARTED. SHUT IT DOWN ENTIRELY.
- 5- The decision is being made in the wrong place - in Washington DC instead of the Northwest. DOE officials do not have to live w/ the mess that is already there, let alone more.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure.PEIS@hq.doe.gov

Name (optional): Patricia Sims  
 Organization: Not a part of Ralph Nader's group  
 Home/Work/Other Address (circle one):  
 13617 SE GRANT CT  
 City: PORTLAND State: OR Zip Code: 97233  
 Telephone (optional): 503-253-0590  
 E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Collette E. Brown, NE-50  
 U.S. Department of Energy - 19001 Germantown Road - Germantown, MD 20874  
 Toll-free telephone: 1-877-562-4693 • Toll-free fax: 1-877-562-4592  
 E-mail: Nuclear.Infrastructure.PEIS@hq.doe.gov



7/12/00

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Response to Commentor No. 242

G through L. The analytical methodology is conservative by nature; the actual impacts to the environment would be expected to be less than calculated. All impacts have been shown to be small. No fatalities among workers or the general public would be expected over the full 35 year operational period. The impacts to the biosphere (air, water, and land) are also seen to be small.

242-1  
 242-3  
 242-1  
 242-4  
 242-5  
 242-1

242-4: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings.

The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's

***Commentor No. 242: Patricia Sims (Cont'd)***

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***Response to Commentor No. 242***

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charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Under the No Action Alternative, DOE would continue to purchase plutonium-238 to meet the space mission needs for the 35-year evaluation period considered in the NI PEIS. However, DOE recognizes that any purchase beyond what is currently available to the United States through the existing contract would likely require negotiation of a new contract and may require additional NEPA review. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

- 242-5:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

**Commentor No. 243: Edith D. Iler**

From: Edith Iler[SMTP:RFC\_822:EILER.TEACHERS.WRHS@WRHS.BCSD.K12.ID.US]  
 Sent: Wednesday, August 30, 2000 7:35:44 PM  
 To: INFRASTRUCTURE\_PEIS, NUCLEAR  
 Cc: larry\_craig@craig.senate.gov%internet; ask.helen@mail.house.gov%internet; mike.simpson@mail.house.gov%internet; governor@governor.state.id.us%internet  
 Subject: Comments  
 Auto forwarded by a Rule

to: the Honorable Senators Crapo & Craig,  
 The Honorable Representatives Chenoweth & Simpson,  
 and Ms. Colette Brown \_ Dept. of Energy, Office of Space & Defense Power Systems

RE: My political and environmental opposition to the draft environmental impact statement for accomplishing expanded nuclear energy research and development and isotope production missions in the U.S. including the role of the FFTF facility at Hanford, WA \_ none of this in Idaho, please keep it at Hanford!

Please tell the Department of Energy:

- a. Reprocessing is not acceptable and should not be considered at INEEL or any other facility.
- b. Building 666 is a decrepit and highly contaminated building and should be decommissioned in a manner that is protective of human health and the environment.
- c. Plutonium\_238 production is unnecessary and its use too risky.
- d. Using ATR at INEEL would interfere with its current mission of producing medical and industrial isotopes.
- e. Extend the comment deadline 30 days

243-1

243-2

243-3

243-4

243-5

**Response to Commentor No. 243**

**243-1:** The commentor's position on the roles of Hanford and INEEL is noted.

**243-2:** DOE would not conduct any reprocessing to produce weapons grade plutonium under any of the alternatives considered under this programmatic environmental impact statement. The alternatives do include processing of target materials used to produce isotopes for medical and industrial uses, plutonium-238 for space missions, and nuclear materials research and development. Sections 4.3.1.1.13; 4.3.2.1.13; 4.3.3.1.13; and 4.4.3.1.13 were revised to clarify the waste management approach for waste resulting from processing of target materials for plutonium-238 production.

Building CPP-666 is divided into two parts, the Fuel Storage Facility and the Fluorinel Dissolution Process Facility (FDPF). The FDPF is under consideration in this PEIS for storage of neptunium-237 oxide, preparation of neptunium-237 targets, and separation of plutonium-238 from irradiated targets. This facility will meet, with further analysis and/or minor modifications, the criteria to safely conduct these operations.

**243-3:** DOE notes the commentor's opposition to enhancing its existing nuclear facility infrastructure to support production of plutonium-238 for use in future NASA space exploration missions. Section 1.2.2 of Volume 1 was revised to clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed production of plutonium-238 are relatively low and are discussed in detail in Chapter 4 of Volume 1 and appendixes H, I, and J of Volume 2 in the Final NI PEIS. For almost 40 years, radioisotope power systems have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. However, potential health and safety impacts associated with future launches of spacecraft utilizing plutonium 238 are not within the scope of the NI PEIS analysis, but would be addressed in the specific NEPA documentation prepared by NASA in support of such missions.

**243-4:** As stated in EIS Section 2.3.1.2, ATR would continue to meet its medical and industrial radioisotope production mission for the no action and most other alternatives considered where ATR is not used for the production

***Commentor No. 243: Edith D. Iler (Cont'd)***

While there is no preferred alternative in this study, which is entitled Draft Programmatic Environmental Impact Statement for Accomplishing Expanded Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility (FFTF) at Hanford, WA., DOE would prefer to accomplish the aforementioned activities at the Fast Flux Test Facility at Hanford.

243-6

I am strongly opposed to the possibility that this program may end up in Idaho by default.

243-1

Sincerely,  
Edith D. Iler  
Ketchum, Idaho

***Response to Commentor No. 243***

of plutonium-238. If ATR were to be used as a production facility for plutonium-238 (options 1, 2, 3, 7, 8, and 9 under Alternative 2), it would support medical and industrial radioisotope production to the extent possible. DOE would try to minimize the impact of the new mission on current medical and industrial radioisotope production.

**243-5:** DOE notes the commentor's request for extension of the public comment period. The Council on Environmental Quality's (CEQ) "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act" (40 CFR 1506.10(c)) require that a minimum of 45 days be allowed for public comment on the Draft NI PEIS. As stated in the Notice of Availability (65 FR 46443 et seq.), the public comment period began on July 28, 2000 and continued to September 18, 2000. In preparing the Final PEIS, DOE has assessed and considered both oral and written comments received on the Draft PEIS during the public comment period and has responded to these comments in the Final PEIS. Volume 3 of the NI PEIS contains public comments received on the NI PEIS and DOE responses to those comments. Moreover, late comments were considered to the extent practicable.

**243-6:** As outlined in 40 CFR Part 1502.14 (e), an agency is not required to specify a preferred alternative or alternatives in the Draft EIS if one does not exist, but must do so in the Final EIS. Accordingly, DOE has identified its preferred alternative in Section 2.8 of Volume 1 that includes a discussion of DOE's reasons for selecting it. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

**Commentor No. 244: *Cjleech@aol.com***

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From: Cjleech@aol.com%internet  
[SMTP:CJLEECH@AOL.COM]  
Sent: Wednesday, August 30, 2000 7:34:31 PM  
To: INFRASTRUCTURE\_PEIS, NUCLEAR  
Subject: (no subject)  
Auto forwarded by a Rule

Please restart the FFTF.

|| 244-1

**Response to Commentor No. 244**

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244-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

**Commentor No. 245: Laura Feldman**

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From: Laura Feldman[SMTP:LAURA@SEUL123.ORG]  
Sent: Wednesday, August 30, 2000 8:57:18 PM  
To: INFRASTRUCTURE\_PEIS, NUCLEAR  
Subject: Hanford  
Auto forwarded by a Rule

Dear Ms. Brown,

Starting up the FFTF reactor is sheer lunacy. No kind way of putting that. When my brother was dying of cancer I learned that Oregon has the highest cancer stats on the West coast. I can believe it as I've lost five family members and friends to the disease. My Uncle who died of cancer had actually worked for Hanford in the 50's. Firing up the FFTF reactor, creating cancer victims in order to make isotopes to cure the cancer is a bit like a mad dog chasing its tail (capitalism).

After last night's hearing in Portland, I really don't imagine people in this region are going to stand by while the USDOE and its partner corporations spend billions of tax payer dollars to add to the nuclear waste that hasn't been safely contained or disposed of turning the Columbia watershed into nuclear dumpsite. Please spend our money and your agency's energies on cleaning up Hanford. Nothing else is acceptable.

Sincerely,

Laura Feldman  
817 SE 29th  
Portland, OR 97214  
503\_236\_8499

**Response to Commentor No. 245**

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**245-1:** DOE notes the commentor's views and opposition to Alternative 1, Restart FFTF. However, a National Cancer Institute survey published in the Journal of the American Medical Association in 1991 showed no general increased risk of death for people living near nuclear facilities, including the Hanford Site. Cancers are believed to be caused by a combination of hereditary and environmental factors, including radiological and chemical agents. In ongoing clinical testing, therapeutic radioisotopes have proven effective in treating cancers and other illnesses while minimizing adverse side effects, making their use an attractive alternative to traditional chemotherapy and radiation treatments.

**245-2:** DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

245-1

245-2

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***Response to Commentor No. 245***

Wastes generated for the NI PEIS missions will be managed in accordance with applicable Federal and state laws and regulations and appropriate DOE orders.

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***Commentor No. 245: Laura Feldman (Cont'd)***

**Commentor No. 246: Chris Francovich**

From: Chris Francovich[SMTP:CFRAN@MICRON.NET]  
 Sent: Wednesday, August 30, 2000 10:07:40 PM  
 To: INFRASTRUCTURE\_PEIS, NUCLEAR  
 Subject: INEEL and P\_238  
 Auto forwarded by a Rule

Ms. Colette Brown  
 DOE  
 Office of Space and Defense Power Systems

Dear MS. Brown:

Reprocessing is not acceptable and should not be considered at INEEL or any other facility. Building 666 is a decrepit and highly contaminated building and should be decommissioned in a manner that is protective of human health and the environment. Plutonium\_238 production is unnecessary and its use too risky.

Using ATR at INEEL would interfere with its current mission of producing medical and industrial isotopes. Extend the comment deadline 30 days.

Thank you,

Chris Francovich, Ed.D.  
 370 W. Hughes Ln  
 Post Falls, ID 83854  
 208.777.7624

246-1

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246-3

246-4

**Response to Commentor No. 246**

**246-1:** DOE would not conduct any reprocessing to produce weapons grade plutonium under any of the alternatives considered under this PEIS. The alternatives include processing of target materials used to produce isotopes for medical and industrial uses, plutonium-238 for space missions, and nuclear materials research and development. Sections 4.3.1.1.13; 4.3.2.1.13; 4.3.3.1.13; and 4.4.3.1.13 were revised to clarify the waste management approach for waste resulting from processing of target materials for plutonium-238 production.

Building CPP-666 is divided into two parts, the Fuel Storage Facility and the Fluorine Dissolution Process Facility (FDPF). The FDPF is under consideration in this PEIS for storage of neptunium-237 oxide, preparation of neptunium-237 targets, and separation of plutonium-238 from irradiated targets. This facility will meet, with further analysis and/or minor modifications, the criteria to safely conduct these operations.

**246-2:** DOE notes the commentor's opposition to enhancing its existing nuclear facility infrastructure to support production of plutonium-238 for use in future NASA space exploration missions. Section 1.2.2 of Volume 1 was revised to clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed production of plutonium-238 are relatively low and are discussed in detail in Chapter 4 of Volume 1 and Appendixes H, I, and J of Volume 2 in the Final NI PEIS. For over 30 years, radioisotope power systems have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. However, potential health and safety impacts associated with future launches of spacecraft utilizing plutonium-238 are not within the scope of the NI PEIS analysis, but would be addressed in the specific NEPA documentation prepared by NASA in support of such missions.

**246-3:** As stated in EIS Volume 1, Section 2.3.1.2, ATR would continue to meet its medical and industrial radioisotope production mission for the no action and most other alternatives considered where ATR is not used for the production of plutonium-238. If ATR were to be used as a production facility for plutonium-238 (options 1, 2, 3, 7, 8, and 9 under Alternative 2), it would support medical and industrial radioisotope production to the

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**Commentor No. 246: Chris Francovich (Cont'd)**

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**Response to Commentor No. 246**

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extent possible. DOE would try to minimize the impact of the new mission on current medical and industrial radioisotope production.

- 246-4:** DOE notes the commentor's request for extension of the public comment period. The Council on Environmental Quality's (CEQ) "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act" (40 CFR 1506.10(c)) require that a minimum of 45 days be allowed for public comment on the Draft NI PEIS. As stated in the Notice of Availability (65 FR 46443 et seq.), the public comment period began on July 28, 2000 and continued to September 18, 2000. In preparing the Final PEIS, DOE has assessed and considered both oral and written comments received on the Draft PEIS during the public comment period and has responded to these comments in the Final PEIS. Volume 3 of the NI PEIS contains public comments received on the NI PEIS and DOE responses to those comments. Moreover, late comments were considered to the extent practicable.

**Commentor No. 247: Brenda Goodwin**

From: JBCGoodwin@aol.com%internet  
 [SMTP:JBCGOODWIN@AOL.COM]  
 Sent: Wednesday, August 30, 2000 10:39:10 PM  
 To: INFRASTRUCTURE\_PEIS, NUCLEAR  
 Cc: larrycraig@craig.senate.gov%internet;  
 ask.helen@mail.house.gov%internet;  
 mike.simpson@mail.house.gov%internet;  
 governor@governor.state.id.us%internet  
 Subject: (no subject)  
 Auto forwarded by a Rule

No Plutonium at INEEL or anywhere. We need to find alternatives to this highly dangerous substance. Our building where the proposed site of production would be is 666. This building is already contaminated and has not been in use for years. The danger of a space shuttle crash releasing pounds of this substance would kill thousands of people, when you consider just one tiny particle is deadly.

Please consider the health of future generations and avoid a terrible catastrophe by stopping all production of plutonium. God is your judge and He is watching you...666.

Sincerely,  
 Brenda Goodwin

247-1

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247-3

247-1

**Response to Commentor No. 247**

**247-1:** DOE notes the commentor's opposition to enhancing its existing nuclear facility infrastructure to support production of plutonium-238 for use in future NASA space exploration missions. Section 1.2.2 of Volume 1 was revised to clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed production of plutonium-238 are relatively low and are discussed in detail in Chapter 4 of Volume 1 and appendixes H, I, and J of Volume 2 in the Final NI PEIS. For over 30 years, radioisotope power systems have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. However, potential health and safety impacts associated with future launches of spacecraft utilizing plutonium-238 are not within the scope of the NI PEIS analysis, but would be addressed in the specific NEPA documentation prepared by NASA in support of such missions.

**247-2:** Building CPP-666 is divided into two parts, the Fuel Storage Facility and the Fluorinel Dissolution Process Facility (FDPF). The FDPF is under consideration in this PEIS for storage of neptunium-237 oxide, preparation of neptunium-237 targets, and separation of plutonium-238 from irradiated targets. This facility will meet, with further analysis and/or minor modifications, the criteria to safely conduct these processes.

**247-3:** DOE notes the commentor's opposition to NASA's use of nuclear materials for space missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. As used by NASA, the plutonium-238 is encapsulated and shielded to minimize any hazards to personnel or to the environment, even in the event of a catastrophic launch accident or inadvertent earth re-entry.

## Commentor No. 248: Jeffrey Belt

From: Jeffrey Belt[SMTP:JEFFOU@SPEAKEASY.ORG]  
 Sent: Thursday, August 31, 2000 1:43:20 AM  
 To: INFRASTRUCTURE\_PEIS, NUCLEAR  
 Subject: Nuclear Infrastructure PEIS comments  
 Auto forwarded by a Rule

I strongly favor initiative 5 (permanent shutdown of FFTF and no new facilities) for the following reasons:

1. From an investment perspective, I don't want public funds spent on an unsure and hugely controversial technology.

a. There's no assurance that the benefits (medical isotopes, NASA instrument fuel) outweighs the risk (soil or groundwater contamination, even the unlikely accident). I also find suspicious the almost contradictory statistics and incomprehensible technical details bandied by both the "pro" and "con" sides. Either the technology is not well understood, or there's some hidden agenda around the FFTF restart which muddies the details.

b. The funds may be separate from cleanup funds, but it's still tax money, and it's money that could be spent on cleanup anyway. Spending funds on FFTF restart now is basically saying Hanford will need more cleanup funds later. If you can really clean up to prove it's possible, thereby showing complete control of the entire nuclear cycle, then I would be more favorable to the FFTF or other facilities restarted or being built.

2. The DoE discredited its own PEIS by making verbal statements that things as they stand now are not as they are in the EIS: the cost report is separate, final treatment of wastes is unspecified and probably unknown, and distinctions were made between research vs. commercial isotopes that aren't in the EIS. This should all be part of the EIS. I am looking forward to a second draft.

Thank you for this opportunity to provide feedback. I hope public feedback is of use and not ignored, whichever way the final decision goes.

Jeffrey Belt  
 15600 NE 8th St B1 PMB 480, Bellevue, WA 98008, (425) 641 6933

248-1

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248-5

248-7

## Response to Commentor No. 248

- 248-1:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 248-2:** DOE notes the commentor's opinion. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.
- 248-3:** There is no hidden agenda around the restart of FFTF. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.
- Potential environmental, health, and safety impacts associated with the proposed action are relatively low, and are discussed in detail in Chapter 4 of Volume 1 and associated appendixes in Volume 2 of the Final NI PEIS.
- 248-4:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE).

*Commentor No. 248: Jeffrey Belt (Cont'd)*

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*Response to Commentor No. 248*

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The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

**248-5:** DOE notes the views expressed but the nature and scope of the statements referenced by the commentor are unclear. The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. DOE mailed this document to about 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P in the Final NI PEIS.

DOE does make the distinction between research and commercial quantities of isotopes. Although the discussion of purpose and need in the NI PEIS (Section 1.2 of Volume 1) is more focused on the two broad civilian applications for isotopes (medical and industrial), the differentiation between research and commercial isotopes is made within the context of DOE isotope production capacity. Specifically, Section 1.2.1 of the Final NI PEIS has been revised to better make the distinction between the relatively small quantities of individual isotopes used in research and development and those that have proven application and are produced in relatively larger quantities to meet commercial demands.

**248-6:** DOE notes the commentor's concern regarding waste treatment. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and

***Commentor No. 248: Jeffrey Belt (Cont'd)***

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***Response to Commentor No. 248***

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environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and appropriate DOE orders.

- 248-7:** DOE policy encourages effective public participation in its decision making process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

***Commentor No. 249: Joanne Witiak***

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From: Joanne Witiak[SMTP:WITIAK@WORLDNET.ATT.NET]  
Sent: Thursday, August 31, 2000 7:09:26 AM  
To: INFRASTRUCTURE\_PEIS, NUCLEAR  
Subject: I support the restart of the FFTF  
Auto forwarded by a Rule

I support the restart of the FFTF

Joanne Witiak  
500 Stony Hill Rd.  
Yardley, PA 19067

|| 249-1

***Response to Commentor No. 249***

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**249-1:** DOE notes the commentor's support for Alternative 1, Restart FFTF.

***Commentor No. 250: Eugene Johnson***


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From: Linda (038) Eugene  
 [SMTP:SANIBELS@EARTHLINK.NET]  
 Sent: Thursday, August 31, 2000 8:15:04 AM  
 To: INFRASTRUCTURE\_PEIS, NUCLEAR  
 Subject: support for fftf  
 Auto forwarded by a Rule

I support the restart of the FFTF Reactor Facility at Hanford to meet the national needs for medical isotopes and other peaceful nuclear materials. The FFTF is the most economical, safe, and environmental friendly method available to meet these needs.

