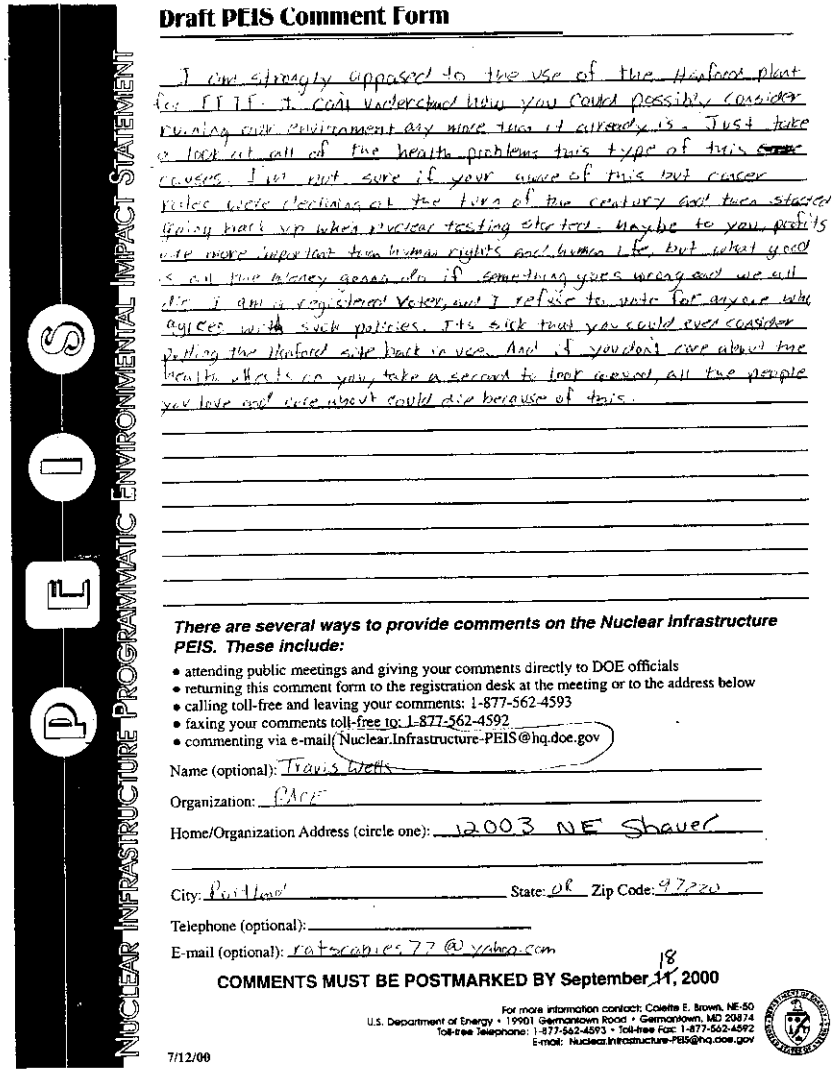
Chapter 2
Written Comments and DOE Responses



Draft PEIS Comment Form

I am strongly opposed to the use of the Hanford plant for FFTF. I can understand how you could possibly consider ruining our environment any more than it already is. Just take a look at all of the health problems this type of this causes. I'm not sure if your aware of this but cancer rates were declining at the turn of the century and then started going back up when nuclear testing started. Maybe to you, profits are more important than human rights and human life, but what good is all the money gonna do if something goes wrong and we all die. I am a registered Voter, and I refuse to vote for anyone who agrees with such policies. It's sick that you could even consider putting the Hanford site back in use. And if you don't care about the health effects on you, take a second to look around, all the people you love and care about could die because of this.

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): Travis Wells

Organization: CARP

Home/Organization Address (circle one): 12003 NE Shaver

City: Portland State: OR Zip Code: 97220

Telephone (optional):