\_Eugene Johnson

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250-1

***Response to Commentor No. 250***


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250-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

***Commentor No. 251: Linda Johnson***

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From: Linda (038) Eugene  
[SMTP:SANIBEL77@EARTHLINK.NET]  
Sent: Thursday, August 31, 2000 8:34:50 AM  
To: INFRASTRUCTURE\_PEIS, NUCLEAR  
Subject: restart of ffff  
Auto forwarded by a Rule

I Support the restart of the FFTF reactor facility at Hanford to meet the national needs for medical isotopes and other peaceful nuclear materials. The FFTF is the most economical, safe, and environmentally friendly method available to meet those needs.

Linda Johnson

251-1

***Response to Commentor No. 251***

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251-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

**Commentor No. 252: Jan Nissl**

From: Jan Nissl[SMTP:JNISSL@HEALTHWISE.ORG]  
 Sent: Thursday, August 31, 2000 9:48:23 AM  
 To: INFRASTRUCTURE\_PEIS, NUCLEAR  
 Cc: 'larry(u)craig(a)craig.senate.gov'; 'ask.helen(a)mail.house.gov';  
 'mike.simpson(a)mail.house.gov'; 'governor(a)governor.state.id.us'  
 Subject: Ms. Colette Brown  
 Auto forwarded by a Rule

Please do not allow plutonium reprocessing to start again at INEEL. It is a hazardous material and the means of generating it has been proven to be faulty, resulting in massive clean-ups at Hanford and Savannah River.

252-1

No one wants this level of isotope production, especially those of us in Idaho \_ we're trying to get INEEL cleaned up!

It is also not acceptable that this is being pushed through without a longer public comment period \_ please extend the deadline by at least another 4 weeks.

252-2

The site that is proposed is Building 666 \_ how ironic that number is thought of as being a satanic expression \_ take the hint \_ don't continue with this proposal. Besides that, the building has already been classified as highly contaminated \_ how do you make it fit for people to work there?

252-1

I doubt NASA really needs this isotope \_ the government has done little to prove to the people that these dangerous hazards in any form are for the good of mankind. The Bush administration shut down reprocessing in 1992 \_\_ This was done to demonstrate US willingness to staunch the flow of plutonium and to persuade other countries not to engage in this threatening technology. Let's keep it that way. I understand the ATR at INEEL is being used to produce medical and industrial isotopes \_ that at least seems credible \_ to switch to something that is so hazardous and NASA doesn't really need it, is foolish.

252-3

252-4

Please deny this proposal. Thank you  
 Jan Nissl  
 1115 E. State, Boise, Id 83712

**Response to Commentor No. 252**

**252-1:** DOE would not conduct any reprocessing to produce weapons grade plutonium under any of the alternatives considered under this programmatic environmental impact statement. The alternatives include processing of target materials used to produce isotopes for medical and industrial uses, plutonium-238 for space missions, and nuclear materials research and development. Sections 4.3.1.1.13; 4.3.2.1.13; 4.3.3.1.13; and 4.4.3.1.13 were revised to clarify the waste management approach for waste resulting from processing of target materials for plutonium-238 production.

Building CPP-666 is divided into two parts, the Fuel Storage Facility and the Fluorine Dissolution Process Facility (FDPF). The FDPF is under consideration in this PEIS for storage of neptunium-237 oxide, preparation of neptunium-237 targets, and separation of plutonium-238 from irradiated targets. This facility will meet, with further analysis and/or minor modifications, the criteria to safely conduct these operations.

**252-2:** DOE notes the commentor's request for extension of the public comment period. The Council on Environmental Quality's (CEQ) "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act" (40 CFR 1506.10(c)) require that a minimum of 45 days be allowed for public comment on the Draft NI PEIS. As stated in the Notice of Availability (65 FR 46443 et seq.), the public comment period began on July 28, 2000 and continued to September 18, 2000. In preparing the Final PEIS, DOE has assessed and considered both oral and written comments received on the Draft PEIS during the public comment period and has responded to these comments in the Final PEIS. Volume 3 of the NI PEIS contains public comments received on the NI PEIS and DOE responses to those comments. Moreover, late comments were considered to the extent practicable.

**252-3:** Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the

**Commentor No. 252: Jan Nissl (Cont'd)****Response to Commentor No. 252**

potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions would be in jeopardy. Section 1.2.2 of Volume 1 was revised to clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed production of plutonium-238 are relatively low and are discussed in detail in Chapter 4 of Volume 1 and appendixes H, I, and J of Volume 2 in the may be lost. For over 30 years, radioisotope power systems have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. However, potential health and safety impacts associated with future launches of spacecraft utilizing plutonium 238 are not within the scope of the NI PEIS analysis, but would be addressed in the specific NEPA documentation prepared by NASA in support of such missions.

Unlike plutonium-239, plutonium-238 is not used in nuclear weapons. The technology that is discussed in the NI PEIS would be used to chemically separate plutonium-238 and neptunium from irradiated targets and not from irradiated or spent nuclear fuel, whereas reprocessing separates weapons grade plutonium-239 from irradiated nuclear fuel. As discussed in the separate nonproliferation impact assessment report, use of this technology to produce plutonium-238 from irradiated targets will not create a nonproliferation threat. DOE is committed to full compliance with and support of the U.S. policy prohibiting reprocessing.

- 252-4:** As stated in PEIS Section 2.3.1.2 of Volume 1, ATR would continue to meet its medical and industrial radioisotope production mission for the no action and most other alternatives considered where ATR is not used for the production of plutonium-238. If ATR were to be used as a production facility for plutonium-238 (options 1, 2, 3, 7, 8, and 9 under Alternative 2), it would support medical and industrial radioisotope production to the extent possible. DOE would try to minimize the impact of the new mission on current medical and industrial radioisotope production. Specific future NASA space missions which will require significant quantities of plutonium-238 are identified in EIS Section 1.2.2. The commentor's opposition to the production of plutonium-238 for NASA is noted.

**Commentor No. 253: Parke G. Burgess, Jr.**

From: Parke Burgess  
 [SMTP:PARKE@NORTHWESTWATCH.ORG]  
 Sent: Thursday, August 31, 2000 10:50:46 AM  
 To: INFRASTRUCTURE\_PEIS, NUCLEAR  
 Cc: 'j.burgess(a)esw.org'  
 Subject: Do Not Restart the FFTF Reactor at Hanford  
 Auto forwarded by a Rule

I am writing to urgently oppose the restart of the FFTF reactor at Hanford.

I believe that the materials produced, the manner of their production, and the waste such production entails are too dangerous to undertake. DOE has a long-standing obligation to cleanup Hanford, at which task DOE is woefully behind schedule. Creating more hazards at Hanford, on our roadways, railways and sea lanes is utterly unacceptable.

When are we going to learn that we cannot control these highly toxic substances; that accidents do happen; that we do not have sufficient understanding to take care of wastes that will be lethal for thousands of years to come?

By the way, your safety assurances in the PEIS are laughably optimistic: do you take us for fools?

Parke G. Burgess Jr  
 5316 2nd Ave NW  
 Seattle, WA 98107  
 (206) 297\_0391  
 pjburgess@aya.yale.edu

**253-1****253-2****253-3****253-2****Response to Commentor No. 253**

**253-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

**253-2:** The comments on the production of materials, and on the safety of operations considered under Alternative 1, have been noted. The types of materials produced under Alternative 1, Restart FFTF, are given in Section 1.2 of Volume 1, Purpose and Need for Agency Actions, of the NI PEIS. All of the materials (mainly radioactive isotopes) have been safely managed by DOE in the past. The manner of their production, including target production, processing and irradiation is described briefly in Section 2.3 of Volume 1, Description of Facilities and in more detail in Appendixes A through D. The impacts associated with each of these production activities are presented in Section 4.3. The presentations include the numbers of human health effects to Hanford workers and the general public in the Hanford area, and an assessment of the management of radioactive and hazardous wastes generated during facility operations. The analytical methodology (described in Appendix G through L) is conservative by nature; the actual impacts during normal operations and the risks associated with postulated accidents would be expected to be less than calculated. All impacts are shown to be small.

**253-3:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Chapter 4 of the PEIS, Environmental Consequences, evaluates the risk from transportation activities associated with each alternative. Transportation risks were determined to be very low.

**Commentor No. 254: Ruthann Saphier**

From: Ruthann Saphier  
[SMTP:RSAPHIER@SUNVALLEY.NET]  
Sent: Thursday, August 31, 2000 12:31:25 PM  
To: INFRASTRUCTURE\_PEIS, NUCLEAR  
Subject: No Reprocessing at INEEL PLEASE!!!!  
Auto forwarded by a Rule

Ms. Colette Brown  
DOE, Office of Space and Defense Power Systems

I am a resident of Sun Valley in the great state of Idaho. I am terrified by the news of reprocessing at INEEL. Not only is INEEL over our Snake River Aquifer is also located over a seismic fault line. The question might be WHY with the educated group at DOE does INEEL still exist in its present location. Any more activity there is simply unacceptable and hazardous to our health!

254-1

Reprocessing is not acceptable and should not be considered at INEEL or any other facility .

254-2

Building 666 is a decrepit and highly contaminated building and should be decommissioned in a manner that is protective of human health and the environment .

Plutonium\_238 production is unnecessary and its use too risky .

254-3

Using ATR at INEEL would interfere with its current mission of producing medical and industrial isotopes.

254-4

**Response to Commentor No. 254**

**254-1:** The commentor's position concerning additional activities at INEEL is noted. Reprocessing spent nuclear fuel is prohibited by DOE policy, and reprocessing would not occur under any of the nuclear infrastructure alternatives described in Section 2.5 of Volume 1. Under Alternatives 1 through 4, the Fluorinel Dissolution Process Facility at INEEL is a candidate facility for processing irradiated neptunium-237 targets to harvest plutonium-238 for use in NASA's deep space missions. Postirradiation processing is described in Section 2.2.2.3.

The Snake River Plain aquifer and the DOE's use of the aquifer are described in Section 3.3.4.2.1 of the NI PEIS. An analysis of water resource impacts that would result from selection of the Fluorinel Dissolution Process Facility as a fabrication/processing facility for production of plutonium-238 is given in Section 4.3.2.1.4 of the NI PEIS. An annual increase of 23,000 liters of process wastewater would result from plutonium-238 target processing. Under normal operations, no radioactive liquid effluent discharges would occur. Selection of the Fluorinel Dissolution Process Facility as a fabrication/processing facility would have no significant effect on the Snake River Plain aquifer. As discussed in Section 4.4.1.1.4, selection of the Advanced Test Reactor for irradiation of plutonium-238 targets would not measurably alter groundwater use or effluent discharge from the reactor.

Capable fault segments of the Lost River Fault and the Lemhi Fault are thought to terminate near the site boundary of INEEL (see Section 3.3.5 of the NI PEIS). However, INEEL is not located over a seismic fault line. Analyses shown in Sections 4.2.3.2.5, 4.3.2.1.5, 4.4.1.1.5, 4.4.2.1.5, 4.5.2.2.5, and 4.6.2.2.5 of the NI PEIS show that earthquakes pose no significant risk to Building CPP-651, the Fluorinel Dissolution Processing Facility, or the Advanced Test Reactor.

**254-2:** DOE would not conduct any reprocessing to produce weapons grade plutonium under any of the alternatives considered under this programmatic environmental impact statement. The alternatives include processing of target materials used to produce isotopes for medical and industrial uses, plutonium-238 for space missions, and nuclear materials research and development. Sections 4.3.1.1.13; 4.3.2.1.13; 4.3.3.1.13; and 4.4.3.1.13 were revised to clarify the waste management approach for waste resulting from processing of target materials for plutonium-238 production.

### ***Commentor No. 254: Ruthann Saphier (Cont'd)***

Please extend the comment deadline 30 days. This is too critical an issue to rush through.

254-5

Could you accomplish the activities at the Fast Flux Test Facility at Hanford? We folks in Idaho do not want to end up with this program.

254-6

Sincerely yours,  
Ruthann Saphier  
Concerned citizen from the beautiful state of Idaho

### ***Response to Commentor No. 254***

Building CPP-666 is divided into two parts, the Fuel Storage Facility and the Fluorine Dissolution Process Facility (FDPF). The FDPF is under consideration in this PEIS for storage of neptunium-237 oxide, preparation of neptunium-237 targets, and separation of plutonium-238 from irradiated targets. This facility will meet, with further analysis and/or minor modifications, the criteria to safely conduct these operations.

**254-3:** DOE notes the commentor's opposition to enhancing its existing nuclear facility infrastructure to support production of plutonium-238 for use in future NASA space exploration missions. Section 1.2.2 of Volume 1 was revised to clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed production of plutonium-238 are relatively low and are discussed in detail in Chapter 4 of Volume 1 and appendixes H, I, and J of Volume 2 in the Final NI PEIS. For over 30 years, radioisotope power systems have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. However, potential health and safety impacts associated with future launches of spacecraft utilizing plutonium 238 are not within the scope of the NI PEIS analysis, but would be addressed in the specific NEPA documentation prepared by NASA in support of such missions.

**254-4:** As stated in EIS Volume 1, Section 2.3.1.2, ATR would continue to meet its medical and industrial radioisotope production mission for the no action and most other alternatives considered where ATR is not used for the production of plutonium-238. If ATR were to be used as a production facility for plutonium-238 (options 1, 2, 3, 7, 8, and 9 under Alternative 2), it would support medical and industrial radioisotope production to the extent possible. DOE would try to minimize the impact of the new mission on current medical and industrial radioisotope production.

**254-5:** DOE notes the commentor's request for extension of the public comment period. The Council on Environmental Quality's (CEQ) "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act" (40 CFR 1506.10(c)) require that a minimum of 45 days be allowed for public comment on the Draft NI PEIS. As stated in the Notice of Availability (65 FR 46443 et seq.), the public comment period

***Commentor No. 254: Ruthann Saphier (Cont'd)***

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***Response to Commentor No. 254***

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began on July 28, 2000 and continued to September 18, 2000. In preparing the Final PEIS, DOE has assessed and considered both oral and written comments received on the Draft PEIS during the public comment period and has responded to these comments in the Final PEIS. Volume 3 of the NI PEIS contains public comments received on the NI PEIS and DOE responses to those comments. Moreover, late comments were considered to the extent practicable.

**254-6:** DOE notes the commentor's support for Alternative 1, Restart FFTF, and opposition to using any facilities in Idaho for the DOE missions covered in the NI PEIS.

### *Commentor No. 255: Charles E. Weems*

From: Charles/Sally Weems[SMTP:FLOATING@SEANET.COM]  
 Sent: Thursday, August 31, 2000 1:21:53 PM  
 To: INFRASTRUCTURE\_PEIS, NUCLEAR  
 Auto forwarded by a Rule

Dear Ms. Colette Brown:

I wish these comments to be placed in the record as I was unable to give them at either the forum or to a Court reporter during the hearings in Seattle on August 30th.

I was disappointed in the hearings for the following reasons. (1)Your PEIS had failed to make available to us answers to several key questions that should have been addressed prior to the meetings. A partial completion of this job with a mailing on the Friday before a Wednesday meeting only increases the public's perception that the DOE is trying to withhold information and obfuscate the issues. (2) My disappointment with the entire tone of the meeting cannot be laid at your feet, but I greatly fault the confrontational style of the letter read into the record from our Senator Gorton and I will let him know of this. This tone was continued by many speakers, however, and restricted any meaningful debate. (3) The packing of the audience by members of the Hanford employees makes it important that in the future the speakers should state their affiliations or at least their name and home address. How it occurred that the majority of them got chosen to read their prepared statements suggests a large number of tickets were picked up by that group and the holding of more than one number led to their preponderance in those allowed to speak.

255-1

### *Response to Commentor No. 255*

**255-1:** DOE notes the commentor's concerns regarding the timing of the issuance of the Cost Report and the tone and format of the Seattle public hearing. DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and to providing ample opportunity for public comment on those actions. The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. DOE mailed this document to about 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P in the Final NI PEIS.

The public hearing format was designed to be fair and unbiased. The public hearing format used was based on stakeholder input and was presented in the Notice of Availability (65 FR 46443 et seq.) for the Draft NI PEIS. This format was intended to encourage public participation, regardless of the motivation for attending the hearing. It provided an opportunity for the participants to meet one another, exchange information, and share concerns with DOE personnel available throughout the course of each hearing to answer questions. The meetings were facilitated by an independent moderator to ensure that all persons wishing to speak had an opportunity to do so. Persons wishing to comment were selected at random from the audiences rather than according to the order in which they registered. This was accomplished by a random number drawing. In addition to the comment recorder stationed at the main hearing, a second recorder was available in an adjacent room to receive comments without the need to await selection at the main proceeding. The hearing format used promoted open and equal representation by all individuals and groups.

**255-2:** DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the

## *Commentor No. 255: Charles E. Weems (Cont'd)*

I was glad to hear in your prepared address some explanation of alternatives. Your PEIS and your talk did not display any real sign of impartiality however. These alternatives need to be thoughtfully considered before a decision is made. Despite the emotional rhetoric and obvious confusion about research versus commercial production of medical isotopes, this reason for the FFTF is neither needed nor will be cost effective. Several groups including the American Institute of Medicine and your own group do not feel that it will be effective or needed. The DOE loses credibility in using this very emotional item to push their goals. Research of medical isotopes is by your own admission not the goal. It is for many of the known and stated reasons also unfeasible at that facility or could be done equally well elsewhere. I admire the pride in their role that the Hanford contingent takes but it does not detract from a reasoned analysis of the FFTF need.

255-2

An equally troublesome aspect is the commercial production proposed, this is not the role of government and should not be used as an excuse to restart. The cure of cancer is not with isotopes, any more than it is with current conventional therapy. In sum the medical isotope use of FFTF is unneeded... Plutonium\_238 has been discussed so far in a curious way. Statements have been made that it probably won't come through Puget Sound but continue to come into Charlestown South Carolina. So to get to Hanford it would cross the entire US. This does not compute. Is there an alternative source for this item for NASA? By both your admission and their statement there is. I would further add that to state that Plutonium\_238 because it is not used for bombs is therefore "safe" is neither true an excuse to restart FFTF. Nuclear Energy research as an alternative to the current "dirty" carbon dioxide emitting sources is another reason stated for reopening the FFTF. With all the solid information currently in on the cost effectiveness of nuclear plants, the current and projected needs, and the other technologies emerging this reason is clearly used to fill a projected hope rather than a real need.

255-3

255-2

## *Response to Commentor No. 255*

next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

DOE's production and sale of radioisotopes fall into two categories "commercial" and "research" and both types of isotope production are considered under the proposed actions. Commercial radioisotopes are those that are produced in large, bulk quantities and sold to pharmaceutical companies or distributors, or to equipment or sealed source manufacturers. Examples of commercial radioisotopes produced by DOE include strontium-82 and germanium-68 for medical applications, and iridium-192 and californium-252 for industrial applications. DOE only produces commercial isotopes when there is no U.S. private sector capability or when foreign sources do not have the capacity to meet U.S. needs reliably. In contrast, research radioisotopes are typically produced and sold in small quantities in response to specialty orders from researchers preparing experiments in the field of medicine, with small quantities of these radioisotopes also purchased by industrial researchers. Because small-quantity production of research isotopes is not financially attractive to private-sector producers and is generally not undertaken, DOE attempts to provide all research radioisotopes that are requested, subject to production capability, inventory, and financial constraints. As successful application of a specific research isotope is established, the production and sales of that radioisotope may shift from research to commercial status. In recent years, over 95 percent of DOE's sales of radioisotopes by dollar volume were commercial and 5 percent have been for research.