E-mail (optional): ratscabies77@yahoo.com

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

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

2055-1

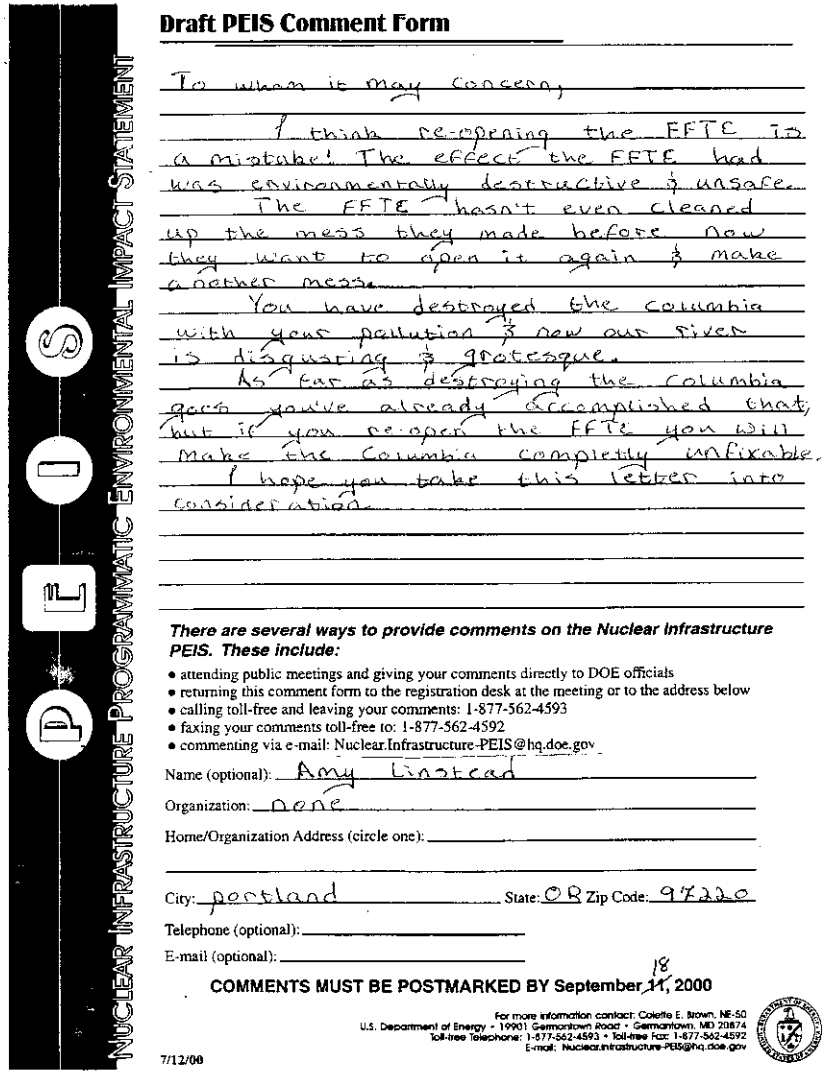
2055-2

2055-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2055-2: Cancers are believed to be caused by a combination of hereditary and environmental factors, including radiological and chemical agents. Statistics from the National Cancer Institute indicate that the rate of cancer incidence and the rate of cancer mortality has dropped during the 1990's [NCI webpage (as of 10/19/2000) - http://cancernet.nci.nih.gov statistics.shtml article entitled "Cancer Death Rate Declined in the 1990s for the First Time Ever"]. A survey sponsored by the National Cancer Institute and published in the Journal of the American Medical Association in 1991 (JAMA 1991:1403-1408) detected no general increase in the risk of cancer death for people living in 107 counties adjacent to or containing 62 nuclear facilities. The Hanford Site, Idaho National Engineering and Environmental Laboratory, and Oak Ridge Reservation were included in the survey. The study used cancer mortality data from Benton, Franklin, and Grant Counties in the survey for the Hanford Site (See Section 3.4.9.3 of Volume 1).

This PEIS has provided an estimate of the potential human health impacts associated with a range of reasonable alternatives as described in Section 2.5 of Volume 1. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Sections 4.3 through 4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from implementation of each of the alternatives Alternative 1 includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with each alternative and with restarting FFTF would be small.

Commentor No. 2056: Amy Linstead



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

To whom it may concern,

I think re-opening the FFTF is a mistake! The effect the FFTF had was environmentally destructive & unsafe. The FFTF hasn't even cleaned up the mess they made before. Now they want to open it again & make another mess.

You have destroyed the Columbia with your pollution & now our river is disgusting & grotesque.

As far as destroying the Columbia goes you've already accomplished that, but if you re-open the FFTF you will make the Columbia completly unfixable.

I hope you take this letter into consideration.

2056-1

2056-2

2056-3

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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): Amy Linstead

Organization: none

Home/Organization Address (circle one):

City: portland State: OR Zip Code: 97220

Telephone (optional):

E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 11, 18, 2000

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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

Response to Commentor No. 2056

2056-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2056-2: 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. 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.

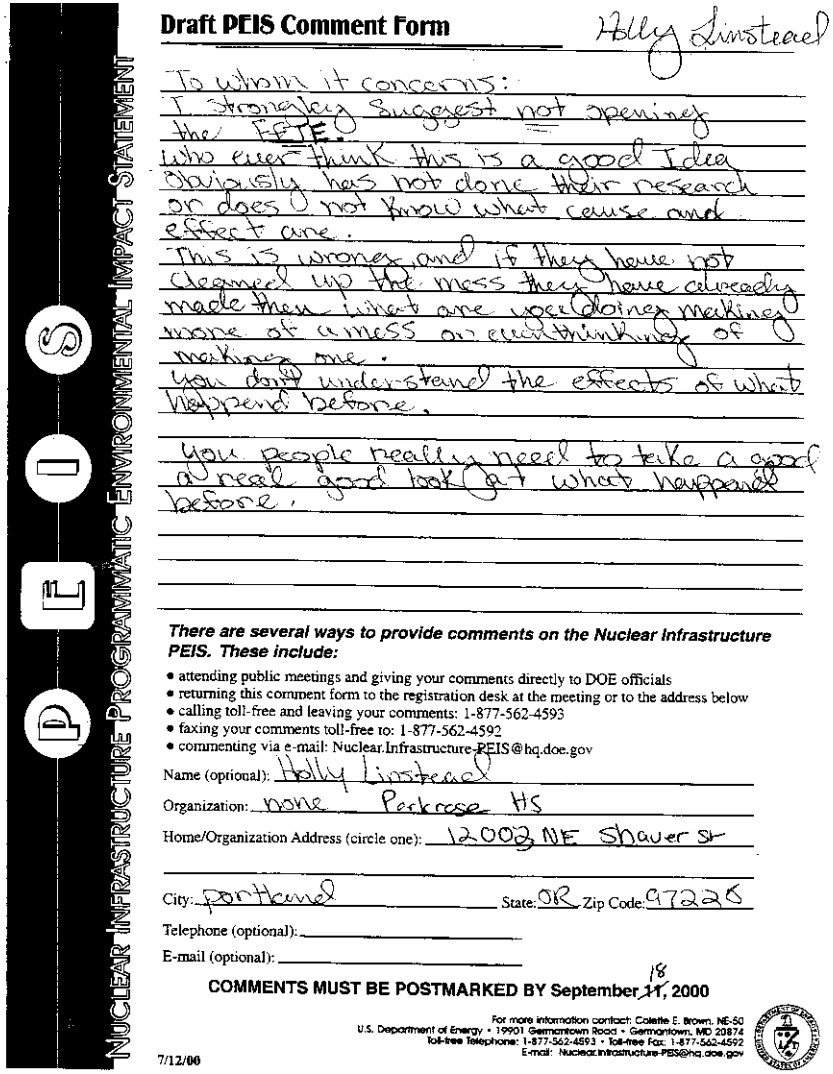
FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there 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.

As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (i.e., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes 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 regards to the Columbia River, all environmental parameters (e.g. air, soil, surface water, groundwater, vegetation, animals, etc.) in and around the Hanford Site are monitored on a set frequency. The information is available to the public in annual monitoring reports. No food or water restrictions are currently in place outside the Hanford Reservation as a result of Hanford activities.

2056-3: 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 considered comments received from the public. No decisions have been made with regard to the facilities and locations evaluated to fulfill the requirements of the DOE 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.

Commentor No. 2057: Holly Linstead



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form Holly Linstead

To whom it concerns:
I strongley suggest not opening the FFTF.
Who ever think this is a good Idea obviously has not done their research or does not know what cause and effect are.
This is wrong, and if they have not cleaned up the mess they have already made then what are we doing making more of a mess or even thinking of making one.
You don't under-stand the effects of what happend before.

You people really need to take a good a real good look at what happend before.

2057-1

2057-2

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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): Holly Linstead
Organization: none Parkrose HS
Home/Organization Address (circle one): 12002 NE Shaver St
City: Portland State: OR Zip Code: 97220
Telephone (optional):
E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 11, 18, 2000

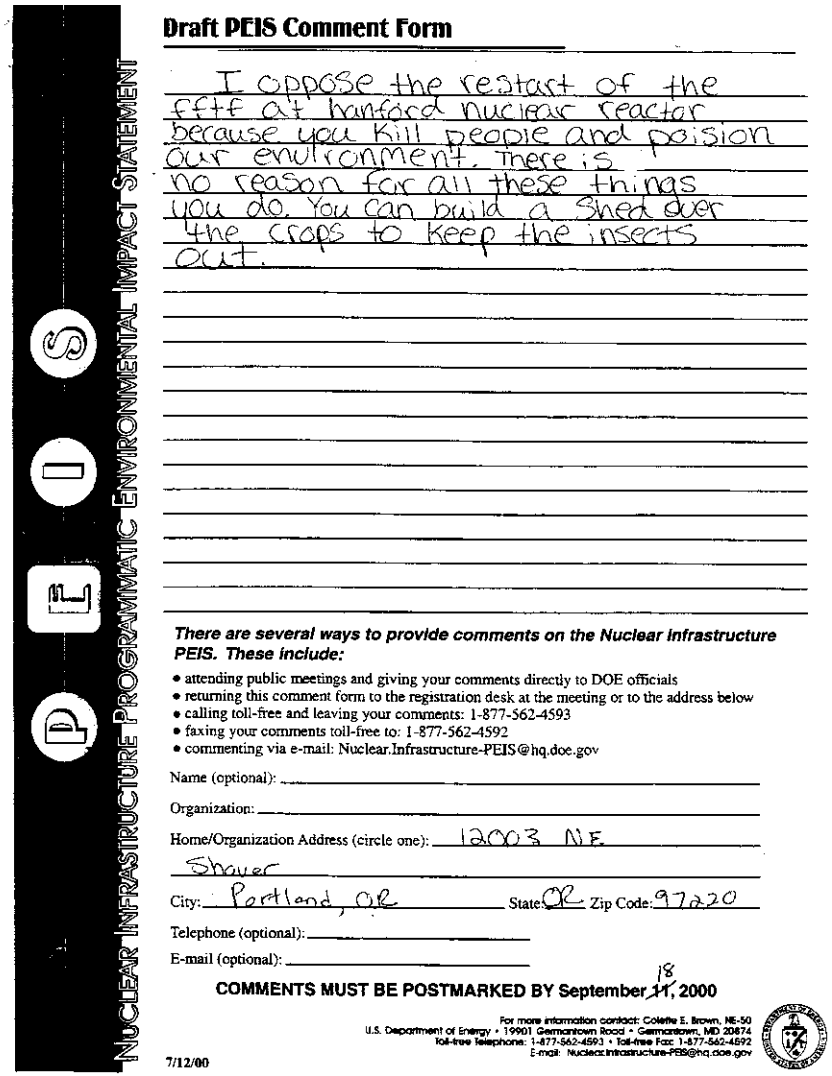
For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

7/12/00

Response to Commentor No. 2057

2057-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2057-2: 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. 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.