The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the

### *Commentor No. 255: Charles E. Weems (Cont'd)*

Much has been said about low risk. We have been told that transportation is without risk, storage of waste (even without a known final destination) is without risk, we are given levels of radioactive elements above that found naturally occurring that are said to be without risk. A risk must be evaluated in relation to its statistical likelihood but also in relation to its severity. The risks of continuing with an unnecessary FFTF are catastrophic, the calculated risk ratios do not justify it. The only reasonable decision should be the alternative of using only existing facilities and permanently deactivating FFTF.

Charles E. Weems, M.D.  
933 No.Northlake Way #9  
Seattle, WA 98103\_8874  
floating@seanet.com

255-4

255-5

### *Response to Commentor No. 255*

suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost. Potential health and safety impacts associated with the proposed production of plutonium-238 are relatively low and are discussed in detail in Chapter 4 of Volume 1 and Appendixes H, I, and J of Volume 2 in the Final NI PEIS.

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***Commentor No. 255: Charles E. Weems (Cont'd)***

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***Response to Commentor No. 255***

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DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

In January 1997, President Clinton tasked his Committee of Advisors on Science and Technology (PCAST) to evaluate the current national energy research and development portfolio and to provide a strategy that ensures the United States has a program to address the Nation's energy and environmental needs for the next century. In its November 1997 report responding to this request, the PCAST Energy Research and Development Panel determined that restoring a viable nuclear energy option to help meet our future energy needs is important and that a properly focused research and development effort to address the potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) was appropriate. The PCAST panel further recommended that DOE reinvigorate its nuclear energy research and development activities to address these potential barriers. Section 1.2.3 provides information on the nuclear energy research and development mission.

- 255-3:** Alternative 1 does postulate that DOE might decide at some point to import mixed oxide fuel from Europe to fuel FFTF. At this time, however, DOE has not proposed to import this fuel through any specific port. If DOE ultimately decides to import fuel from Europe, it would perform a separate NEPA analysis to select a port. This review would address all relevant potential impacts of overseas and inland water transportation, shipboard fires, package handling, land transportation, as well as safeguards and security associated with the import of SNR-300 mixed oxide fuel through a variety of specific candidate ports on the east and west coasts. It would consider all public comments, including local resolutions, concerning the desirability of bringing mixed oxide fuel into the proposed alternative ports.

In the event that DOE decides to enhance its nuclear infrastructure, it would not expose any population to high, unacceptable risks under any alternative. Any transportation activities that would be conducted by DOE would comply with U.S. Nuclear Regulatory Commission and U.S.

**Commentor No. 255: Charles E. Weems (Cont'd)**

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**Response to Commentor No. 255**

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Department of Transportation regulations. Associated transatlantic shipment would comply with International Atomic Energy Agency requirements. In Section J.6.2, DOE reviewed the potential maximum impacts from the marine transportation of mixed oxide fuel from Europe to a representative military port, Charleston, South Carolina, and overland transportation to Hanford. Also in that section, a bounding analysis demonstrates that the maximum potential radiological risks to the surrounding public from mixed oxide fuel shipments would be small (e.g., less than 1 chance in a trillion for a latent cancer fatality per shipment from severe accidents at docks and in channels and less than 1 chance in 50 billion for a latent cancer fatality per shipment from overland highway accidents).

- 255-4:** The environmental impacts associated with restart and operation of the FFTF are presented in Section 4.3 of the NI PEIS. The impacts include human health risks to workers and the general public associated with operation of the FFTF, with the management of waste, and with the transportation of reactor fuel, targets, and irradiated products to and from Hanford. Details of the accident assessments are presented in Appendix I. It is not claimed in the NI PEIS that the activities associated with the FFTF restart alternative are without risks. However, it is shown that they are small.
- 255-5:** DOE notes the commentor's support for Alternative 2, Use Only Existing Operational Facilities, which includes permanently deactivating FFTF.

**Commentor No. 256: Nancy Dolan**

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From: Nancy Dolan[SMTP:DOLANN@LYCOS.COM]  
Sent: Thursday, August 31, 2000 10:36:13 AM  
To: INFRASTRUCTURE\_PEIS, NUCLEAR  
Subject: FFTF restart  
Auto forwarded by a Rule

There is NO reason to restart this. The current waste isn't being dealt with, so why accumulate more? There is no shortage of medical isotopes, and putting nuclear powered anything in space is dangerous and could lead to militarization of space. Is that what we want?

Nancy Dolan  
19319 89th Ave. N.E.  
Bothell, WA 98011

|| 256-1  
|| 256-2  
|| 256-3

**Response to Commentor No. 256**

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- 256-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 256-2:** DOE notes the commentor's concern regarding waste generation. The restart of FFTF would not impact the schedule or available funding for the cleanup missions at Hanford. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and appropriate DOE orders.
- 256-3:** DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings.
- The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been

***Commentor No. 256: Nancy Dolan (Cont'd)***

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***Response to Commentor No. 256***

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revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

Potential environmental, health, and safety impacts associated with the proposed action are relatively low, and are discussed in detail in Chapter 4 of Volume 1 and associated appendixes in Volume 2 of the Final NI PEIS. Potential health and safety impacts associated with future launches of spacecraft utilizing plutonium-238 are not within the scope of the NI PEIS analysis, but would be addressed in the specific NEPA documentation prepared by NASA in support of such missions.

***Commentor No. 257: John E. Cozad***

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From: John\_E\_Cozad@rl.gov%internet  
[SMTP:JOHN\_E\_COZAD@RL.GOV]  
Sent: Thursday, August 31, 2000 1:39:18 PM  
To: INFRASTRUCTURE\_PEIS, NUCLEAR  
Subject: restart fftf for medical isotopes  
Auto forwarded by a Rule

To Colette E. Brown

I think it would be great thing to restart the FFTF for medical use and for PU 238. my father had bladder cancer 3 years ago, went throught a couple of surgerys and took almost 2 years for him to recover from all of that he is 77 years old now. If the FFTF had been making Isotopes back then it would not have been as hard on him, lot less recovery time and maybe even cost less. Lets get it restarted to help man kind.

Thanks

John E. Cozad

**257-1**

***Response to Commentor No. 257***

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**257-1:** DOE notes the commentor's support for Alternative 1, Restart FFTF.

**Commentor No. 258: Irene Svete, Charles Terrill,  
Garry Boyden**

From: ISvet@aol.com%internet[SMTP:ISVET@AOL.COM]  
Sent: Thursday, August 31, 2000 2:49:36 PM  
To: INFRASTRUCTURE\_PEIS, NUCLEAR  
Subject: FFTF comments  
Auto forwarded by a Rule

Dear Ms. Brown:

We are writing to oppose attempts to restart the Fast Flux Test Facility at the Hanford Nuclear reservation. This absurd and costly idea flies in the face of logic.

Over the past several years, it has become obvious that neither DOE nor its Hanford contractors have found a satisfactory way to deal with the toxic waste already on the site. Yet DOE has simply ignored the additional waste this proposal will create at what is already considered the most contaminated nuclear site in the Western hemisphere.

There is already a glut of isotopes available for medical treatment. Rather than restart the FFTF, we strongly support the option of permanently shutting down the reactor, despite the \$281 million cost. This is the responsible, sane option and we hope you will take it.

Sincerely,  
Irene Svete  
Charles Terrill  
Garry Boyden  
11107 SE 204th St.  
Kent, WA 98031

258-1

258-2

258-3

**Response to Commentor No. 258**

**258-1:** Management of wastes that would be generated under implementation of Alternative 1 (Restart FFTF) is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

**258-2:** DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information.

Although other private manufacturers produce medical isotopes, DOE remains the key provider for a large number of isotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially experimental, these

***Commentor No. 258: Irene Svete, Charles Terrill,  
Garry Boyden (Cont'd)***

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***Response to Commentor No. 258***

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isotopes are not generally purchased in large-enough quantities to make their production financially attractive to private industry. The United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. Section 1.2.1 of Volume 1 has been revised to clarify DOE's role and other producers' capabilities to fulfill U.S. isotope needs.

- 258-3:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

## Commentor No. 259: Pennie Stasik O'Grady

### Draft PEIS Comment Form

If it is true that the DOE at this date (8-30-00) "has no preference" for any of the 6 alternatives in the PEIS, then why are the 3 tasks and tripod and comments made by the DOE at this hearing in support of Pu238 for medical + space technologies? Where are the beautifully done displays for alternative 5, ~~where are they~~ in particular? I am for clean energy - I am for the health + well-being of our citizens - I am for workers + quality employment opportunities - I am for business - but I am NOT for anything which risks the ultimate health + well-being of our citizens. What is causing this level of cancer and ill-health in our population in the first place? Why does the US use so much more energy per capita than any other country? We need to look at solutions to the underlying problems presumably addressed by ETRF - not use a supposedly "low-risk" technology with devastating potential consequences should our human infallibility kick in. Remainder The Titanic?

**There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:**

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): Pennie Stasik O'Grady

Organization: \_\_\_\_\_

Home/Organization Address (circle one): 8033 Maryland Ave N

City: Seattle State: WA Zip Code: 98103

Telephone (optional): \_\_\_\_\_

E-mail (optional): \_\_\_\_\_

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50  
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874  
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592  
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



## Response to Commentor No. 259

259-1

259-1: The displays developed for the public meeting were not intended to convey a preference for any alternative. The displays were developed to address the information contained in the Draft PEIS.

259-2

259-2: DOE notes the commentor's concerns. However, the many factors contributing to current U.S. cancer levels and energy demands are not within the scope of the NI PEIS. Rather, the NI PEIS evaluates a range of reasonable alternatives for maintaining and enhancing DOE's existing nuclear facility infrastructure for the purposes of addressing three primary needs:

- 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;
- 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and
- 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Section 1.2 of Volume 1 has been revised to clarify the purpose and need of the proposed action.

Potential environmental, health, and safety impacts associated with the proposed action are relatively low, and are discussed in detail in Chapter 4 of Volume 1 and associated appendixes in Volume 2 of the NI PEIS.

***Commentor No. 260: Ralph Nielsen***

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Ralph Nielsen  
4182 Ironton Drive  
West Richland, Washington 99353

I would like to thank the Department of Energy for preparing the PEIS and considering restart of FFTF to produce medical isotopes, plutonium-238 and for nuclear research and development. I believe these missions are important to this nation. Production of medical isotopes is costly and needs government support so that a stable and varied supply of specialized isotopes is available to the medical and research community. I believe that only a facility like FFTF can create these special isotopes.

FFTF can be operated safely with very minimal impacts to the environment. The facility provides the greatest flexibility and capability of any of the alternatives that were evaluated in the PEIS. I believe that it should be selected as the preferred alternative.

**260-1**

***Response to Commentor No. 260***

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**260-1:** DOE notes the commentor's support for Alternative 1, Restart FFTF.

## Commentor No. 261: Jim Montano

### PEIS COMMENTS

I would like to go on record in support of the FFTF option in the PEIS based on the demonstrated mission capability of the FFTF. I do have a major concern that some people will oppose FFTF just because it is part of the Hanford Site and/or that it is a nuclear facility. It is in the best interest of Washington, the Northwest and the country to examine the factual data available and to not be misled by inaccurate information and fear of the unknown or unfamiliar.

As citizens and taxpayers it should be in all our interests that our nations assets and resources are utilized to the best extent possible. FFTF is a known commodity, not a new risk operation or process. It has previously demonstrated 10 years of outstanding capabilities and safe operation. It is not a single use facility and can be effectively utilized for materials testing, energy research, support of NASA space missions, and most importantly to the general public a wide spectrum of medical isotope production that can meet quantity and quality needs in this growing field. Medical isotope production provides a significant opportunity to improve the future health care for all our citizens.

In closing, I urge all citizens and the DOE to base the PEIS decision on factual data including the cost effectiveness and versatility of the alternatives. Lets all contribute to keeping the PEIS process open, factual and avoid unfounded rhetoric and statements.

Jim Montano  
2519 Allegheny Ct.  
Richland, WA 99352

261-1

## Response to Commentor No. 261

261-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

## Commentor No. 262: The Sierra Club

### Testimony Regarding the Draft Environmental Impact Statement on the Proposed Re-Start of the Fast Flux Test Facility at Hanford

The Sierra Club  
Carole Woods, Cascade Chapter  
Aug. 30, 2000

We are deeply dismayed that the Department of Energy is considering re-starting the FFTF in the face of a 'slow-motion catastrophe' comprised of extensive contamination of air, land, and water on and around the Hanford Nuclear Reservation. While sixty-nine huge underground storage tanks are known to be leaking extremely radioactive and toxic materials, all resources should be directed to mitigating this and other problems at Hanford. To divert any resources toward anything else at Hanford is unconscionable.

In 1995 the Department of Energy promised (in the Hanford Cleanup Agreement) to shut down the FFTF and use the money saved for higher priority cleanup. Instead, USDOE has spent more than 100 million dollars of cleanup money to keep the FFTF on hot stand-by while searching for a mission to justify re-start. Arguments for re-start are ludicrous. Specifically:

#### Plutonium 238 for NASA:

NASA has stated they have no need to purchase Plutonium-238 for the specific space mission used to justify FFTF restart.

#### Medical Isotopes:

USDOE's own Subcommittee for Isotope Research and Production Planning concluded that FFTF is not a viable source for medical research radioisotopes. Even the Washington State Medical Association says there is no need for FFTF as an additional source of medical isotopes.

Finally, the Draft Environmental Impact Statement misleads the public by omitting information that shows that FFTF restart is dangerous and unnecessary. Specifically:

#### Cost:

The costs of restarting the FFTF are not disclosed.

#### Nuclear Fuel for the FFTF:

The need to ship weapons-grade Plutonium fuel through Puget Sound is not mentioned.

#### Nuclear Waste From the FFTF:

The effects and risks of waste production, storage, reprocessing and transportation resulting from the FFTF re-start are not disclosed.

There's an important question of stewardship here. We do not feel that the Pacific Northwest is ours to pollute and deplete at will. We believe it is a trust that we must protect for future generations. We must do all we can to restore the Hanford region, including the groundwater and Columbia River, to a state of cleanliness that will not threaten the people, or wildlife that will live there for a very, very long time.

I have lost count of how many years I've testified at hearings like this on FFTF re-start. At every one of those hearings I observed that the vast majority of those testifying -- all who did not have financial interests in Hanford -- were clearly and strongly opposed to FFTF re-start. How many times do the majority of citizens of this region have to tell you that we want cleanup, not more nuclear waste at Hanford, before you will act on our mandate?

In summary, the DEIS for FFTF re-start is incomplete. It omits information that proves that there is no justification for FFTF re-start, and that the risks of restart are unacceptable. Moreover, the Department of Energy made a promise in the Tri-Party Agreement to make cleanup Hanford's primary mission. Re-starting the FFTF will be a violation of that promise.

## Response to Commentor No. 262

**262-1:** DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

The U.S. Congress funds Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM). Congress also funds FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The proposed actions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

Hanford tank waste issues are not within the scope of this PEIS, as none of the alternatives considered would add to these waste volumes.

**262-2:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

**262-3:** Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science

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### *Commentor No. 262: The Sierra Club (Cont'd)*

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### *Response to Commentor No. 262*

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and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. DOE does not stockpile large quantities of Russian plutonium-238 long in advance of needs due to budget constraints and the additional processing required to remove decay products that occur following extended storage of the material.

The May 22, 2000, correspondence from NASA to DOE identifies that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium 238 to support deep space missions. Rather, SRTG development efforts were stopped in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires one-third less plutonium-238 as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000, letter to DOE that large RTGs be maintained as backup. Section 1.2.2 of Volume 1 was revised to clarify plutonium-238 mission needs.

The major mission of FFTF would not be the production of plutonium-238. Rather, all three missions are of equal importance; no one mission is given priority in the NI PEIS.

- 262-4:** The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and

## *Commentor No. 262: The Sierra Club (Cont'd)*

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## *Response to Commentor No. 262*

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conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

DOE has taken the Expert Panel and NERAC report recommendations under consideration in developing the range of alternatives evaluated in the NI PEIS. These reports were made available to the public at the NI PEIS public information centers and on the Internet at <http://www.nuclear.gov>.

**262-5:** This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS. DOE made every effort to obtain, analyze, and disclose all required information, including information on FFTF, to make a decision on expanding nuclear infrastructure. Further, DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives.

The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. DOE mailed this document to about 730 interested parties on August 24, 2000. The

## *Commentor No. 262: The Sierra Club (Cont'd)*

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## *Response to Commentor No. 262*

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report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P in the Final NI PEIS.

**262-6:** The commentor's concern about shipments of plutonium through Puget Sound is noted. None of the proposed alternatives would involve the shipment of weapons-grade plutonium to any port in the United States. Alternative 1 does postulate that DOE might decide at some point to import mixed oxide fuel from Europe to fuel FFTF. At this time, however, DOE has not proposed to import this fuel through any specific port. If DOE ultimately decides to restart FFTF and to import fuel from Europe, it would perform a separate NEPA analysis to select a port. This review would address all relevant potential impacts of overseas and inland water transportation, shipboard fires, package handling, land transportation, as well as safeguards and security associated with the import of SNR-300 mixed oxide fuel through a variety of specific candidate ports on the east and west coasts. It would consider all public comments, including local resolutions, concerning the desirability of bringing mixed oxide fuel into the proposed alternative ports.

In the event that DOE decides to enhance its nuclear infrastructure, it would not expose any population to high, unacceptable risks under any alternative. Any transportation activities that would be conducted by DOE would comply with U.S. Nuclear Regulatory Commission and U.S. Department of Transportation regulations. Associated transatlantic shipment would comply with International Atomic Energy Agency requirements. In Section J.6.2, DOE reviewed the potential maximum impacts from the marine transportation of mixed oxide fuel from Europe to a representative military port, Charleston, South Carolina, and overland transportation to Hanford. Also in that section, a bounding analysis demonstrates that the maximum potential radiological risks to the surrounding public from mixed oxide fuel shipments would be extremely small (e.g., less than 1 chance in a trillion for a latent cancer fatality per shipment from severe accidents at docks and in channels and less than 1 chance in 50 billion for a latent cancer fatality per shipment from overland highway accidents).

**262-7:** This NI PEIS addressed wastes produced for each alternative, as well as cumulative impacts related to waste production. In particular, Section 4.3.1.1.13 of Volume 1 provides information on waste that would

## *Commentor No. 262: The Sierra Club (Cont'd)*

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## *Response to Commentor No. 262*

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be associated with the restart of the FFTF. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. In most cases, wastes will be managed on the site it was generated. Transportation of waste off site is covered by other NEPA review specific to the site of waste generation.

**262-8:** DOE notes the commentor's concerns regarding potential impacts to groundwater and the Columbia River. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

More specific to the alternatives presented in the NI PEIS, FFTF is located approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to the groundwater. Analyses presented in Chapter 4 of the NI PEIS (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4) indicate that there would be no discernible impacts to groundwater or surface water quality at Hanford from normal operation of the existing Hanford facilities in support of the stated missions. Also, no water quality impacts would be expected as a result of permanent deactivation of FFTF (Section 4.4.1.2.4).

The environmental impacts associated with operation of the FFTF and support facilities at Hanford during normal operations and from postulated accidents are presented in Section 4.3 of the PEIS. All impacts to human health and ecological resources, e.g., wildlife, were demonstrated to be small in the immediate area of the Hanford Site and negligible at all distant locations.