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

I oppose the restart of the fftf at hanford nuclear reactor because you kill people and poision our environment. There is no reason for all these things you do. You can build a Shed over the crops to keep the insects out.

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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): _____

Organization: _____

Home/Organization Address (circle one): 12003 N.E. Shaver

City: Portland, OR State: OR Zip Code: 97220

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 18, 2000

For more information contact: Colette E. Brown, NE-50
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Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

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2058-1

2058-2

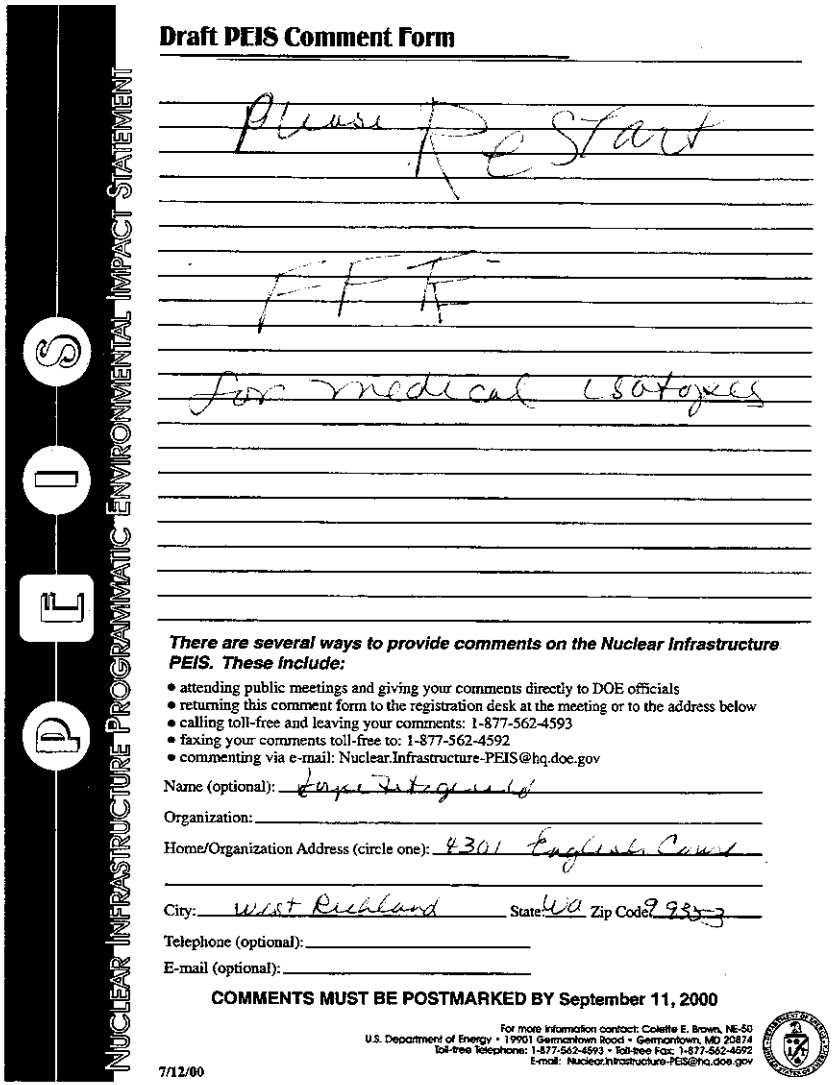
2058-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2058-2: 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 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 shown to be small.

All air emissions and wastewater discharges would be in accordance with applicable permit and regulatory requirements. The releases of air pollutants and contaminated liquid are addressed in Section 4.3 of the NI PEIS. The release of air pollutants would result in concentrations well below Federal and state air standards (Table 4-13). The release of radioactivity and hazardous chemicals into the atmosphere would have a negligible effect on human health (Tables 4-17 and 4-19, respectively). There would be no discernible impacts to groundwater or surface water quality (Section 4.3.1.1.4). All impacts on ecological resources, including animals and fish, associated with operation of the FFTF would be small Section 4.3.1.1.6).

It is concluded that operation of the FFTF would have small adverse effects on the environment.

Commentor No. 2059: Joyce Fitzgerald



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

Please Restart

FFTF

for medical isotopes

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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): Joyce Fitzgerald

Organization:

Home/Organization Address (circle one): 4301 English Court

City: West Richland State: WA Zip Code: 99353

Telephone (optional):

E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 11, 2000

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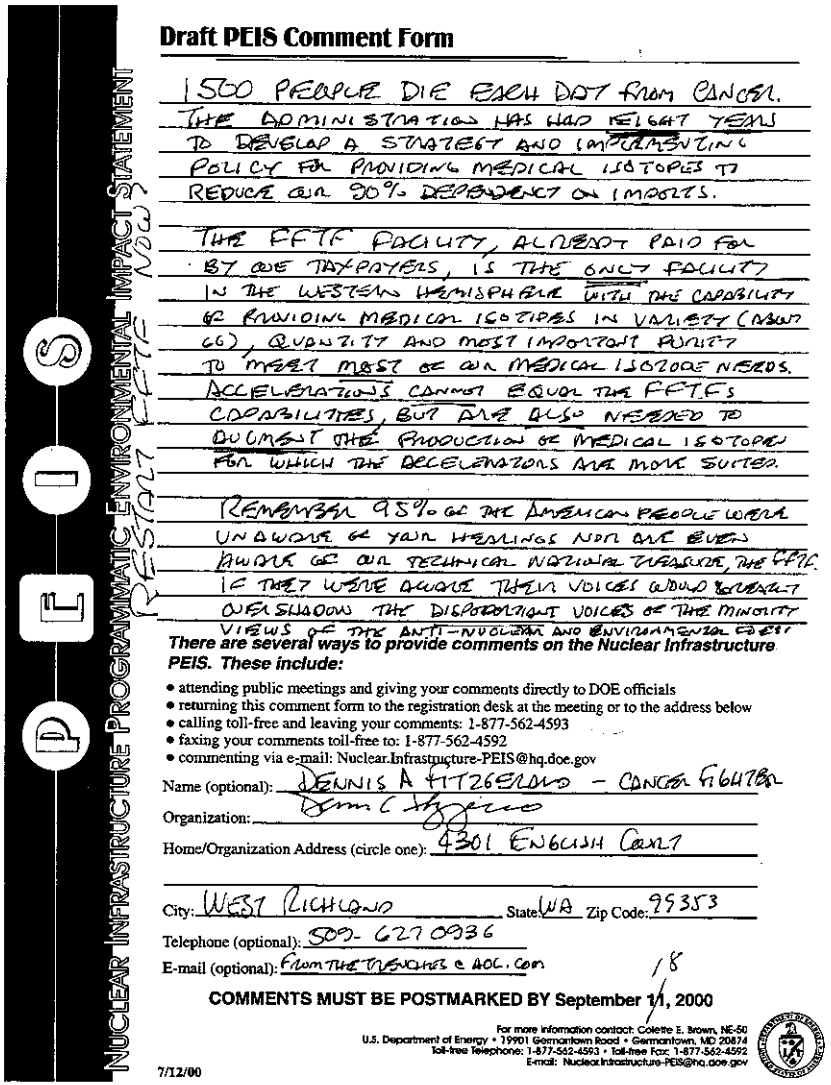
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

7/12/00

2059-1

Response to Commentor No. 2059

2059-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

RESTART FFTF NOW

Draft PEIS Comment Form

1500 PEOPLE DIE EACH DAY FROM CANCER.
THE ADMINISTRATION HAS HAD EIGHT YEARS
TO DEVELOP A STRATEGY AND IMPLEMENTING
POLICY FOR PROVIDING MEDICAL ISOTOPES TO
REDUCE OUR 90% DEPENDENCY ON IMPORTS.

THE FFTF FACILITY, ALREADY PAID FOR
BY OUR TAXPAYERS, IS THE ONLY FACILITY
IN THE WESTERN HEMISPHERE WITH THE CAPABILITY
OF PROVIDING MEDICAL ISOTOPES IN VARIETY (ABOUT
60), QUANTITY AND MOST IMPORTANT PURITY
TO MEET MOST OF OUR MEDICAL ISOTOPE NEEDS.
ACCELERATORS CANNOT EQUAL THE FFTF'S
CAPABILITIES, BUT ARE ALSO NEEDED TO
AUGMENT THE PRODUCTION OF MEDICAL ISOTOPES
FOR WHICH THE ACCELERATORS ARE MORE SUITED.

REMEMBER 95% OF THE AMERICAN PEOPLE WERE
UNAWARE OF YOUR HEARINGS NOR ARE EVEN
AWARE OF OUR TECHNICAL NATIONAL TREASURE, THE FFTF.
IF THEY WERE AWARE THEIR VOICES WOULD LOUDLY
OVERSHADOW THE DISPROPORTIONATE VOICES OF THE MINORITY
VIEWS OF THE ANTI-NUCLEAR AND ENVIRONMENTAL CULT

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

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- 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): DENNIS A FITZGERALD - CANCER FIGHTER

Organization:

Home/Organization Address (circle one): 4301 ENGLISH COURT

City: WEST RICHLAND State: WA Zip Code: 99353

Telephone (optional): 509-627 0936

E-mail (optional): FROMTHETRENCHES@AOL.COM

1/8

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

7/12/00

2060-1

2060-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 2061: Seattle City Council Members (N. Licata, P. Steinbrueck, R. Conlin, J. Nicastro)

08/25/2000 17:15 2062330054 N LICATA PAGE 01

Seattle City Council

August 25, 2000

Honorable Bill Richardson,
Secretary of Energy
U.S. Department of Energy
1000 Independence Ave. SW
Washington, D.C. 20585

Dear Secretary Richardson:

We support your initiatives for discussions and use of independently facilitated, negotiations regarding the future of Hanford's FFTF Nuclear Reactor, which you put forward at the Washington State Democratic Convention on June 10th in a meeting with Washington Democrats. These commitments were innovative efforts at ensuring meaningful dialogue on an issue that has created deep opposition. We congratulate you for your willingness to make commitments to improve the EIS and engage in principled negotiations. We are growing increasingly concerned, however, with the apparent bias of the EIS, and the public participation process for the EIS. 2061-1 2061-2