**262-9:** This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE

## *Commentor No. 262: The Sierra Club (Cont'd)*

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## *Response to Commentor No. 262*

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implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS. Further, DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives. DOE made every effort to obtain, analyze, and disclose all required information to make a decision on expanding nuclear infrastructure. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

- 262-10:** The environmental impacts associated with operation of the FFTF are addressed in detail in Section 4.3 of the NI PEIS. The impacts are shown to be small. These impacts specifically include the risks to human health during normal operations and associated with postulated accidents. Over the 35-year operational period no fatalities would be expected among workers or in the general public.
- 262-11:** Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy ). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- Ecology, EPA, and DOE agreed to a change in the Tri-Party Agreement to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on FFTF's future. Public meetings were held on this formal milestone change. The NI PEIS missions would not have an impact on Hanford cleanup activities.

**Commentor No. 263: Gary Boehnke**

My name is Gary Boehnke and I am speaking today as private citizen who has resided in eastern Washington for 23 years. In recent years I have watched several close family members during their fights to survive battles with cancer. Sadly, one was not successful.

It is extremely important that the United States develop and maintain a means of producing a much greater supply of isotopes for medical research, diagnostic and therapeutic use. The demand for an increasing amount and wider variety of isotopes is growing and the U. S. now only produces about 10% of what it needs and must rely on sources outside the country. The FFTF is the quickest and safest way to begin producing the high quality isotopes needed by the medical and research communities while a national long term production strategy is finalized and we citizens of Washington should be proud to be able to play a vital part in serving this growing need.

I have worked in commercial industry including shipyards and can assure those with concerns about waste that by design and proven after 10 years of excellent operation ratings there is no waste problem at FFTF. Anyone in this room can go to the site right now and observe the fuel used to date safely stored in concrete containers in a space about the size of a basketball court. My kids and grandkids have used the Columbia river for recreation for many years and the FFTF is not a cause for concern to that activity since it's operation is completely self contained.

I am proud to support the restart of a facility that can help all of us and also proud to have it "IN MY BACKYARD".

  
GARY BOEHNKE  
6012 N. CONWAY PL.  
KENNEWICK, WASHINGTON

**Response to Commentor No. 263**

263-1

263-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

263-2: See comment response 263-1.

263-2

## Commentor No. 264: *Bernie Patterson*

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Good Evening,

My Name is Bernie Patterson and I would like to offer this personal testimony on behalf of restarting the FFTF. I am a concerned citizen, representing myself.

Isotopes are an extremely important tool used in the life sciences. 13 million medical procedures and 100 million lab tests use isotopes every year in the U.S. 80% of all newly approved drugs use isotopes during research and development. Without question, medical isotopes have a tremendous role in our health care yet the true benefits of isotopes are just now starting to be realized.

Until now, most medical isotopes were used in diagnosing injuries and diseases. The main isotope used in these diagnostic procedures is technetium-99m, which is derived from its parent isotope molybdenum-99. Large quantities of this isotope are easily produced in small reactors, such as the ones in Canada that now provide most of our supply. Most other diagnostic isotopes are produced in accelerators or cyclotrons scattered across the U.S. Recent advances in biotechnology have opened a whole new dimension for the role of isotopes in treating diseases like arthritis, heart disease, and cancer. Isotopes can now be effectively attached to antibodies and other biological targeting tools that are designed to seek out unwanted tissues such as cancer cells. The isotope can then deliver its close range particles to kill the unwanted cell.

Therapeutic isotopes are fundamentally different than their diagnostic cousins. Therapeutic isotopes need to deliver large amounts of killing energy over very short distances. For this reason therapeutic isotopes need to give off alpha or beta particles. These particles come from radioactive isotopes that are neutron-rich and seek to obtain stability by ridding themselves of excess neutrons...in the form of alpha and beta particles. These isotopes are generally made in reactors, not accelerators or cyclotrons. Accelerators and cyclotrons make neutron-poor isotopes. These isotopes decay by methods that produce photons that can be used by special cameras to provide a picture of what's happening in a particular area of the body. Accelerators and cyclotrons cannot effectively make large quantities of therapeutic isotopes.

264-1

## Response to Commentor No. 264

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264-1: DOE notes the commentor's support for greater availability of medical isotopes.

264-2: DOE notes the commentor's support for Alternative 1, Restart FFTF.

*Commentor No. 264: Bernie Patterson (Cont'd)*

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As stated several years ago in the often- misquoted Institute of Medicine report on isotopes, "if isotopes become important for cancer therapy, the current number and condition of reactors in North America will be inadequate". As of now, isotopes are becoming very important in curing cancer and other diseases. The main problem is that there are not enough isotope production reactors in the U.S. to meet even the demand for clinical trials of certain isotopes much less be able to meet the demand when these trials are finished and the therapy gets approved by the FDA.

264-1  
(Cont'd)

As shown in report after report, the DOE infrastructure is not capable of providing the variety and quantity of isotopes that will be required by the medical and research communities, and the millions of patients over the next several decades. Indeed, enhancing this infrastructure is the purpose of the PEIS and of these public hearings.

The FFTF is the only reactor in North America that has the volume, high flux, and overall capabilities to make a significant contribution towards meeting this nations' need for isotopes, while also meeting the other mission needs in the PEIS. It is a unique asset to the Pacific Northwest, and to the United States. When first built and operated it was labeled as the finest test reactor in the world yet many felt that the FFTF was ahead of its time. Well, its time has come and the FFTF is ready to meet the challenges of producing the next generation of therapeutic isotopes. Isotopes that will dramatically alter the course of our war on cancer, providing superior, low-cost care to millions of suffering patients.

264-2

*Response to Commentor No. 264*

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**Commentor No. 265: Sam Volpentest****TRIDEC**


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 TRI-CITY INDUSTRIAL DEVELOPMENT COUNCIL
 

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901 N. Colorado, Kennewick, WA 99336-7685 USA 1-800-TRI-CITY 509-735-1000 509-735-6609 fax tridec@tridec.org www.tridec.org

September 13, 2000

Colette E. Brown, NE-50  
 U.S. Department of Energy  
 19901 Germantown Road  
 Germantown, MD 20874

DRAFT PROGRAMMATIC ENVIRONMENTAL STATEMENT  
 FOR  
 ACCOMPLISHING EXPANDED CIVILIAN NUCLEAR  
 ENERGY RESEARCH AND DEVELOPMENT AND  
 ISOTOPE PRODUCTION MISSIONS IN THE UNITED STATES  
 INCLUDING THE ROLE OF THE FAST FLUX TEST FACILITY (NI PEIS)

Dear Ms. Brown:

Transmitted herewith, is a copy of the statement made by William Martin, President of the Tri-City Industrial Development Council, at the NI-PEIS hearing in Richland, Washington on August 31. As indicated in our statement, TRIDEC and the regional business community strongly supports the restart of the FFTF to meet the national programmatic needs described in the draft EIS. We are submitting this statement for inclusion in the record of the EIS hearings.

Subsequent to the preparation of this statement, we have received and reviewed the supporting Alternative Cost Analyses and the Non Proliferation Impact Assessment reports. We support the conclusion in these reports that the FFTF provides the lowest cost alternative for meeting the mission needs, and restart of the FFTF does not raise any significant non-proliferation concerns.

We also wish to thank you for the conduct of the EIS hearings. The hearings were carried out in a controlled, fair and balanced manner. All of the competing and conflicting interests represented at the hearings were provided with balanced opportunities to present their views on this subject, which is of significant interest in this region. The patience and conduct of you and your staff during the hearing process is commendable.

We appreciate the opportunity to present our views on the FFTF.

Very truly yours,

Sam Volpentest  
 Executive Vice President

**Response to Commentor No. 265**

## Commentor No. 265: Sam Volpentest (Cont'd)

### TRIDEC



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TRI-CITY INDUSTRIAL DEVELOPMENT COUNCIL

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NUCLEAR INFRASTRUCTURE  
DRAFT ENVIRONMENTAL IMPACT STATEMENT  
EXPANDED CIVILIAN NUCLEAR ENERGY RESEARCH & DEVELOPMENT  
DOE/EIS-03100

August 31, 2000

Thank you for the opportunity to provide comments regarding this Draft Environmental Impact Statement. My name is Sam Volpentest and I am the Executive Vice President of TRIDEC. The Tri-City Industrial Development Council is a non-profit organization, whose objective is the economic development and health of the Tri-City area, which encompasses the Hanford site. Our membership is composed of over 500 businesses, organizations, labor, and governmental entities interested in the welfare of the Tri-Cities.

TRIDEC strongly supports the objectives of the Department's Nuclear Energy Program and specifically endorses the implementation of the various missions identified and evaluated in the Draft EIS. We also strongly support and urge the identification of the Fast Flux Test Facility as the preferred option for accomplishing these missions.

The Draft EIS evaluation of these alternatives clearly shows the capability and superiority of the FFTF over the other alternatives considered. The FFTF is the most modern reactor available in the DOE complex, was designed and constructed to meet both Department of Energy and Nuclear Regulatory Commission requirements and operated flawlessly for over ten years with no significant safety incidents or issues. With its large volume core, it has the capability to carry out a number of production or research and development missions simultaneously. The proposed low power operation of the reactor provides added safety margins above the already high standard safety requirements established for this reactor.

The FFTF was never intended for or utilized in nuclear weapons production missions and none are proposed or considered in the current Draft EIS evaluation.

The FFTF has the demonstrated capability to produce a number of medical isotopes which are either unavailable or in limited supply. There is a significant national need for the production of these isotopes, many of which cannot be effectively produced in an accelerator. An accelerator of the size and energy level, which would be required for this mission, does not exist and the construction of such a speculative untried machine in the future is highly questionable.

The startup and operation of the FFTF for the missions evaluated in this EIS will not interfere with or detract from the Hanford cleanup mission. The funding for FFTF programs is provided through Nuclear Energy program appropriated funds, which by law are separately appropriated and segregated from the Environmental Management program. Conversely, if the decision were to be

## Response to Commentor No. 265

**265-1:** The commentor's support for implementation of Alternative 1, Restart FFTF, is noted. The Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, costs, nonproliferation issues, schedules, technical assurance, policy, and program objectives.

The commentor's position concerning FFTF capabilities is noted. Descriptions of the capabilities of candidate irradiation facilities are discussed in Section 2.3.1 of Volume 1.

The commentor's positions on socioeconomic impacts and the supply of medical isotopes that would result from implementation of Alternative 1 are noted. Socioeconomic impacts that would result from implementation of Alternative 1 are discussed in Section 4.3 of Volume 1. Section 2.7.3 of Volume 1 contains a discussion of the mission effectiveness of the alternatives.

**265-2:** As discussed in Section 1.2 of Volume 1, the nuclear infrastructure missions are unrelated to the national defense or weapons production.

The commentor's support of FFTF for radioisotope production is noted. As stated in Section 2.3.1.1 of Volume 1, during its operation, FFTF successfully produced a variety of medical isotopes. Section 2.5 of Volume 1 describes alternatives, including the construction of one or more accelerators, for accomplishing the nuclear infrastructure missions. Section 2.7.3 contains a discussion of the mission effectiveness of the Alternatives. Accelerators are not speculative or untried. DOE and the U.S. have considerable experience in designing, building, and operating accelerators similar to the accelerators that would be constructed and operated under Alternative 3.

**265-3:** The commentor is correct on the separation of NI PEIS mission and Hanford cleanup funding sources and a possible impact of deactivation of FFTF on existing cleanup activities. FFTF restart and operation would not impact the schedule or available funding for existing cleanup activities.

**265-4:** DOE notes the commentor's views that Alternative 1 options involving the restart of FFTF are preferred on the basis of associated environmental and socioeconomic impacts. No decisions have been made with regard to the facilities and locations evaluated to fulfill the requirements of the stated missions, which include the production of

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**Commentor No. 265: Sam Volpentest (Cont'd)**  
**TRIDEC**

made to shutdown the FFTF and decommission it, then responsibility for the facility would be transferred to the Environmental Management program. This would have a major negative impact on the limited cleanup program funding which is available.

The opponents of the FFTF have made a number of allegations regarding safety and waste management issues related to the operation of the FFTF. These allegations are not factually correct and are being responded to by other commenters who support the FFTF. We will not repeat these issues in this statement but are enclosing two attachments for record purposes, which provide issue papers on these topics and respond to recent public statements by the opponents.

We wish to call your attention to the agreement reached between DOE and the State of Oregon and Washington for the preparation of a "Waste Management and Minimization Plan" to ensure that FFTF waste issues do not negatively impact the Hanford Site cleanup programs.

We believe that the FFTF has been clearly identified in the EIS studies to be the preferred options for meeting the identified program missions without any significant negative social, environmental, or economic impacts. Operation of the FFTF will provide significant positive economic and social impacts not only to the Pacific Northwest, but also to the nation. The supply of currently unavailable or limited medical isotopes for general use is of particular significance.

Local area business, labor and governmental leaders strongly support the restart and operation of the FFTF. During the review of the draft EIS, we expect that these interests as well as our Congressional Delegation will submit strong statements of support for restart of the EIS. We expect that regional and national environmental interests will also continue to express their opposition to operation of the reactor. However, these are not the views of the local community and reflect a "knee jerk" reaction to any new programs at Hanford and in particular to any consideration of restarting the Fast Flux Test Facility. We have reviewed recent letters and press releases, which have been released by these interests regarding the FFTF. Many of the allegations contained in these papers are factually incorrect or scare statements and do not apply to the current program proposals.

We have submitted to the Department as an attachment to previous testimony a compilation of position statements and letters from our Congressional Delegation, the State of Washington, and other regional interests supporting the FFTF. Please consider this previous submission for inclusion in the record of this hearing. We expect that this same level of support will continue to be available in support of the FFTF for the currently proposed missions.

We request that the assets of the FFTF receive an objective, balanced, and realistic evaluation of the alternatives during the preparation of the Record of Decision on this Environmental Impact Statement.

Thank you for the opportunity to present our views on this subject.

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(Cont'd)

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**Response to Commentor No. 265**

medical and industrial isotopes, the production of plutonium-238 for NASA space missions, and nuclear research and development. In accordance with Council on Environmental Quality regulations (40 CFR 1502.14(e)), DOE has identified its preferred alternative in Section 2.8 of the Final NI PEIS. The Record of Decision for the PEIS will be based on a number of factors including environmental impacts, costs, public input, nonproliferation issues, schedules, technical assurance, policy, and program objectives.

**265-5:** DOE notes the commentor's views and contention that local interests support Alternative 1, Restart FFTF. In preparing this NI PEIS, DOE carefully considered all scoping comments received from the public, and all comments received during the scoping periods are part of the Administrative Record for this NI PEIS. The Record of Decision for the PEIS will be based on a number of factors including environmental impacts, costs, public input, nonproliferation issues, schedules, technical assurance, policy, and program objectives.

## Commentor No. 266: Sol Guttenberg

Good evening. My name is Sol Guttenberg and I am representing myself. I recently went to the Heart of America Northwest homepage to see what information they were making available to the public about FFTF. One article that really caught my eye is called "Nuclear Safety at FFTF and Hanford: Unsafe, Unregulated, No Public Right to Review". I was amazed at the inaccuracy and misleading nature of the articles that I found there. It is truly unfortunate that distortions and fabrications are being circulated to create unsupported fear and distrust in people that live in the Northwest. Public opinion plays an important role in the Department of Energy's decision making process. Each of us here tonight will be affected by these upcoming decisions, especially those related to medical isotope production. I would like to set the record straight on some of the inaccuracies in this article. It would take most of the evening to address each false statement, so I will limit my response to a few examples.

One HOA topic area states "Government planning documents reveal that if FFTF were to resume production, the risk of a large radiation release accident serious enough to require crop seizure and mass evacuation is as high as 30%." The accident referred to is associated with the drop of a cask containing tritium targets. It is also interesting to note that the probability of this particular accident is incredible which means that it has less than 1 in a million chance of occurring, not the claimed 30 percent. Not only was this quote taken out of context, it doesn't even relate to the missions being discussed here tonight! FFTF will not be making tritium if restarted. HOA apparently likes to use this misrepresentation over and over again to frighten the public.

Another misinformed HOA topic area states " FFTF will require Highly Enriched Uranium or Plutonium fuel, which was the type of fuel being fabricated at Tokaimura, Japan... In light of the recent accident in Japan, many are concerned that a similar accident could happen here." Operation of FFTF does not involve the fabrication of any nuclear fuel at Hanford so how can there be a risk to the region? If additional fuel for FFTF is eventually required, it is expected that it would be fabricated at an existing commercial facility. The U.S. nuclear fuel fabrication facilities have an exemplary safety record, including the fabrication of highly enriched fuel for the U.S. Navy. Existing DOE reactors and many international test reactors safely use highly enriched uranium fuel.

Lastly, HOA states "Nor does USDOE plan to disclose that Plutonium and target processing will add more liquid High-level Nuclear Wastes to Hanford's leaking and explosive High-Level Nuclear Waste tanks." This is an example of using scare tactics to reach an unsupported conclusion. As stated in the PEIS, FFTF has never generated high level waste, nor will any high

## Response to Commentor No. 266

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266-1: DOE notes the commentor's views and observations. DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and to providing ample opportunity for public comment on those actions.

266-2: DOE notes the commentor's support for Alternative 1, Restart FFTF.

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**Commentor No. 266: Sol Guttenberg (Cont'd)**

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level radioactive waste be generated by any of the proposed missions. Since no waste of this type will be generated, the truth is that not a single drop of waste will be added to Hanford's high-level waste tanks. Well, there goes HOA again. They continue to use this outright falsification to suit their needs.

I would challenge each of you tonight to keep an open mind, carefully evaluate where you are obtaining your information on these important issues, and formulate your own opinions based on truth and facts. The very vocal antinuclear activists in this area are not large in number, but they are quite skilled at taking information and data out of context and twisting it to meet their own agenda. It is clear to me that these groups do not represent the good of the public at large. I believe that FFTF is the best alternative evaluated in the PEIS. It provides the greatest capability and flexibility to meet the proposed mission needs.

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(Cont'd)**

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**Response to Commentor No. 266**

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## Commentor No. 267: Pat Schweiger

### Nuclear Research and Development

Hello. My name is Pat Schweiger. I live in Kennewick, Washington, and I am here representing myself. I fully support conducting the three missions outlined in the PEIS using Alternative #1, which is to Operate the FFTF. I would like to focus on one of the missions in particular – the expanded nuclear research and development work.

I believe nuclear energy is very important in meeting increasing electrical power needs and in helping to protect the environment. In the United States, nuclear energy is the second largest source of electricity and generated about 20 percent of all electricity in 1999.

Nuclear power plants do not have a combustion process like that in a fossil-fuel plant. The heat in a nuclear power plant is produced by a process in which atoms of uranium or plutonium in fuel rods are split by neutrons in a controlled reaction to produce heat. Coolant water absorbs this heat from the fuel rods which is used to produce steam to generate electricity. Since this process does not involve any combustion, nuclear power plants emit none of the combustion gases associated with air pollution, acid rain, or global climate changes. Nuclear power plants are thus a key factor in reducing greenhouse gas emissions. For example, in 1999, if the electricity produced by the 103 nuclear power plants in the U.S. had instead been produced by coal or oil fired plants, 90 million cars would have to be removed from America's highways just to maintain air quality at its current level.

With the current shortage of electricity just to the south of us in California and developing elsewhere, with oil and gas prices skyrocketing, and with a growing need for electricity worldwide, the role of nuclear power in producing safe, reliable electricity is likely to increase. This will be particularly true when it comes time to meet greenhouse gas restrictions specified in the Kyoto accord. To ensure that nuclear power will be a viable option for the future, it will be necessary to reduce nuclear waste, to provide more proliferation resistant fuel and to develop the technology for cheaper, more efficient power plants. To do these things requires a renewed nuclear energy research and development program.

## Response to Commentor No. 267

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267-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

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267-2: DOE notes the commentor's support for nuclear research and development initiatives.

## ***Commentor No. 267: Pat Schweiger (Cont'd)***

Current U.S. nuclear power plants are based on the technology of the 1970's to early 1980's and include very large design margins to address any technical uncertainties and to ensure safety. Improvements in materials and nuclear fuel behavior as well as investigation of advanced design concepts will lead to plant designs with improved performance and economy of operation. Future reactor technologies are likely to involve higher temperatures which will improve plant thermal efficiency and reduce costs, will use longer life nuclear fuel rods which will reduce the amount of spent nuclear fuel generated, and may use different coolants. Testing of these concepts and improved materials will require irradiation in a reactor environment.

**267-2  
(Cont'd)**

The FFTF can make a significant contribution to the nuclear research and development needed. The FFTF is unique in the United States and is one of only several reactors in the world that has a combination of high temperature, high neutron flux, and fast neutron energy spectrum with a liquid metal coolant that makes it ideal for many types of advanced irradiation testing. The FFTF has performed flawlessly in conducting extensive testing on various materials and nuclear fuels. This included international testing of materials for a fusion reactor which could have major positive environmental impacts as an energy source in the future. The neutron flux in the FFTF can also be adjusted (tailored) to different energies to provide custom irradiation environments providing greater flexibility.

**267-1**

I believe that the modern FFTF reactor and associated support facilities represents a multi-billion dollar national asset that is essential to ensuring that a clean and reliable nuclear energy option be maintained for our future. I strongly urge the Department of Energy to restart the FFTF to help ensure that there will be a viable nuclear energy option when it is needed.

## ***Response to Commentor No. 267***

## Commentor No. 268: Robert R. Beach

TESTIMONY AT THE NI PEIS PUBLIC HEARING – SEATTLE, OREGON – AUGUST 30, 2000  
BY  
ROBERT R. BEACH OF KENNEWICK, WASHINGTON

I, Robert R. Beach, residing at 7803 West Deschutes Ave. Kennewick, Washington would like to make the following personal statement related to the DOE request for public comment on their draft Nuclear Infrastructure Environmental Impact Statement.

First, I commend the efforts to make this an actual public hearing, as opposed to a political sideshow. I will attempt to stay away from political cliché and outright propaganda and lies. Unfortunately, you will hear more untruths than truths here tonight from the representatives of supposedly public outcry organizations.

Secondly, the DOE should be commended for the recognition that they require additional resources to provide the public services that they are charged with doing. This is contrary to the tenets of the present Clintonesque oligarchy, and certainly required courage and moral fiber.

As for technical comments:

First, the DOE should proceed with the development of an enhanced nuclear infrastructure with the utmost in speed and great determination. The gains to the people of the United States are extremely clear, and urgent to meet. We are presently frittering away every opportunity due to inaction.

Second, it should be noted, that from an environmental impact standpoint, each of the alternatives contained in the EIS is completely acceptable. From an environmental standpoint, this EIS is actually unnecessary and only serves to meet the legal requirement. The care of the environment is being engineered into the systems and processes.

Third, the DOE should carefully review each alternative to define the extent to which that alternative meets the requirements of the three missions. The concern is that some of the options are “cheapies” that attract the political eye, but actually are not capable of meeting the needs of the three missions.

Fourth, the DOE should utilize available resources rather than shutting down and deactivating one facility, so that they can build another. This is not good management of my taxpayer funding. There is altogether too little attention paid to what is thrown away – since it doesn’t require funding.

Fifth, the DOE should carefully review the costs for the Alternatives 3 and 4 that are provided in the Cost Study. These costs, particularly for the low-power accelerator and the pool reactor are sorely underestimated. In my opinion, there is no way that the DOE can obtain and operate these facilities with the required supporting facilities and services for the stated costs. The capability of the described systems to meet each of the three mission goals is also highly questionable, without extended designs and much higher costs.

Sixth, the cost benefit for this Nuclear Infrastructure Program goes far beyond the DOE. For example, in the case of medical isotopes, the benefits accrue to the taxpayers themselves, the insurers for the medical industry, and finally to the administrators of MEDICARE. The first return in battling cancer through the use of radioisotopes is the better chance for recovery for any of us who may be afflicted. But, the financial return to each group is also extraordinary, and these are not presently considered a part of the DOE decision, in fact, they are not even discussed. It is time that the needs of the taxpayer are considered – not the political needs of the politician.

Seventh, the DOE should break itself free from the encumbrances of the “Nuclear Weapons and Cleanup” missions, and begin to fill the needs of the American public. The full capabilities of the nuclear medicine alternatives need to be exploited, and support for the civil use of nuclear energy needs to be greatly

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## Response to Commentor No. 268

**268-1:** DOE notes the commentor’s views and remarks concerning the Seattle, Washington, public hearing.

**268-2:** DOE notes the commentor’s support for the proposed action.

**268-3:** The results of analyses described and shown in the NI PEIS indicate that from an environmental impact standpoint, each of the alternatives assessed in the NI PEIS is acceptable.

**268-4:** Section 2.5 describes each alternative analyzed in the NI PEIS. Part of that description includes a review of the extent to which each alternative can meet the purpose and need for agency action as described in Section 1.2. Volume 1, Section 2.7.3 compares the mission effectiveness among alternatives.

**268-5:** DOE notes the commentor’s views on costs, support for Alternative 1, Restart FFTF, and opposition to Alternative 3, Construct New Accelerator(s) and Alternative 5, Construct New Research Reactor. DOE acknowledges that Alternative 1, 3, and 4 do not meet the mission objectives in the same manner.

**268-6:** DOE notes the commentor’s concern about the cost benefit of the Nuclear Infrastructure missions described in the Final PEIS and the support for the stated missions. The estimated costs of the range of reasonable alternatives are presented in the Cost Report, summarized in Appendix P of the Final NI PEIS. However, the Cost Report is not a cost-benefit analysis. While it is reasonable to believe that the benefits of medical isotopes are substantial, the purpose of this NI PEIS is to describe the nuclear infrastructure missions (Section 1.2 of Volume 1), a range of reasonable alternatives for satisfying the mission requirements (Section 2.5 of Volume 1), and the environmental impacts that would result from implementation of the alternatives.

**268-7:** The commentor’s support of FFTF is noted. Many of the commentor’s FFTF facts are contained in PEIS Section 2.3.1.1 of Volume 1. Evaluation of the environmental impact of restarting FFTF, denoted Alternative 1 in the PEIS, is presented in the Summary, Section 2.7, and Section 4.3.

## Commentor No. 268: Robert R. Beach (Cont'd)

expanded. It is clear that there is no technical, health or environmental reason not to utilize the benefits of the technologies. LEADERSHIP IN THIS BENEFICIAL EFFORT IS WHY DOE EXISTS.

Eighth, the facts related to the Fast Flux Test Facility should be clearly presented to the public.

- The FFTF has already operated for ten years with no adverse environmental impact.
- The FFTF has demonstrated an excellent safety record during this period in addition to the extended standby period.
- The FFTF has already demonstrated production of many of the isotopes that are considered.
- Operation of the FFTF does not impact cleanup of the Hanford wastes.
- The FFTF can be operated for more than twenty years without having to manufacture any new fuel. This would also remove plutonium fuels from inventory that will otherwise probably require chemical processing to remediate.
- The reliability of FFTF is known. Any new facility of equal capability is an unknown.
- The FFTF is certainly not the "old" Hanford. If the FFTF was in any other DOE laboratory, it would probably already be in operation and providing beneficial services to the people of the United States.

I welcome this opportunity to present my comments for your consideration.

Sincerely,

  
Robert R. Beach

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(Cont'd)

268-7

## Response to Commentor No. 268

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***Commentor No. 269: Shirley Breitenstein***

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My name is Shirley Breitenstein. I lived in Richland, WA from 1974 to 1984. During that period I was married to Dr. Bryce Breitenstein who was chairman of Hanford Environmental Health Foundation.

I now live in Redmond, WA - however, spend many weekends in West Richland with a friend who is dying of bone cancer or in Kennewick with my oldest daughter and her family.

In the summer of '75 we were awakened by the phone in the middle of the night. Bryce was called to receive a patient at the decontamination center located next to Kadlec Hospital - a facility constructed at the request of Dr. Dag Norwood, a former chairman of HEHF. An explosion in the small room the patient had been working in had left him with pieces of glass and a highly radioactive substance imbedded in his face.

The newspapers were very interested in this accident. Within 2 days, Bryce was told by DOE authorities that he was not to speak to the newspapers. He was very aware of patient confidentiality. If you've ever been placed in that position, perhaps you know how it feels. He is presently working at a facility on Long Island. I would imagine he still says very little to the public.

The patient was held in the center for several weeks, finally released to a trailer parked nearby - with all water and waste contaminants that touched his body, placed in containers and taken to the site. A substance created by Battelle Laboratories and never before used on humans, was used on this patient.

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***Response to Commentor No. 269***

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## Commentor No. 269: Shirley Breitenstein (Cont'd)

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I believe very few people realize, in spite of our fantastic space travel and science fiction movies, what type of facility, expertise, money, technology, etc. it takes to keep one man alive after such an accident.

I believe very few people realize what a major disaster at Hanford would be like - least of all our politicians and perhaps even some of our Department of Energy experts. Do we consider the disaster at Chernobyl happened because that particular facility was not constructed properly nor maintained and monitored responsibly?

For years Hanford has been a vast piece of desert land in Eastern Washington that no one really cared about - sadly, even many of us who have lived there. One day someone must have said, "Oh dear!" "I do believe that a bit of the waste is not being held in their containers as we had hoped. This may become a problem."

I don't know what's out there or how much contaminant is already going into the beautiful Columbia river. I don't know how much money it's going to take to get it cleaned up or if it can be cleaned up. I also realize that the restart of the reactor would provide jobs for many people and boost the economy of the Tri-Cities and thus the economy of this state. But at what cost?

The Tri-City Herald recently printed a full front page article that described some of the many issues surrounding the clean-up and how the person in charge (described as quite responsible) had quit, apparently due to his frustration with DOE authorities. Even the people of the community were expressing frustration. That's unusual for a community that largely depends on Hanford for its survival.

269-1

## Response to Commentor No. 269

**269-1:** DOE notes the commentor's concern regarding the existing cleanup mission at Hanford and the risk of contamination to the Columbia River. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

***Commentor No. 269: Shirley Breitenstein (Cont'd)***

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As small children, our parents attempted to teach us we should clean up one mess before starting another. Parents are still giving their children the same messages but with what validity. Aren't we now adults that refuse to even see our messes.

Let's wake up and take responsibility. It would even be refreshing to hear our politicians take on a new slant with words that would encourage responsibility.

***Response to Commentor No. 269***

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## Commentor No. 270: Greg Bergquist

Greg Bergquist  
1312 Cedar Ave  
Richland, WA 99352

Good Evening. I'm Greg Bergquist, representing myself. I have a few points that I'd like to make in the next couple of minutes.

First, I'd like to thank the DOE for going forward with this PEIS. I too, as a private citizen, am concerned about the degradation of the DOE nuclear infrastructure and the associated impact that it has on the people in the Pacific Northwest as well as the nation. I recognize that completion of the PEIS is a key step in the decision process to enhance this capability, so that DOE can fulfill their obligation for the identified missions in the PEIS. I believe it is imperative that they do so and in a timely manner, with specific emphasis on promoting the development and utilization of diagnostic and therapeutic medical isotopes in conjunction with pharmaceutical firms by assuring an adequate and stable supply of these isotopes.

Second, the purpose of the PEIS is to address the environmental impacts of the proposed actions. It does, and it concludes that they are extremely small for all the alternatives under consideration. However, there is a major void that would likely prohibit the Secretary from making what I consider to be an informed decision, and that is, there is no comparison of capabilities for the alternatives. As a result, the implication is that Alternatives 1, 3, and 4 (i.e. startup of the FFTF, two new accelerators or a new reactor) all equally meet the mission needs. This is not the case. We the public can't tell if we're buying a VW, Cadillac, Minivan or truck. They all provide transportation, but they don't meet the same requirements. Therefore, it is essential that a technical comparison of capabilities for the alternatives be performed either as a stand-alone document or folded into the PEIS. In concert with the environmental consequences, cost information and other inputs, this will enable the decision process to move forward on an even keel and for the Department to recognize where they're getting the best bang for their buck.

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270-2

## Response to Commentor No. 270

**270-1:** DOE notes the commentor's support for the proposed action.

**270-2:** The summary of environmental impacts (Sections 2.7.1 of Volume 1) has been completely revised and reformatted in the Final NI PEIS for the reader to compare the environmental impacts between alternatives. Section 2.7.3 of Volume 1, "Comparison of Mission Effectiveness Among Alternatives," has been revised in the Final NI PEIS to provide the reader a better understanding of the medical isotopes that can be produced using accelerator technology (Alternative 3) and reactor technology alternatives (Alternatives 1 and 4).

**Commentor No. 270: Greg Bergquist (Cont'd)**

Greg Bergquist  
1312 Cedar Ave  
Richland, WA 99352

Third, I'd like to set the record straight with respect to the so-called diversion of funds that others indicate the startup of FFTF would have on the cleanup budget at Hanford. The reality is, there is no diversion. Funding for the potential restart of FFTF would be provided by Nuclear Energy, which is completely unrelated to the cleanup budget under Environmental Management. This funding level is approximately \$314M. If another alternative is selected, appropriate funding would still be required. It is also important to recognize that additional funding of \$281M would also be required to deactivate the FFTF. This funding would come from the Hanford cleanup budget and would have a significant impact on the Hanford cleanup. So, if FFTF is not selected as the preferred alternative, the cost to the DOE would be almost twice as much or greater for the first five years or so (roughly the deactivation time for the FFTF.)

Well, it seems to me that the conclusion is obvious. Selection of FFTF makes sense economically as well as environmentally and technically. The startup costs and shutdown costs are comparable. If shutdown, the hit on Hanford cleanup costs would be substantial. FFTF has the largest capability and flexibility of all the options. It is the premier test reactor in the world with a proven performance and a safety record second to none. I am sure that when the Department completes the capabilities comparisons, that I spoke to earlier, coupled with other technical input, they will come to the same conclusion that I have – and that is the FFTF is and should be the preferred alternative.

**Response to Commentor No. 270**

270-3

**270-3:** The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

270-4

**270-4:** Except for Alternative 2, the cost of implementing Alternatives 3 and 4 (construction of new accelerators or new research reactor) would be at least twice the cost of restarting FFTF, when FFTF deactivation costs are included. Volume 2, Appendix P contains the Cost Report Summary.

270-5

**270-5:** DOE notes the commentor's support for Alternative 1, Restart FFTF.

## Commentor No. 271: Heidi Wills

### Statement regarding FFTF Nuclear Reactor - Public Hearing - 8/30/00

Seattle City Councilmember Heidi Wills  
Read by Legislative Assistant Katy Carter

My name is Katy Carter and I work for Seattle City Councilmember Heidi Wills. Councilmember Wills is unfortunately out of town tonight, but I do have a statement from her to present.

I would like to emphasize my opposition to restarting Hanford's FFTF Nuclear Reactor.

First of all, restarting the reactor is unnecessary. Officials have claimed that it would produce needed medical isotopes and fuel for NASA spacecraft. However, the Department of Energy's own Nuclear Energy Research Advisory Committee concluded that "the reactor will not be a viable source of research isotopes." In addition, NASA has informed the Department of Energy that it no longer needs the fuel the FFTF might have produced.

Secondly, the FFTF poses great risks to human health and to the environment. Nuclear waste from the facility may contaminate the water used by the people of Puget Sound, threatening the health of millions of people as well as endangered salmon and other parts of our ecosystem.

Finally, I am concerned that there has not been enough public input into the decision to restart the FFTF. The Department of Energy should disclose the costs of restarting FFTF and the effects of waste production before public hearings are held, so that the public is fully informed.

Thank you for the opportunity to speak about this important issue.

271-1

271-2

271-3

271-4

## Response to Commentor No. 271

**271-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

**271-2:** The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April, 2000, regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

The May 22, 2000, correspondence from NASA to DOE identifies that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium 238 to support deep space missions. Rather, SRTG development efforts were suspended in order to permit reprogramming of funds to support development of a new power system based on a Stirling technology generator. This new power system, referred to in the subject correspondence, similarly requires plutonium-238 as its fuel source. Section 1.2.2 was revised to clarify plutonium-238 mission needs.

**271-3:** The potential health and environmental impacts associated with operation of the Hanford facilities during normal operations and from postulated accidents are presented in Section 4.3 of Volume 1. All impacts to human health and to ecological resources would be small in the immediate area and negligible at all distant locations.

*Commentor No. 271: Heidi Wills (Cont'd)*

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*Response to Commentor No. 271*

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**271-4:** No decisions have been made with regard to the facilities and locations evaluated to fulfill the requirements of the stated missions. In accordance with Council on Environmental Quality regulations (40 CFR Section 1502.14(e)), DOE has identified its preferred alternative in Section 2.8 of Volume 1. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the environmental impact analysis of DOE's proposed alternatives for meeting the mission requirements, and gave equal consideration to all comments, regardless of how or where they were received. DOE has analyzed each environmental resource area in a consistent, unbiased manner across all the alternatives to allow for a fair comparison among the various alternatives. The analysis included the effects of waste generation to include the quantities and types of waste expected to be generated under each alternative, expected path of disposition, and the impact on waste management infrastructure.

The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS. DOE made every effort to obtain, analyze, and disclose all required information to make a decision on expanding nuclear infrastructure. The costs of the proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. DOE mailed these documents to more than 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P of the Final NI PEIS.

## Commentor No. 272: Joe Szwaja

### Statement of Joe Szwaja concerning the NI PEIS

My name is Joe Szwaja. I am the Green Party's nominee for Congress from the 7<sup>th</sup> District. I am a teacher at Nova, a public High School in Seattle. From 1986 to 1993 served on the City Council of Madison, Wisconsin.

The NI-PEIS, as it currently stands, is not acceptable. It does not give an objective, comprehensive review of the need for radioisotopes, and it does not accurately compare the advantages and disadvantages of the possible strategies for meeting America's needs for radioisotopes.

The need for Plutonium 238 for space exploration has not been accurately portrayed in the NI-PEIS. NASA has plainly stated that its usage of Pu-238 will be much less than DOE is projecting. As technology improves, more and more deep space missions will use solar power. It is unlikely that Plutonium will ever again be a significant item on NASA's exploratory mission shopping list.

The military stockpile and demand for Pu-238 has also not been accurately portrayed. The U.S. Air Force's Space Command is planning, in its own words, to "Dominate Space...to dominate the world". On whose behalf? In the words of Arthur Stephenson, director of NASA's Marshall Space Flight Center, "We serve American industry..."

The Air Force and NASA are planning to spend more than a quarter trillion dollars in new military spacecraft in the next ten years. Longer range plans call for much more. Space Command is planning weapons to use in space, but also against ground targets. It even envisions destroying subversives with space-based lasers. Many of its weapons would employ Pu-238. Why is there no discussion of this need for Pu-238 in this PEIS? One possibility is obvious—the DOD and DOE want FTF to produce Pu-238 for space warfare, but they know the American people would reject such belligerence. They are hiding behind a smokescreen of space exploration and cancer fighting.