Restart of the FFTF Nuclear Reactor and resumption of Plutonium processing at Hanford would have potentially catastrophic impacts on the health of Northwest citizens and our environment. Our constituents are entitled to a fair and impartial process to consider all reasonably foreseeable impacts and reasonable alternatives. 2061-3 2061-4

The Department is preventing our constituents and ourselves from reviewing and commenting on the Department's assessment of many of those potential impacts and alternatives by separating them from the Draft Environmental Impact Statement (EIS) and only disclosing them in reports to be made available after the public hearing are over. Apart from the bias of such an approach, this seems to be a clear violation of the National Environmental Policy Act (NEPA). Major public concerns stated in our comments for the scoping of this EIS, including those detailed in the Seattle City Council and Portland City Commission Resolutions opposing FFTF restart (and formally entered into the record at scoping hearings) are ignored in the Draft EIS. 2061-5 2061-6

It is not acceptable to have left out of the Draft EIS the following important details: 2061-7

- what the Department will do with the nuclear and toxic wastes from restarting FFTF and Plutonium operations at Hanford.

1100 Municipal Building, 600 Fourth Avenue, Seattle, WA 98104-1876
(206) 684-8888, Fax: (206) 684-8587, TTY: (206) 233-0025
E-Mail Address: council@ci.seattle.wa.us Internet Address: http://www.pan.ci.seattle.wa.us
An EEO/AA employer. Accommodations for people with disabilities provided upon request.

Response to Commentor No. 2061

2061-1: DOE notes the commentors' concerns. 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. DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives.

2061-2: 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.

2061-3: The evaluation presented in the NI PEIS considered both normal operations and accidents and indicates that the environmental and human health impacts of these facilities would be low.

2061-4: See responses to Comments 2061-1 and 2061-2.

2061-5: 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. CEQ (40 CFR 1500 et seq.) and DOE (10 CFR Part 1021) implementation regulations do not require inclusion of cost and nonproliferation studies in an environmental impact statement. The basic purpose of the NI PEIS is to describe the alternatives under consideration for implementation (Section 2.5 of Volume 1) and the environmental impacts that would occur if these alternatives were implemented (Chapter 4 of Volume 1). 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. The associated cost report and nonproliferation report were made available to the public on August 24, 2000 and September 8, 2000, respectively. DOE mailed these documents to approximately 730 interested parties, and these reports were made available immediately upon release on the NE web site (http://www.nuclear.gov) and in public reading rooms. DOE has also

- the costs of restarting the FFTF reactor and each alternative (especially when the Department has target budgets that are not adequate to comply with the Hanford Clean-Up Agreement)
- the impacts on the nation's nuclear non-proliferation policies from restarting the reactor and use of Plutonium or High Enriched Uranium fuels
- the independent assessment of the need for particular medical isotopes and the suitability of the FFTF reactor to produce them.

2061-8

2061-9

For each of these critical areas, the Department has chosen to issue a report separate from the Draft EIS and not to release that report before the public hearings on the Draft EIS.

2061-10

We are dismayed that the Draft EIS fails to disclose that the Department's own blue ribbon medical advisory committee recommended last April that ***"the FFTF not be considered as a viable long-term source of research radioisotopes."*** Additionally, neither disclosed or referenced in the Draft EIS are the NERAC Subcommittee for Isotope Research and Production Plannings' findings regarding 1) the suitability of the FFTF reactor for production of research medical isotopes, 2) the claims of the contractors regarding FFTF's costs and projected revenues for producing isotopes, and 3) the "poor" rating of the manufacturing practices at Hanford are.

2061-11

The Draft EIS should have considered the alternatives recommended by the Subcommittee, and fully disclosed its criticism of the claims made by the FFTF's contractors. Instead, the Draft EIS and DOE documents repeat the cost and isotope need claims that the Subcommittee found to be flawed and overly optimistic. The public deserves to have this fully disclosed in the Draft EIS.

The concerns of the City of Seattle (Resolution 30060 and Resolution 28848) regarding the import of Plutonium on board ships passing through inland waters (such as Puget Sound or the Columbia River to the Port of Portland), and transport of Plutonium through the crowded Puget Sound region, are entirely ignored in this EIS. A shipboard fire involving a shipment of Weapons Grade Plutonium fuel in inland waters poses horrific consequences. Exposure of our constituents to such risk is entirely unacceptable. Other major concerns raised in the Portland and Seattle resolutions, and by Members of Congress, are similarly ignored in the Draft EIS. The Department undermines the public confidence in its consideration of the restart of FFTF when it proposes such actions and ignores the formal input from elected officials and the region's major cities.

2061-12

As the hearings on the Draft Environmental Impact Statement (EIS) approach, the Department has not provided for adequate notice of the hearings to our constituents, has not changed its plans for conduct of the hearings, and those in charge of the EIS have

2061-13

2061-14

provided summaries of the Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment in Appendixes P and Q, respectively, in the Final NI PEIS.