The people of the seventh district, and in deed of Washington as a whole, have a different agenda for Hanford. Again and again, we repeat: your job is to clean up the mess you made. Your job is to stop nuclear pollution from entering the Columbia. Your job is to stabilize the high level waste to eliminate leakage and prevent catastrophe. Your job is to decontaminate what can be decontaminated, and return those portions of the Hanford site to ecologically sustainable, economically useful purposes. Your job is not to restart FTF, not to import radioactive material to the Northwest, not to contaminate the FMEF, not to persecute whistleblowers, not to lie to the public and not to produce more waste. It is a good job, a vital job, and a challenging job. Get on with it.

Joe Szwaja,  
P.O. Box 30929  
Seattle, WA 98103  
(206) 633-2464

8/30/00

272-1

272-2

## Response to Commentor No. 272

**272-1:** The NI PEIS evaluates a range of reasonable alternatives for maintaining and enhancing DOE's existing nuclear facility infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. However, no component of the proposed action is for the purpose of supporting any defense or weapons-related mission.

DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1 2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

A May 22, 2000, correspondence from NASA to DOE identified that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG

## *Commentor No. 272: Joe Szwaja (Cont'd)*

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## *Response to Commentor No. 272*

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development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires one-third less plutonium-238 as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000, letter to DOE that large RTGs be maintained as backup. Section 1.2.2 was revised to clarify plutonium-238 mission needs.

**272-2:** DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to “ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use.” The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

DOE notes the commentor’s opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission and migration of contaminants to the Columbia River. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

***Commentor No. 272: Joe Szwaja (Cont'd)***

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***Response to Commentor No. 272***

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More specific to the DOE missions presented in the NI PEIS, FFTF is located approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to the groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

All workers at Hanford are free to, and in fact, encouraged to disclose safety hazards associated with DOE activities. Workers are protected against reprisals by legislation applicable to the U.S. Departments of Energy and Labor.

**Commentor No. 273: David Johnson**  
**Heart of America Northwest**

COMMENTS TO USDOE NI PEIS HEARING  
SEATTLE, WASHINGTON \_ AUGUST 30, 2000

- MY NAME IS DAVE JOHNSON, I AM A MEMBER OF THE BOARD OF HEART OF AMERICA NORTHWEST
- I HAVE A Ph.D. IN NUCLEAR PHYSICS FROM THE UNIVERSITY OF WASHINGTON
- I WORKED FOR A NUMBER OF YEARS AT HANFORD
- THAT WORK INCLUDED DOING REACTOR PHYSICS ON THE FFTF REACTOR
- I WAS ALSO RESPONSIBLE FOR ALL MEASUREMENTS OF RADIO-ISOTOPES IN SUPPORT OF DESIGN OF A HIGH POWER ACCELERATOR BASED NEUTRON SOURCE
- I TESTIFIED ON OCTOBER 18, 1999 HERE IN SEATTLE AT THE SCOPING HEARING THAT A SPECIALLY DESIGNED ACCELERATOR BASED NEUTRON SOURCE FACILITY WAS A MUCH BETTER WAY TO MAKE MEDICAL ISOTOPES THAN RESTARTING THE FFTF REACTOR
- THE NI PEIS HAS ANALYZED THE ALTERNATIVE OF BUILDING TWO ACCELERATORS TO FULFILL IT'S NEEDS FOR NEUTRON SOURCES AS SPECIFIED IN THE PEIS
- \* HOWEVER, AS I WILL SHOW, THE ANALYSIS APPEARS TO BE A STRAW MAN THAT IS DOOMED TO FAIL IN COMPARISON TO THE FFTF REACTOR
- IT IS APPARENTLY SET UP SO THAT THE FFTF WILL LOOK FAR SUPERIOR
- WHY DO I SAY THIS? LET ME EXPLAIN
- THE TWO ACCELERATORS THAT ARE PROPOSED ARE AS FOLLOWS
- THE FIRST ACCELERATOR IS A LOW ENERGY CYCLOTRON THAT IS PROPOSED FOR MAKING RADIO-ISOTOPES FROM A BEAM OF UP TO 70 MEV PROTONS
- NOTE THAT THIS ACCELERATOR WOULD NOT BE DESIGNED AS A NEUTRON SOURCE
- HENCE, IT WOULD NOT BE CAPABLE OF PRODUCING THE SAME ISOTOPES THAT COULD BE MADE BY THE NEUTRONS IN THE FFTF REACTOR
- FURTHERMORE, I HAVE A LETTER SIGNED BY WILLIAM D MAGWOOD IV, THE USDOE DIRECTOR OF THE OFFICE OF NUCLEAR ENERGY, SCIENCE, AND TECHNOLOGY DATED JULY 7, 1999 THAT STATES THAT THE USDOE DOES NOT NEED SUCH ACCELERATORS

273-1

**Response to Commentor No. 273**

**273-1:** DOE notes the commentor's view but contends that Alternative 3, Construct New Accelerators, is a reasonable alternative for meeting the mission objectives.

The high-energy accelerator supports both the plutonium-238 production mission and the civilian nuclear energy research and development mission. The commentor concluded that there is no need for this accelerator because the May 22, 2000, correspondence from NASA to DOE identifies that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium-238 as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that large RTG be maintained as backup. Volume 1, Section 1.1.2 was revised to clarify the plutonium-238 mission needs.

The commentor observed that the low-energy accelerator in Alternative 3 is proposed for the production of medical isotopes. DOE acknowledges that this accelerator will not produce the same array of medical and industrial isotopes produced by reactors or high-energy accelerators. Each irradiation device evaluated in this PEIS for the production of medical isotopes (FFTF, new low-energy accelerator, and new research reactor) will produce an array of medical and industrial isotopes unique to the facility. As indicated above, the design of the high-energy accelerator presented in the PEIS focused on supporting the plutonium-238 production mission, but as stated in Volume 1, Section 2.3.1.5.2, the design could be refined and expanded to perform additional missions such as the production of a select set of medical and industrial isotopes. The low-energy accelerator was configured primarily for the production of a spectrum of proton enriched medical and industrial isotopes. The modified high-energy accelerator and low-energy accelerator could jointly produce a broader spectrum of medical and industrial isotopes.

**Commentor No. 273: David Johnson (Cont'd)**  
**Heart of America Northwest**

- A DIRECT QUOTE FROM THE LETTER IS "GIVEN OUR EXISTING ACCELERATOR FACILITIES, THE DEPARTMENT DOES NOT REQUIRE A NEW ACCELERATOR FACILITY FOR THE PRODUCTION OF ISOTOPES"
- HE MEANT THE PRODUCTION OF ISOTOPES VIA CHARGED PARTICLES, NOT VIA NEUTRONS
- I WILL ATTACH A COPY OF THIS LETTER TO MY TESTIMONY AS ITEM 1
- BY THE WAY, HE IS ALSO RESPONSIBLE FOR THIS NI PEIS
- FINALLY, SUCH AN ACCELERATOR WOULD COMPETE DIRECTLY WITH INDUSTRY WHICH IS NOT ALLOWED BY THE USDOE'S OWN POLICIES
- HENCE, THERE ARE THREE REASONS THAT THE FIRST ACCELERATOR IS A STRAW MAN, DOOMED TO FAIL AGAINST THE FFTF REACTOR
- THE SECOND ACCELERATOR THAT WAS PROPOSED IN THE NI PEIS IS A LARGE LINEAR ACCELERATOR THAT IS DESCRIBED ONLY FOR USE IN PRODUCING THE ISOTOPE PLUTONIUM -238 FOR POSSIBLE USE IN NASA SPACE PROJECTS
- IT IS A CONVENTIONAL SPALLATION NEUTRON SOURCE THAT IS WELL KNOWN TO WORK WELL, BUT THE BEAM ENERGY IS HIGH AT 1000 MEV
- THE COST OF THIS ACCELERATOR WAS STATED IN A RECENT REPORT AS OVER \$1 BILLION, BUT WITH SIGNIFICANT CONTINGENCY BECAUSE OF SO-CALLED UNCERTAINTIES
- HENCE, IT CLEARLY WOULD NOT COMPETE DIRECTLY WITH THE FFTF RESTART ON THE BASIS OF CAPITAL COST ALONE
- HOWEVER, SURPRISINGLY, IT IS MUCH CHEAPER TO OPERATE THAN THE FFTF
- MORE IMPORTANTLY, HOWEVER, IN MAY OF THIS YEAR NASA FORMALLY TOLD THE USDOE THAT IT DOES NOT NEED THE PLUTONIUM-238 THAT COULD BE PRODUCED BY THE FFTF OR SOME OTHER SOURCE
- HENCE, THE SECOND ACCELERATOR IS ALSO A STRAW MAN, SINCE PLUTONIUM-238 IS NOT NEEDED, THE SECOND ACCELERATOR IS NOT NEEDED
- I HAVE ANOTHER PROPOSAL THAT SHOULD BE THOROUGHLY EXAMINED FOR THE FINAL NI PEIS
- IN DECEMBER OF 1999, THE USDOE SHUT DOWN THE HFBR REACTOR AT BROOKHAVEN NATIONAL LABORATORY FOR SAFETY AND ENVIRONMENTAL REASONS

273-1  
(Cont'd)

273-2

**Response to Commentor No. 273**

The commentor also concluded that based on a July 7, 1999 DOE letter, there is no need for an accelerator to produce medical and industrial isotopes. The letter stated, "Given our existing accelerator facilities, DOE does not require a new accelerator facility for the production of isotopes." DOE operates two accelerators that are being utilized for the production of medical isotopes, the Brookhaven Linac Isotope Producer (BLIP) located at the Brookhaven National Laboratory and the Los Alamos Neutron Science Center (LANSCE) located at the Los Alamos National Laboratory. DOE is currently in the process of upgrading the LANSCE facility with the 100 MeV isotope production facility. The upgrade is scheduled for completion in 2001. After the completion of the LANSCE upgrade, the existing capability at these two facilities will be twice the current need for accelerator generated medical isotopes. Thus, no new accelerator capacity is needed in the short term. In 1998, an Expert Panel convened to forecast future demand for medical isotopes estimated that the expected growth rate of medical isotope use during the next 20 years will range between 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These growth projections were adopted by DOE as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, there will be a need for expanded isotope production capacity.

- 273-2: The PEIS did examine a steady state spallation neutron source, the high energy accelerator. As stated in Volume 1, Section 2.3.1.5.2, the design of the high-energy accelerator presented in the PEIS focused on supporting the plutonium-238 production mission, but the design could be refined and expanded to perform additional missions such as the production of a select set of medical and industrial isotopes. The modified high-energy accelerator and low-energy accelerators could jointly produce a broad spectrum of neutron and proton enriched medical and industrial isotopes.

The commentor stated that the capital cost of his proposed accelerator design could be made, "with more study," comparable to restarting FFTF. He estimated the total program cost of the proposed accelerator to be in the range of \$420-570 million. This estimate was based on 1985 dollars.

**Commentor No. 273: David Johnson (Cont'd)**  
**Heart of America Northwest**

- THIS REACTOR WAS A VITAL PART OF THIS COUNTRY'S NEUTRON SCATTERING RESEARCH PROGRAM. IT HAD SPECIAL LOW TEMPERATURE CAPABILITIES THAT ARE RARE
- I PROPOSE THAT THE NIPES EXAMINE A STEADY STATE SPALLATION NEUTRON SOURCE
- \* IT WOULD BE DESIGNED TO DO STEADY STATE NEUTRON SCATTERING RESEARCH AS WELL AS PRODUCE MEDICAL ISOTOPES FROM THE NEUTRONS
- \* IT COULD ALSO BE USED FOR SOME OF THE OTHER PROPOSED NUCLEAR RESEARCH ACTIVITIES
- ACCORDING TO EXPERTS IN THE FIELD OF NEUTRON SCATTERING, THERE IS STILL A NEED FOR A STEADY STATE NEUTRON SOURCE EVEN THOUGH A LARGE PULSED NEUTRON SOURCE (THE SNS AT OAK RIDGE NATIONAL LAB) IS UNDER CONSTRUCTION
- I HAVE INCLUDED ITEM 2 AS AN ATTACHMENT TO THIS TESTIMONY TO VERIFY THE NEED FOR A STEADY STATE NEUTRON SOURCE
- THE COST OF SUCH A SPALLATION FACILITY SHOULD BE LESS THAN FOR THE SECOND ACCELERATOR IN THE DRAFT NIPES
- THE FACILITY IS FEASIBLE, IN FACT IT WAS PROPOSED 15 YEARS AGO AT A WORKSHOP AT THE (THEN) NATIONAL BUREAU OF STANDARDS
- I KNOW BECAUSE I AM CO-AUTHOR OF THE PROPOSAL PAPER
- IT WAS TO BE A SPALLATION NEUTRON SOURCE WITH A BEAM ENERGY OF 300 MEV OR MORE
- HENCE, THE ENERGY WOULD BE MUCH LESS THAN THE SECOND ACCELERATOR
- THE BEAM CURRENT WOULD BE MUCH HIGHER HOWEVER
- I HAVE ATTACHED A COPY OF THE PROPOSED STEADY STATE NEUTRON SOURCE AS ITEM 3
- I IMPLORE THE USDOE TO CONSIDER THE STEADY STATE NEUTRON SOURCE AS I HAVE PROPOSED
- IT WOULD BE CAPABLE OF DOING THE NEUTRON SCATTERING RESEARCH AS WELL AS MAKE ALL THE MEDICAL ISOTOPES AND OTHER RESEARCH THAT COULD BE DONE IN THE FFTF
- HOWEVER, IT WOULD DO ALL THAT WITHOUT MAKING MORE FISSION PRODUCT OR TRANSURANIC WASTES

273-2  
(Cont'd)

**Response to Commentor No. 273**

This cost would escalate to \$603-818 million in 2000 dollars due to an inflation rate of 43.5 percent between 1985 and 2000 (<http://www.economagic.com/em-egi/data.exe/fedstl/gnpdef+1>). The total cost of FFTF restart, which includes facility modifications, startup, target development, testing, and evaluation, presented in Table S-3 of the Cost Report, is \$314 million in 2000 dollars. The capital costs of the commentor's proposed accelerator design would have to be decreased, "with more study," more than 48-61 percent to be comparable to the total cost of FFTF restart.

The commentor stated that the annual operating cost of his proposed accelerator should be less than FFTF. Operating costs for the proposed accelerator estimated at \$20-40 million per year in 1985 dollars is \$29-57 million in 2000 dollars. The upper end of the estimated operating cost range is slightly less than the FFTF annual operating cost, \$58.9 million.

**273-3:** Deactivation of FFTF is not part of implementing Alternative 1, Restart FFTF. Deactivation of FFTF is part of implementing Alternatives 2, 3, 4, and 5 and including the cost of FFTF deactivation in the implementation costs for these alternatives is appropriate. The Cost Report was structured to identify the implementation costs of the various alternatives so the Secretary of Energy would have this information along with other data for consideration. The Cost Report did not identify the source of funding for implementation.

**Commentor No. 273: David Johnson (Cont'd)**  
**Heart of America Northwest**

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- FURTHERMORE, WITH MORE STUDY, THE CAPITAL COST COULD BE MADE QUITE COMPARABLE TO RESTARTING THE FFTF
- FINALLY, THE OPERATING COST SHOULD BE LESS THAN THAT OF THE FFTF WHICH MEANS THAT REVENUE FROM SALE OF ISOTOPES COULD MORE QUICKLY PAY OFF THE DEBT
- AS AN ADDED POINT, IT IS NOT FAIR TO ADD \$281 MILLION TO THE COST OF ACCELERATORS WHEN THE COST FOR DISMANTALLING THE FFTF WOULD COME OUT OF THE ENVIRONMENTAL MANAGEMENT BUDGET, NOT THE NUCLEAR ENERGY BUDGET
- THANK YOU

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273-2

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273-3

*David Johnson PhD*

*P.O. Box 1034*

*ENUMCLAW WA 98022*

*360-825-0480*

**Response to Commentor No. 273**

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**Commentor No. 274: Nancy Rising  
Peace Action of Washington**

**Statement of Nancy Rising concerning the NI PEIS**

I am the Chairperson of Peace Action of Washington, representing almost 18,000 households in Western and Eastern Washington. Peace Action's members have been concerned about Hanford for many years. We want the DOE to stick to first things first. We want the clean up of Hanford to become the primary objective of the DOE, without distractions such as a return to production of nuclear waste for whatever purpose.

Until you have shown that you can clean out all leaking or "watch list" tanks, and stabilize all high-level waste in a timely and cost-effective fashion, that is your job. Until you have identified all significant bodies of pollution on the site and downstream, and taken appropriate measures to keep them out of the Columbia and out of our environment, that is your job. Until you have thoroughly decontaminated usable land and facilities, so that they can again make positive contributions to the region and the nation, that is your job. Until Hanford workers are free to speak out when they see safety hazards, incompetence or corruption, without fear of reprisal, that is your job. Other priorities can wait.

The Department of Energy's draft NI PEIS is neither complete nor objective. Whether deliberate or inadvertent, the cumulative effect of numerous omissions to the PEIS are unprofessional and bias the PEIS in favor of a de-facto "preferred alternative," the restart of the Fast Flux Reactor. Many have already been brought to your attention, especially the NASA letter should have been included in the discussion of the need for Pu-238.

An omission that hasn't been mentioned since it was pointed out by Peace Action members during the scoping process is the military Pu-238 stockpile. Since the START treaty, the number of deployed nuclear warheads has been drastically reduced. Further reductions are expected. The Pu-238 used to power the electronics on these warheads can now be used to power spacecraft, if necessary. The omission of any discussion of this resource tends to bias the PEIS further in favor of restarting FFTF.

The tri-cities economy is dependent on Hanford, and the DOE has an obligation to continue to provide steady employment in the area. If the DOE does not make real progress on the Hanford cleanup, and continues to pursue pork-barrel projects instead of real solutions to America's energy and security needs, we are concerned that Congress will continue underfunding the Hanford clean up. Hanford will become an environmental and economic national sacrifice area.

Nancy Rising, Chair  
Peace Action - Washington  
5001 - 112<sup>th</sup> Ave. NE  
Kirkland, WA 98033

**Response to Commentor No. 274**

**274-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

DOE was tasked by Congress in the Atomic Energy Act to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental impacts to accomplishing the proposed action. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure mission described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected. FFTF restart and operation would not impact the schedule or available funding for existing cleanup activities.

Steady and consistent progress in restoring Hanford is documented in annual reports. These are available at [www.hanford.gov](http://www.hanford.gov). Hanford has a comprehensive waste minimization and pollution prevention program in place as summarized in Section 3.4.11.8 that controls any activity generating waste on the site.

Workers at Hanford are free to and encouraged to disclose safety hazards associated with DOE activities. Workers are protected against reprisals by legislation.

274-1

274-2

274-1

***Commentor No. 274: Nancy Rising (Cont'd)  
Peace Action of Washington***

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***Response to Commentor No. 274***

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**274-2:** This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR 1500 through 1508 and 10 CFR 1021, respectively). DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives.

The acquisition and use of surplus, defense-related plutonium-238, if available, were not considered and are outside the scope of the civilian nuclear infrastructure missions considered in this NI PEIS. The commentor is correct that small radioisotope thermoelectric generators (RTGs) using plutonium-238 are used to power electronic systems on some strategic weapons, some of which have become surplus due to strategic arms reductions. Although the exact configuration of these RTGs is classified, the amount of plutonium-238 in each unit is relatively small and the assay of the plutonium-238 is much lower than that required for use in NASA spacecraft.