2061-6: DOE has read and considered the public concerns detailed in the Resolutions of the Seattle City Council and the Portland City Commission. Section 1.4 of Volume 1 and the expanded discussion in Appendix N summarize the issues and concerns raised during the scoping process.

2061-7: 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.

2061-8: 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). 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 fund designated for Hanford cleanup, regardless of the alternative(s) selected.

2061-9: DOE notes the commentors' concern that an independent assessment of the need for particular isotopes and the suitability of FFTF is not included in the NI PEIS. Section 1.2.1 of Volume 1 discusses the need

Commentor No. 2061: Seattle City Council Members (Cont'd) (N. Licata, P. Steinbrueck, R. Conlin, J. Nicastro)

failed to live up to expectations for meaningful discussions regarding the substance of the EIS.

Last year, the conduct of the hearings was itself a major controversy because the Department refused to use a sign in list for determining the order of speakers. Again, the Department appears intent to allow the process to appear biased by allowing the Department's moderator to choose the order of speakers. Last year, this resulted in the spokespeople for the region's major public interest groups not being called on to speak until late in the night at hearing after hearing.

2061-14 (Cont'd)

We are also disturbed that the Department has identified public interest groups as "opposition" and "protest" groups, thus requiring them to pay for police in order to hold pre-hearing workshops. We must reiterate that the Cities of Seattle and Portland are also officially opposed to the restart of FFTF.

2061-15

We urge the Department to take immediate steps to do the following:

1. Provide proper notice designed to notify our constituents that these hearings are on an EIS regarding the possible restart of Hanford's FFTF Nuclear Reactor and Plutonium processing.
2. Utilize unbiased procedures for the conduct of the hearings.
3. Discontinue the characterization of groups as "opposition" or "protest" and ensure that there is no intimidation of public comment.

2061-16

2061-17

2061-18

Sincerely,

Councilmember Nick Licata

Councilmember Judy Nicastro

Councilmember Peter Steinbrueck

Councilmember Richard Conlin

Response to Commentor No. 2061

for isotopes based on the Expert Panel and NERAC subcommittee recommendations. As further discussed in the response to Comment 158-13 and presented in Section 1.5 of Volume 1, the recommendations of these independent review groups were taken into consideration in developing the range of reasonable alternatives evaluated in the NI PEIS. NERAC is an independent Federal advisory committee appointed by the Secretary of Energy to advise DOE on civilian nuclear energy research program as noted in Section 1.2 of Volume 1.

2061-10: The draft Waste Minimization and Management Plan for the Fast Flux Test Facility (May 2000) and the NERAC Isotope Subcommittee report (April 2000) were referenced in the NI PEIS and were available prior to the public hearings. The NI PEIS cost and Nonproliferation reports were made available on August 24 and September 8, 2000, respectively; immediately after they were completed, as discussed in response to Comment 2061-5.

2061-11: 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 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 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.

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

12/06/93
JN:ssj

RESOLUTION 28848

A RESOLUTION stating the City's position that high level nuclear wastes should not be moved through Seattle or the Puget Sound area by water or land transportation.

WHEREAS, in response to a proposal from the Federal Department of Energy in 1986 to ship high-level nuclear waste from Asia through Puget Sound and Seattle to inland destinations, the Mayor and all Councilmembers signed letters to the Secretary of Energy requesting a site-specific EIS before undertaking such shipments; and

WHEREAS, in 1990 the City Council again, this time by resolution, opposed a Department of Energy proposal to ship high-level radioactive wastes from the Hanford Nuclear Reservation to West Germany through the City and Port of Seattle; and

WHEREAS, this proposal was also withdrawn; and

WHEREAS, in 1991, the Department of Energy made another policy proposal for a ten-year program to transport from 100-352 cask-shipments of high-level nuclear waste from research reactors in foreign countries to DOE facilities in South Carolina and Idaho through Puget Sound ports without a complete EIS and again, the Council, through Resolution 28433, opposed such shipment; and

WHEREAS, the Department of Energy on October 21, 1993 began a public comment period on the scope of an EIS for a proposed policy which would permit acceptance through the Port of Seattle of spent nuclear fuel containing enriched uranium of U.S. origin from foreign research reactors; and this EIS will evaluate the impact of such shipments on marine ports of entry, overland transportation routes and storage at its Hanford or the Idaho National Engineering Laboratory (INEL) site, until a means for permanent disposition is available; and

WHEREAS, the DOE press release of October 21, 1993 appears to suggest that it wishes to return up to 700 spent fuel elements from foreign research reactor while the EIS on the acceptance policy is being prepared; and

WHEREAS, the City Council, the Port of Seattle, and the Longshoremen's Union in Seattle continue to oppose these nuclear shipments through Seattle without adequate safeguards, procedures and risk assessments in place, in advance of any such shipments; NOW, THEREFORE,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF SEATTLE, THE MAYOR CONCURRING, THAT

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 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 disturbing 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 www.nuclear.gov.

2061-12: The commentors concern that DOE would expose constituents in the Seattle area to risks associated with the transport of weapons-grade plutonium is noted. None of the purposed alternatives involved 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 review 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

Commentor No. 2061: Seattle City Council Members (Cont'd) (N. Licata, P. Steinbrueck, R. Conlin, J. Nicastro)

RESOLUTION

I. It is the City's position that no shipments of high level nuclear waste, from any source and to any destination requiring transport through the State of Washington, shall be moved through Seattle by land or water transportation without complete site-specific EIS's for each port and each transportation corridor involved, which conclusively establish that shipments will not pose risk to the health or safety of Seattle's residents.