DOE assumes that the commentor's reference to the "NASA letter" refers to the May 22, 2000, letter from NASA Headquarters to the DOE Office of Space and Defense Power Systems. This letter is cited in Section 1.2.2 of Volume 1 of the Draft and Final NI PEIS with regard to the discussion of plutonium-238 needs for future space missions. While this letter states that NASA no longer has a need for Small Radioisotope Thermoelectric Generator (SRTG) power systems, this letter also lists the planned deep space probe missions which would specifically require plutonium-238. These missions and their planned launch dates are outlined in Section 1.2.2 of this NI PEIS. For reference, this letter and all of the references cited in this NI PEIS are available in the public reading rooms established by DOE.

## Commentor No. 275: Chris Jackins

August 30, 2000

REGARDING:

Opposition to restarting FFTF Nuclear Reactor  
(Fast Flux Test Facility reactor)

FROM: Chris Jackins  
P.O. Box 84063, Seattle, WA 98124

My name is Chris Jackins.

Thank you sending me a copy of the draft Environmental Impact Statement. Looking through the documents, I saw information on economic (socioeconomic) impacts, like jobs.

For example, the documents mention that more Plutonium-238 could have been purchased from Russia, but was not purchased, "due to budget constraints". (page S-5) And, some alternatives were dismissed based on projected costs. (page S-19)

Three questions:

1. The documents state that some 12 million nuclear medicine procedures are performed each year. (page S-2) If the FFTF reactor were to supply medical isotopes for these procedures, do you have an estimate for the average cost per procedure attributable to the FFTF reactor, and a comparison to the cost from other sources?
2. Do you have an estimate for the average cost per kilogram of Plutonium-238 produced by the FFTF reactor, and a comparison to the cost from other sources?
3. If FFTF costs are higher, would subsidizing production be legal under World Trade Organization (WTO) agreements?

After recent fires at Hanford, traces of a number of radioactive elements were detected in nearby areas. This is a reminder that Hanford already has an existing abundant supply of radioactive elements.

It has been reported for some time that the precise contents of a number of the waste tanks at Hanford is not known. Perhaps there is a lot of "swell stuff" in those storage tanks.

The process of dealing with this waste is already on the agenda. It would be sensible to look the waste over first, before shopping around for more. One need not be like alchemists, who, not content at owning an actual gold mine, wish instead to manufacture the element themselves.

According to recent news reports, NASA does not need the Plutonium-238 that would be produced by the FFTF reactor, and there is already adequate production of medical isotopes. (See, for example, Seattle Times, August 29, 2000, "Restart of reactor challenged"; Seattle Times, August 29, 2000, "Hanford's FFTF reactor poses unacceptable risks")

The FFTF reactor should not be restarted. The focus should be on cleaning up Hanford's radioactive waste.

Thank you.



## Response to Commentor No. 275

**275-1:** The estimated costs of the range of reasonable alternatives are presented in the Cost Report and are summarized in Appendix P of the Final NI PEIS. However, the Cost Report is not a cost-benefit analysis. While it is reasonable to believe that the benefits of medical isotopes are substantial, the purpose of this NI PEIS is to describe the nuclear infrastructure missions (Section 1.2 of Volume 1), a range of reasonable alternatives for satisfying the mission requirements (Section 2.5 of Volume 1), and the environmental impacts that would result from implementation of the alternatives. According to 40 CFR Section 1502.23, if a cost-benefit analysis exists, it must be reported and summarized in the NI PEIS.

No estimate of average cost per procedure or cost per kilogram of plutonium-238 attributable to FFTF was made in the Cost Report. DOE also does not anticipate any need to subsidize the operation of FFTF.

**275-2:** No radioactive materials were "released" in the Hanford wildfires of 2000. Wildfires did resuspend some materials already in the environment. The resuspended materials were low; slightly above natural background levels. The very low levels required several days of analysis to quantify. Additional information is available to the public at <http://www.Hanford.gov/envmon/index.html>. This site also provides a link to information on the independent offsite air monitoring conducted by the U.S. Environmental Protection Agency.

The utilization of radioisotopes in current Hanford wastes for medical isotope use was not in the scope of this PEIS. The primary reason is that Hanford wastes contain "aged" isotopes not typically useful in medical procedures (i.e., short-lived isotopes). A secondary reason is that nearly all wastes at Hanford has had a treatment and disposition determined.

**275-3:** DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice

**Commentor No. 275: Chris Jackins (Cont'd)**

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**Response to Commentor No. 275**

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regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

A May 22, 2000, correspondence from NASA to DOE identified that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires one-third less plutonium-238 as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000, letter to DOE that large RTGs be maintained as backup. Section 1.2.2 was revised to clarify plutonium-238 mission needs.

**275-4:** DOE notes the commentor's opposition to Alternative 1, Restart FFTE.

**Draft PEIS Comment Form**

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

PLEASE INCLUDE p. 106, 116, 120, 121, 123.  
 FROM STANFORD TURNER BOOK CAGING THE NUCLEAR  
 GENIE.  
 SEATTLE IS PAYING 10's OF MILLIONS IN  
 EXCESS DEBT SERVICE IN CITY LIGHT TO BACK  
 WPPSS BONDS. WPPSS WAS SAID TO BE ABLE TO  
 PRODUCE ENERGY TOO CHEAP TO METER.  
 FFTF IS SAID BY SIMILAR CORPORATE  
 INTERESTS TO BE ABLE TO PRODUCE CHEAP  
 ISOTOPES FOR WHATEVER GOVERNMENT AGENCIES WANT. \*  
 BECAUSE - AS MR. TURNER SAID IN  
 HIS BOOK DOD WAS ABLE TO PUSH WEAPON  
 SYSTEMS WITH IMPUNITY. COSTS OF CLEANUP  
 EXTERNALIZED TO DOE.  
 SECRETLY PREVENTS SOLVING THESE  
 PROBLEMS. OBJECTIVE AGENCIES SUCH AS  
 THE IAEA THAT HAVE NOT BEEN CONTRACTORS  
 OR OFFICIALS WITH SUBJECTIVE INTEREST MUST  
 BE USED TO APPROACH THE TRUTH. TRUTH IS  
 NECESSARY TO SOLVE TECHNICAL PROBLEMS NOT P.R.

\* PEIS - NIPEIS MEDICAL AND INDUSTRIAL ISOTOPE PRODUCTION.

**There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:**

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): BARBARA ZEPEDA

Organization: \_\_\_\_\_

Home/Organization Address (circle one): 308 E REPUBLICAN ST #708

City: SEATTLE State: WA Zip Code: 98102

Telephone (optional): 206-324-8571

E-mail (optional): \_\_\_\_\_

**COMMENTS MUST BE POSTMARKED BY September 18, 2000**

For more information contact: Collette E. Brown, NE-50  
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874  
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592  
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

276-1

276-1: DOE notes the commentor's views and concerns and receipt of the referenced attachment. The purpose of this NI PEIS is to evaluate the environmental impacts of reasonable alternatives to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238 for NASA space missions, and nuclear research and development. As evaluated under Alternative 1 in this NI PEIS, FFTF would be restarted to accomplish these nondefense-related missions. Other unrelated nuclear energy and defense-related considerations are beyond the scope of this NI PEIS.

## Commentor No. 277: Roy D. Goodman

8/30/00 Presentation in Seattle at Department of Energy public hearing  
on NI PEIS for Fast Flux Test Facility at Hanford  
(to the tune of the Village People's "Y.M.C.A.")  
by Roy D. Goodman,  
Seattle, Washington

**Hanford, it's in Washington State,  
I said Hanford, full of nuclear waste,  
I said Hanford, suffers from your delay  
To honor your clean-up agreement,**

**Hanford's where you want to restart,  
I said Hanford, making plutonium as part  
Of your charter to power NASA in space,  
First fix the earthly mess you've made.**

**It's time to shutdown the F.F.T.F.,  
It's time to shutdown the F.F.T.F.,  
Hanford's fouled up enough, you don't need to make more  
Deadly waste you don't know how to store.**

**It's time to shutdown the F.F.T.F.,  
It's time to shutdown the F.F.T.F.,  
And get on with your task of clean-up till it's done,  
Make life safer for everyone.**

**Hanford's not where you need to impose  
To produce medical isotopes,  
Your own folks said don't be such dopes,  
It can be done cheaper elsewhere.**

**Hanford for research nuclear,  
Ship plutonium thru ports around here,  
Vhat?! Are you crazy?! If ve all vant to live,  
There's only one alternative.**

**And that's to shutdown the F.F.T.F.,  
It's time to shutdown the F.F.T.F.,  
Hanford's messed up enough, you don't need to make more  
Deadly waste you don't know how to store.**

277-1

**277-1:** DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

**277-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

277-2

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost-efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of

**Commentor No. 277: Roy D. Goodman (Cont'd)**

**It's time to shutdown the F.F.T.F.,  
It's time to shutdown the F.F.T.F.,  
And get on with your task of clean-up till it's done,  
Make life safer for everyone.**

**F.F.T.F.,  
Dismantle the F.F.T.F.,  
One big mistake and we all just might die,  
Bend over now and kiss your rear goodbye.**

**277-2  
(Cont'd)**

**Response to Commentor No. 277**

various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NIPeIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

The commentor appears to express the concern that DOE would expose constituents in the Seattle area to risks associated with the transport of weapons-grade plutonium. None of the proposed alternatives involve the shipment of any weapons-grade plutonium to any port in the United States. Alternative 1 does postulate that DOE might decide at some point to import mixed oxide fuel from Europe to fuel FFTF. At this time, however, DOE has not proposed to import this fuel through any specific port. If DOE ultimately decides to import fuel from Europe, it would perform a separate NEPA analysis to select a port. This review would address all relevant potential impacts of overseas and inland water transportation, shipboard fires, package handling, land transportation, as well as safeguards and security associated with the import of SNR-300 mixed oxide fuel through a variety of specific candidate ports on the west and east coasts. It would consider all public comments, including local resolutions, concerning the desirability of bringing mixed oxide fuel into the proposed alternative ports.

In the event that DOE decides to enhance its nuclear infrastructure, it would not expose any population to high, unacceptable risks under any alternative. Any transportation activities that would be conducted by DOE would comply with U.S. Nuclear Regulatory Commission and U.S. Department of Transportation regulations. Associated transatlantic shipment would comply with International Atomic Energy Agency

***Commentor No. 277: Roy D. Goodman (Cont'd)***

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***Response to Commentor No. 277***

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requirements. In Section J.6.2, DOE reviewed the potential maximum impacts from the marine transportation of mixed oxide fuel from Europe to a representative military port, Charleston, South Carolina, and overland transportation to Hanford. Also in that section, a bounding analysis demonstrates that the maximum potential radiological risks to the surrounding public from mixed oxide fuel shipments would be extremely small (e.g., less than 1 chance in a trillion for a latent cancer fatality per shipment from severe accidents at docks and in channels and less than 1 chance in 50 billion for a latent cancer fatality per shipment from overland highway accidents).

## Commentor No. 278: Rick Mounce

Rick Mounce  
2806 W. 46<sup>th</sup> Ave  
Kennewick, Washington 99337

Good Evening, my name is Rick Mounce. I reside in Kennewick, WA. I am speaking tonight as a private citizen.

I was not surprised that the PEIS confirmed that there was essentially no public risk associated with operation of the FFTF to support an expanded isotope mission. Since I have been associated with operation of the FFTF for many years, I can personally attest to its high standards of safety.

278-1

But tonight, I would like to comment on information that I have seen distributed by some of the anti-nuclear activist groups attending these meetings.

One activist brochure I picked up is titled "Hanford and the River" by Columbia River United. This brochure identifies the major areas and past operations at Hanford that have impacted the Columbia River. I read this document front to back and would like to point out that the FFTF operated for ten years, but is not mentioned one single time as having had a past impact on the Columbia River. Why? Because operation of FFTF has absolutely no impact on the river.

278-2

Another hand-out I read was from Columbia Riverkeeper. In it they demand that the following statement be removed from the PEIS summary on spent fuel management. "The environmental impacts associated with the existing inventory of spent fuel at the Hanford site are minimal."

I agree that this statement should be removed. Instead, the PEIS summary should reflect DOE's well-publicized and appropriate commitment to remove the 2100 metric tons of spent fuel from Hanford's 100 area water basins. This defense mission spent fuel does not include the 16 metric tons of non-defense spent FFTF fuel.

278-3

The PEIS summary should also discuss the minimal environmental impacts associated with storing the spent FFTF fuel on its own merits. Namely, that it is not corroded and is stored in dry storage casks, not the aging defense mission water basins. This section should also be consistent with Chapter 4 of the PEIS which correctly states that the FFTF spent fuel will be packaged and shipped to the repository for disposal.

However, I am surprised at some of the information I have seen distributed by Heart of America Northwest. Maybe I shouldn't be. It seems that because they could not find any significant or legitimate comments on the PEIS, they have had to resort to distributing inflammatory half-truths and outright fabrications under the guise of "public education."

278-2

## Response to Commentor No. 278

278-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

278-2: DOE notes the commentor's views and observations. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to the groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

278-3: The discussions in the Summary and Section 4.8.3.5 of Volume 1 on the cumulative impacts for spent nuclear fuel management at Hanford were revised to clarify that the management of the existing spent nuclear fuel at Hanford results in a dose of less than 0.1 millirem per year of the maximally exposed member of the public. This dose is well within the DOE limits given in DOE Order 5400.5. As discussed in that Order, the dose limit from airborne emissions is 10 millirem per year, as required by the Clean Air Act; drinking water is 4 millirem per year, as required by the Safe Drinking Water Act; and the dose limit from all pathways combined is 100 millirem per year. DOE has committed to remove the spent nuclear fuel at Hanford for ultimate disposition in a geologic repository.

## ***Commentor No. 278: Rick Mounce (Cont'd)***

The lengths they will go to mislead the public into supporting their agenda is evidenced in information they publish and distribute. One example of their so-called "credible" educational material is their statement that; "Restart of the FFTF nuclear reactor will have enormous environmental consequences for the Pacific Northwest for generations to come. Restart of the FFTF nuclear reactor will mean importation of Weapons Grade Plutonium in "Mixed Oxide" fuel to Hanford from Germany and production of 35,000 pounds of High-Level Nuclear Waste - waste which USDOE has no idea of where or how to dispose of, but the report (and here they mean the PEIS) just concludes that the waste can be stored indefinitely at Hanford."

Note that the 35,000 pounds of High-level Nuclear Waste they are referring to is the 16 metric tons of spent FFTF fuel that I mentioned earlier. Also note that FFTF fuel is not, nor could it ever be, classified as weapons-grade plutonium.

Well, had Heart of America Northwest read the PEIS, they would have noticed the section entitled Spent Nuclear Fuel Management in Chapter 4. In it they would have discovered that DOE did not, in any way, conclude that the spent fuel would be stored indefinitely at Hanford. Instead, they would know that the disposition path for the 16 metric tons of spent FFTF fuel is to package it in acceptable containers and ship it to the repository for disposal, the same process as for the nation's 105,000 metric tons of commercial reactor fuel. They would also know that the time-line for doing this is either during operation or at cessation of reactor operation.

Furthermore, if Heart of America Northwest really had public education in mind they would be knowledgeable about the status of the repository at Yucca Mountain. They would then know that the FFTF fuel is suitable for repository disposal in its current form and that its contribution to the overall projected repository inventory is a whopping 0.015%.

This hardly qualifies as enormous environmental consequence for generations to come.

This is just one example of deliberate misrepresentation of the facts by a handful of anti-nuclear activists. You have already heard or will hear other examples tonight.

By using false pretenses to intentionally scare and mislead the public into supporting their agenda, some of these organizations have seriously undermined the NEPA process and their own credibility and it is my opinion that they are not trustworthy nor qualified to speak on behalf of the public interest.

On a personal note, just last month I lost my brother to cancer. He was 49 years old. Perhaps, had FFTF been restarted to produce medical isotopes earlier, he may still be alive today; therefore I fully support the restart of the FFTF to produce medical isotopes in support of the eradication of this and other debilitating diseases.

278-2  
(Cont'd)

278-1

## ***Response to Commentor No. 278***

**Commentor No. 279: Sarah Schmidt**

**Response to Commentor No. 279**

**Draft PEIS Comment Form**

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Shut down FFTF  
 Clean up Hanford  
 Cease & desist incompetence in handling  
 of waste (see attached form)

|| 279-1  
 || 279-2  
 || 279-3

**There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:**

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): \_\_\_\_\_  
 Organization: \_\_\_\_\_  
 Home/Organization Address (circle one): \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
 Telephone (optional): \_\_\_\_\_  
 E-mail (optional): \_\_\_\_\_

**COMMENTS MUST BE POSTMARKED BY September 18, 2000**

For more information contact: Colette E. Brown, NE-50  
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874  
 Toll-free telephone: 1-877-562-4593 • Toll-free fax: 1-877-562-4592  
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

**279-1:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

**279-2:** DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site.

**279-3:** DOE notes the commentor's concern regarding the proper handling and transportation of wastes. DOE Order 435.1 "Radioactive Waste Management" was issued on July 9, 1999. Per this Order, each DOE radioactive waste receiving facility shall evaluate waste for acceptance, including confirmation that the technical and administrative requirements have been met including the facilities waste acceptance criteria. A process for the disposition of nonconforming wastes is also to be established. The commentor provided a few examples of when the waste receiving facility had identified certain wastes that did not meet the technical and administrative requirements.

FFTF restart would not impact the cleanup missions at Hanford. With respect to waste management and cleanup issues, the Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Chapter 2—Written Comments and DOE Responses

## Commentor No. 279: Sarah Schmidt (Cont'd)

Sarah Schmidt  
3815 Woodland Park Ave N #205  
Seattle, WA 98103

The following information was researched and compiled during my internship at Heart of America Northwest. This information, consisting of internal memos and reports, was sent by the Department of Energy and obtained through the Freedom of Information Act.

Per Memo dated May of 1995, issued by The Hanford Public Westing House Company, document number 9502473R1. Pertaining to a mismanaged waste shipment sent by the Lawrence Berkeley National Laboratories to Hanford's Low Level Burial Ground. Problems with this shipment included, but were not limited to:

- Leaking containers
- Mislabeled Waste
- Improper Packaging such as mixing, and overfilling

Per reports by Lana Richterich, dates ranging from December 1996 to January 98, document number SWIR611. Pertaining to repeated nonconformance by Argonne National Laboratories in their shipment of waste to Hanford. These violations contained but were not limited to:

- Leaking containers
- Mislabeled waste
- Exceeding allowed weight of waste
- Mixing of potentially incompatible waste

Because these examples were repeat errors by Argonne National Laboratories, the reader of the reports is lead to the conclusion that nothing was done to solve the problem.

Per Memos pertaining to End of the Year Assessments by Department of Energy Contractors to confirm that they are up to State and Federal guidelines on waste management:

Martin Marietta Energy Systems March 1994, Document number 9452287.

Restricted Status.

General Atomics July 1994, Document Number 9455507.

Not Approved.

Paducah Gaseous Diffusion Plant, September 1994, Document number 9456361.

Restricted Status.

279-3

## Response to Commentor No. 279

**Commentor No. 279: Sarah Schmidt (Cont'd)**

Sarah Schmidt  
3815 Woodland Park Ave N #205  
Seattle, WA 98103

Problems identified at the various locations mentioned above included but were not limited to:

- mislabeling of waste
- mixing of waste
- inadequately trained staff handling the waste

This is just a small example of the incompetence that is displayed in the handling of the waste already buried at Hanford. Now you expect the citizens of Washington and Oregon to trust you when you say that the Department of Energy can handle the excessive waste that will be created by the Fast Flux Test Facility?

It is time to stop robbing the cleanup fund and keep the promises you made in the Tri-Party Agreement.

SHUT DOWN FFTF ONCE AND FOR ALL AND CLEAN UP THE MESS YOU HAVE ALREADY CREATED.

This is our state and we will be heard.

279-3  
(Cont'd)

279-2

279-1

279-2

Signature:  Date: 8/30/00

## Commentor No. 280: Sally Lamson

Good Evening. My name is Sally Lamson. I'm <sup>currently</sup> a resident of Kennewick Washington and representing myself. I would like to spend the next few minutes setting the record straight on one of the topics in Heart of Americas citizens guide for these hearings. Specifically, the distortion and fabrications that DOE is "Violating the Hanford Cleanup Agreement" and that "cleanup funds are lost every year to FFTF."

Let's go over the facts.

### Fact 1.

The decision to shut down the FFTF was a unilateral decision by the U.S. Department of Energy, not a "covenant" or promise between the DOE, Environmental Protection Agency and Washington Department of Ecology. Following the shutdown decision in December 1993, FFTF was included in the Tri-Party Agreement to establish milestones with the goal of conducting shutdown work in an orderly sequence to ensure coordination with other Hanford Site cleanup actions.

### Fact 2.

When DOE identified a possible future mission for the reactor, shutdown work was terminated and the facility was placed in standby. <sup>for</sup> DOE initiated discussions with the Washington State Department of Ecology to revise the TPA milestones, and public meetings were held. As a result, the milestones were placed in temporary suspension until the Secretary of Energy issues a final decision on whether or not to restart the FFTF. If the FFTF restarts, the milestones will be deleted. If the FFTF is directed to shut down, new dates for the milestones will be negotiated. What I described is the TPA change process. Therefore, is Heart of America also inferring

## Response to Commentor No. 280

280-1

280-1: DOE notes the commentor's views and observations.

280-2: DOE notes the commentor's support for Alternative 1, Restart FFTF.

*Commentor No. 280: Sally Lamson (Cont'd)*

that the EPA and the WDOE are violating the Hanford Cleanup Agreement? I don't think so, and neither is the DOE.

**Fact 3.**

The statement that cleanup funds are being directed to the FFTF is recurring and false <sup>distortion.</sup> ~~Heart of America rhetoric.~~ They are fully aware that resources for maintaining the FFTF in standby is provided by separate funding appropriations from Nuclear Energy, which is completely unrelated to the cleanup budget under Environmental Management. If the FFTF were to restart, Nuclear Energy funding appropriations would continue. Let me reemphasize, **FFTF funding for standby and potential restart does not come out of the cleanup budget.**

**Fact 4.**

If FFTF was selected for the proposed missions, the estimated restart funding is \$314M. If the missions under consideration in the PEIS were assigned to other DOE sites, appropriate funding from Nuclear Energy, **not clean up**, will still be required. Interestingly, if this were to occur, additional funding of ~\$281M would also be required for the concurrent deactivation of the FFTF, and this funding would come from the Hanford cleanup budget. It takes money to shut the FFTF down. Recapping, if the FFTF were not selected as the preferred alternative, the cost to the DOE would be almost twice as much or greater to meet the PEIS needs, depending on which alternative was selected. And the hit on Hanford cleanup costs would be substantial.

280-1  
(Cont'd)

*Response to Commentor No. 280*

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**Commentor No. 280: Sally Lamson (Cont'd)**

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My conclusions are:

- 1.) The Heart of America statements discussed earlier are completely unfounded and without merit.
- 2.) Selection of the FFTF as the preferred alternative makes sense economically as well as environmentally and technically. The startup costs and shutdown costs are comparable. The FFTF has the largest capability and flexibility of all the options. It meets the needs and requirements of the PEIS. It is the premier test reactor in the world with a proven performance and a safety record second to none. I trust that the DOE will agree and make the right decision.

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**280-1  
(Cont'd)**

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**280-2**

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**Response to Commentor No. 280**

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## Commentor No. 281: Brian Berglin

Good evening, my name is Brian Berglin. I live in the Tri-Cities and I am representing myself this evening. First, I would like to thank the DOE for preparation of this PEIS and addressing the need for expanding the nation's nuclear infrastructure to support these important civilian missions. I believe that FFTF should be selected as the preferred alternative in the final PEIS because it provides the greatest capacity and flexibility of the options being evaluated and, as the PEIS analyses clearly indicate, the environmental impacts associated with restart and operation are small.

I want to also express my concerns tonight about the misleading information being circulated by Heart of America Northwest regarding FFTF restart, apparently to scare and mislead the public. This does a great disservice to the EIS and decision-making process, and more importantly, to the people in this region. A lot is at stake with the upcoming decision on this PEIS, and opinions should be based on truthful information, not obvious fabrications being made under the guise of informing the public. I would like to address one topic in particular where this is occurring, waste generation and management.

Waste generation is an area of importance to everyone in the northwest. I would like to address several false statements that were made related to the wastes that would be generated by the proposed restart of FFTF and how these wastes would be managed. I have been involved with operation of FFTF for many years and I believe I am knowledgeable to speak in this area.

Heart of America claims that "Internal USDOE documents reveal that restarting the FFTF Nuclear Reactor will add more liquid radioactive waste to Hanford's leaking and explosive High-Level Nuclear Waste tanks." This is untrue and a good example of the use of scare tactics. FFTF has never generated high level waste and as stated in the PEIS there will be **NO** high level radioactive waste produced by any of the proposed missions. Since not a single drop is generated, then it goes without saying that operation of FFTF, or the Hanford facilities being considered for processing, would not add a single drop of waste to the Hanford High Level Waste tanks, nor in any way affect the Columbia River. In fact, as stated in the PEIS waste management sections, if the FFTF is selected for the proposed missions, DOE plans to use available 400 Area and commercial facilities to store, process and dispose of the wastes that would be generated.

Heart of America claims that "Radioactive Wastes would be buried in Hanford's unlined, unregulated low-level waste trenches -with no consideration of environmental and health

281-1

281-2

## Response to Commentor No. 281

**281-1:** DOE notes the commentor's support for Alternative 1, Restart FFTF.

**281-2:** DOE notes the commentor's views and observations. DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and to providing ample opportunity for public comment on those actions.

The use of proposed alternative facilities associated with processing of neptunium-237 targets would have no impact on schedules or available funding for high-level radioactive waste programs at either Hanford or the INEEL sites. At INEEL the tanks would not be used although certain facilities at the Idaho Nuclear Technology Engineering Center (INTEC) would be used to treat the wastes resulting from processing the irradiated targets. These are reliable systems that would process a maximum of 1,050 cubic meters of low-level radioactive waste over the 35-year nuclear infrastructure operational period. The higher activity waste would be treated as a solid form via a stand-alone vitrification system, separate from any tank waste treatment system. At Hanford, the existing high-level radioactive waste facilities would also not be used, and as analyzed in the PEIS, no existing or planned high-level radioactive waste facilities would be used to treat the wastes resulting from processing the irradiated targets.

Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

**Commentor No. 281: Brian Berglin (Cont'd)**

impacts.” As I mentioned before, available 400 Area and commercial facilities would be used for waste disposition. Therefore, DOE does not intend to send any waste generated at FFTF to the Hanford burial trenches. And by the way, wastes disposed of in Hanford’s burial trenches must meet specific criteria for burial and be appropriately packaged before being accepted for burial in the trenches, which are operated in accordance with federal regulations.

Heart of America claims that “USDOE deliberately violates NEPA (the law requiring this EIS) by saying they will disclose plans for these wastes in a future document instead of right now.” This is another example of Heart of America rhetoric. What the PEIS does say is that DOE intends that waste be managed independent of the existing Hanford site waste management infrastructure by using commercially available facilities. Contrary to statements made at earlier public meetings, use of commercial facilities is consistent with current DOE policy and is already in practice at other sites. It further discusses the Waste Minimization and Management Plan for FFTF that was developed in consultation with the Washington State Department of Ecology and the Oregon Office of Energy. This Plan identifies a program and process for incorporating pollution prevention and waste minimization practices into FFTF’s restart and operations planning, if FFTF is selected to restart. The process laid out in this plan would involve key stakeholders, including the states of Washington and Oregon, in waste management, waste minimization and pollution prevention decisions. Are these the actions of an agency trying to ignore the public’s concern with waste generation? I don’t think so.

Heart of America also claims that the PEIS does not look at safety or environmental impacts from adding more wastes. This again is untrue. The PEIS addresses the radiological and chemical impacts on workers and the public from waste management activities. The amount of wastes that would be generated are very small and would be safely managed in full compliance with state and federal laws, as they are now, and pose no threat to the public or the environment. The humanitarian benefits to the general population from the production of medical isotopes clearly outweighs the small impact of the waste that would be produced. I am confident that FFTF can safely and competently support these missions and that the wastes generated would likewise be safely and appropriately managed.

281-2  
(Cont'd)

**Response to Commentor No. 281**

*Commentor No. 282: Dan Arrigoni*

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Good Evening, my name is Dan Arrigoni and I am a citizen of the Pacific Northwest.

I am pleased to have the opportunity to provide my comments to DOE regarding the PEIS alternative to operate the FFTF.

I have become very frustrated with newspaper articles that have been published in Pacific Northwest regarding the DOE alternative to operate the FFTF. It seems that unreliable sources have purposely and unfairly influenced the media with propaganda designed to scare and mislead the public into supporting an anti-nuclear agenda.

This is why I find a recent article published in the Oregonian so refreshing. I am impressed that they sought out factual information so they could fairly present the virtues of operating the FFTF to the public.

I would like to read this article into the record that was published on August 29, 2000, prior to the public hearing in Portland.

READ ARTICLE

In closing, I urge everyone in this room to follow the Oregonian's lead and accept your responsibility to seek out factual information seriously.

The opportunity to provide the public with progressive cancer treatments is too important to throw out based on the self-centered bias of a few individuals.

*Dan Arrigoni  
417. W. 12<sup>th</sup> Ave.  
Kennewick, WA 99337  
(509) 586-0818*

282-1

*Response to Commentor No. 282*

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282-1: DOE notes the commentor's views and observations as well as those expressed in the Oregonian newspaper article.

## ***Commentor No. 283: Bill Dautel***

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Good evening, my name is Bill Dautel and I am speaking tonight as a citizen of the Pacific Northwest.

Recently, I read a citizen's guide that was distributed by an anti-nuclear activist group called Heart of America Northwest. These anti-nuclear activists claim that they serve to "educate" the citizens of the Pacific Northwest on a number of topics addressed in this guide. This material is so chock full of misquotes, distortions, and outright fabrication that it appears that the sole purpose is only to scare and mislead the citizens of the Pacific Northwest into supporting their anti-nuclear platform.

Because of the time limitation, I will only touch on one area of this so-called "educational" material and contrast this to the factual information stated in the PEIS. I am not asking you to change your position, I merely ask that you listen with an open mind. Then I challenge you to personally seek out the facts. It is only by this process that you will be able to form an informed position. The benefits of operating FFTF to alleviate the very real future health risks to you and your family are too important to throw them out based on heresay.

The area I would like to address tonight is the section of the Heart of America guide titled "Weapons-Grade Plutonium Could Come Through Puget Sound." The plutonium that they are referring to is unused mixed oxide fuel that has no future use in Germany but can be used to operate the FFTF reactor for 15 years. This fuel is essentially identical to FFTF fuel. As such it is not, nor could it ever be classified as "weapons-grade" plutonium.

They also claim that DOE has ignored transportation risk concerns in the PEIS and that citizens <quote> "demand that USDOE acknowledge that a ship fire in Puget Sound, with plutonium on board, could kill thousands and permanently leave a large area uninhabitable. Oppose any scheme to import plutonium fuel through any port to FFTF." <unquote> Maybe Heart of America Northwest hasn't read the Table of Contents of the

283-1

## ***Response to Commentor No. 283***

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283-1: DOE notes the commentor's views and observations.

**Commentor No. 283: Bill Dautel (Cont'd)**

PEIS yet. Otherwise, they would discover that an entire appendix is dedicated to impacts of transportation.

If you read this section, you will discover that public and environmental safety is paramount. You will also discover that it is unlikely that DOE will even ship the fuel to Puget Sound, not because of any risk, but because it costs more to sail to the west coast than to sail directly to an eastern port. Charleston Naval Station has been the primary port for receiving foreign fuel for the past five years and was the port selected for detailed analysis in the PEIS.

The activist material claims that a ship fire could kill thousands and leave a large area uninhabitable. Have they supplied you with an independently reviewed risk analysis that explains just how this event could occur? I don't think so.

Let's examine the facts. First, the FFTF fuel is designed to operate at temperatures up to 1500 degrees fahrenheit and is not susceptible to damage from the DOT severe transportation fire temperature of 1475 degrees fahrenheit. Additionally, FFTF fuel has been safety tested and shown not to leak under these conditions. Second, the fuel is transported in certified high integrity casks. These casks are subject to stringent regulatory safety testing to verify beyond doubt that they will not leak during severe transportation accident conditions, including fire. Third, certified purpose-built ships would be used to transport the fuel casks from Europe to the U.S. These ships are constructed with double hulls to assure that they can withstand a collision without penetrating the inner hull. Every part of the ship is protected by an automatic fire system which will quickly detect, isolate, and suppress a fire should one break out in any one of the separate compartments. The individual holds can also be deliberately flooded with water, and, if all the holds were flooded the ship would still remain afloat. These levels of safety are what contribute to the low level of risk to transport the fuel. In fact, the accident risk in the PEIS was determined to be less than  $10^{-12}$  latent cancer fatalities or 1 in a trillion.

**283-1  
(Cont'd)**

**Response to Commentor No. 283**

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**Commentor No. 283: Bill Dautel (Cont'd)**

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Let me put this in perspective. The risk of dying from radiation exposure received from flying round trip cross-country is approximately 1 in a million. Mightly small. The risk from fuel transportation is a million times less. So I ask you, is this the enormous risk that results in thousands of deaths as claimed by Heart of America Northwest? Hardly!! In my view this is a blatant insult to the intelligence of the public and undermines the entire NEPA process. The transportation of nuclear fuel is completely safe.

*Thank you for this opportunity to comment.*

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**283-1  
(Cont'd)**

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**Response to Commentor No. 283**

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## Commentor No. 284: Raging Grannies of Seattle



(left to right)

**BACKS:**  
 Kathleen Kelley  
 Carol Hoyt  
 Shirley Morrison  
 Elaine Birn  
 Caroline Canafax  
 Roberta Brumbaugh  
 Hinda Kippus  
 Carolyn Hale

**MIDDLE:**  
 Rita Selin  
 Rosy Betz-Zall  
 Sally Gwin  
 Kay Thode

**FRONT:**  
 Karen Schneider-Chen  
 P. Anna Johnson  
 Georgie Kunkel  
 Ruth Lianos



### RAGING GRANNIES of SEATTLE

P. O. Box 22048, Seattle, WA 98122  
[www.raginggrannies.com](http://www.raginggrannies.com)

"The Raging Grannies will wake you up... make you laugh...and send you out to change the world with a great big smile on your face."

TOM RAWSON, teacher & talk singer

"It's a worthwhile event, Raging Grannies will be there...outrageous and hard-hitting."

SEATTLE WOMEN  
 ACT UP FOR PEACE

"hello from a Belgian grandpa! Does your male equivalent exist? We are ready here in Belgium to join your movement!"

PAUL MAWFF, Belgium

"They sing out their no-holds-barred messages. Audiences and media alike love them. Their effectiveness is truly inspiring."

PETE SEIGER, folk singer

"One of the more interesting poorest groups at the WTO meeting in Seattle."

PAUL HAWKEN

author of *Naked Capitalism*  
*Creating the Next Industrial Revolution*

"Long live Raging Grannies! God bless you. Merci beaucoup."

JEANNOT, Marseille, France

## Response to Commentor No. 284

Commentor No. 284: Raging Grannies of Seattle (Cont'd)

Testimony from Seattle Raging Grannies

Sung to Solidarity forever

HANFORD

The chosen site of Hanford  
Is for radioactive waste  
It mixes in our water  
And we all can have a taste  
The river called Columbia  
Is about to get some too  
Nuclear soup for me and you

Leaking tanks forever  
Leaking tanks forever  
Leaking tanks forever  
Plutonium makes us strong

We have so little money  
For cleaning up the mess  
We're spending it on armaments  
That bring us happiness  
So what's a little poison  
When you mix it in your tea  
It builds our economy

Leaking tanks forever  
Leaking tanks forever  
Leaking tanks forever  
Plutonium makes us strong

STOP WASTING MONEY ON FFTF

FOR: Pack up your Troubles!

Stop wasting money on FFTF

Its "lean, clean, fast"

Clean up the messes you've already made,

And don't make any more.

FFTF's not needed,

To make those isotopes,

So, shut down FFTF

for diox and all,

and clean, clean, clean.

FFTF is blowing in the wind

How many times must we come before you  
to tell you to shut that thing down?

How much cleanup could you have done  
with all that money & time?

How many years will you keep sanding &  
A reason for it to survive?

The answer my friends is all politics  
The answer is blowing in the wind

284-2

284-1

Response to Commentor No. 284

284-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford and the potential for contaminants in the Columbia River. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The proposed action described in the NI PEIS would not have an impact on Hanford cleanup activities. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to the groundwater. As indicated in analyses presented in Chapter 4 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

With respect to plutonium processing, no weapons material will be produced under the proposed action. All missions in this PEIS are for civilian purposes.

Hanford tank waste issues are not within the scope of this PEIS, as none of the alternatives considered would add to these waste volumes.

284-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. DOE also notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site.

## Commentor No. 284: Raging Grannies of Seattle (Cont'd)

### Why Do We Sing?

We sing to encourage respect for all people, to encourage casting aside prejudice... to help in the struggle to build a world we will be happy and proud to pass on to our precious grandchildren. We sing for a JUST world in which PEACE reigns.

### What Are We Raging About?

We are enraged about the poor conditions that people are forced to endure in their lives. We rage about the pollution on the earth, and we rage against corporate greed.

### The Beginning

In Victoria, British Columbia, in 1986, several peace activists dressed up in outrageous hats and sang satirical songs to protest nuclear submarines, uranium mining, nuclear power, racism, militarism, clear-cut logging and corporate greed. They called themselves Raging Grannies. Groups promptly sprang up across Canada, all the way to Nova Scotia.

The idea spread across the border to Vermont and inspired the first U.S. Raging Grannies. Kathleen Kelley, a member of the Vermont group, called the first meeting of the Raging Grannies of Seattle.

Our debut performance, on February 12, 1996, was in Olympia at the President's Day rally sponsored by the Washington State Labor Council. The cold weather and pouring rain did not dampen our spirit as we sang...



Since 1996, Raging Grannies of Seattle has performed at hundreds of rallies, meetings and demonstrations. Together with Raging Grannies from Victoria and Vancouver, British Columbia, we took part in the demonstrations which prevented the World Trade Organization (WTO) from meeting in Seattle in November 1999.

For that, we received a great deal of media attention, national and international.

### And Now...

We hope to see more and more Raging Grannies groups form all across the U.S. and throughout the world. If you are interested in starting a group in your area and need some assistance, please contact us.

**RAGING  
GRANNIES  
of SEATTLE**

P. O. BOX 22048  
SEATTLE, WA 98122

[www.raginggrannies.com](http://www.raginggrannies.com)

Oh, we're a gaggle of grannies,  
Urging you off of your fannies.

We're raising our voice,

We want a new choice...

**NO MORE WAR!**

## Response to Commentor No. 284