II. It is the City's position that the EIS which is being prepared for the proposed policy should be as thorough and detailed as possible, addressing all potential risks to human health and the environment. The EIS should explore a range of alternatives including leaving the nuclear waste in situ until a strategy for disposal is resolved upon; having DOE take title to the material at the point of its generation, rather than when it arrives at the storage facility; using less-populated locations than the Port of Seattle for transfer from ship to land transport; and using a less congested and dangerous transportation corridor than through Seattle and over the Cascades. It should fully evaluate accidents or events which might result in breakage or leaking from the transport casks, as well as the resulting risks of harm from such leaks and the existence and availability of appropriate emergency equipment and facilities.

III. It is further the City of Seattle's position that if it is not completely satisfied with the EIS, and Seattle is chosen as a Port of Entry, the City will continue, by all means available, to oppose such a plan.

Response to Commentor No. 2061

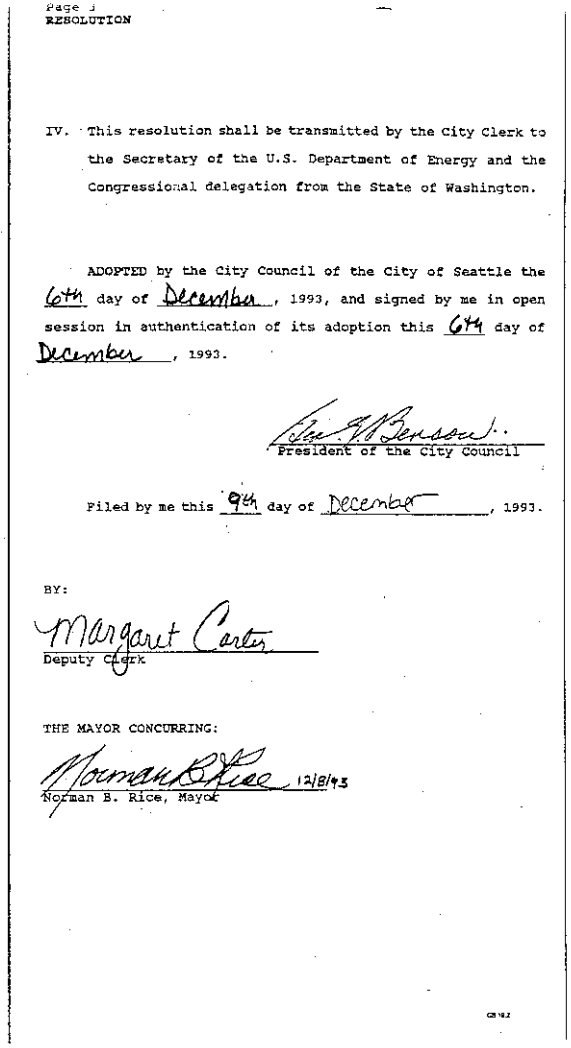
public comments, including local resolutions, concerning the desirability of bringing mixed oxide fuel into the proposed alternative ports.

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).

2061-13: DOE provided notice of scheduled public hearings in accordance with the requirements of CEQ and DOE regulations (i.e., 40 CFR Parts 1503.1 and 1506.6 and 10 CFR Part 1021.313, respectively). This included announcement of the hearings in the Federal Register as well as in the local media. In addition, copies of the Draft NI PEIS and/or the Summary (including the public hearing schedule) were sent to each individual or group listed to receive it at the address on record. Additional notification to the public concerning meetings on the Draft PEIS were made by the Oregon Office of Energy to members of 20 focus groups in six Oregon communities and other Oregon interest groups.

2061-14: 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

Commentor No. 2061: Seattle City Council Members (Cont'd) (N. Licata, P. Steinbrueck, R. Conlin, J. Nicastro)



Page 3
RESOLUTION

IV. This resolution shall be transmitted by the City Clerk to the Secretary of the U.S. Department of Energy and the Congressional delegation from the State of Washington.

ADOPTED by the City Council of the City of Seattle the 6th day of December, 1993, and signed by me in open session in authentication of its adoption this 6th day of December, 1993.

President of the City Council

Filed by me this 9th day of December, 1993.

BY:
Margaret Carter
Deputy Clerk

THE MAYOR CONCURRING:
Norman B. Rice 12/8/93
Norman B. Rice, Mayor

Response to Commentor No. 2061

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.

2061-15: DOE does not engage in or condone the actions alleged in the comment. DOE did not and does not label organizations or individuals. Neither does it interfere with workshops held by an organization, nor exert any influence or authority in the matter of fees for security and law enforcement charged by the owners or managers of facilities in which public meetings are held. Such matters are determined by the rules and regulations adopted by or applied to these facilities, consistent with local laws and municipal requirements.

For the record, DOE did not characterize public hearings participants as "opposition" or "protest" groups, and further, did not attempt to recommend or influence any meeting facility fees or security measures applicable to any group or individual.

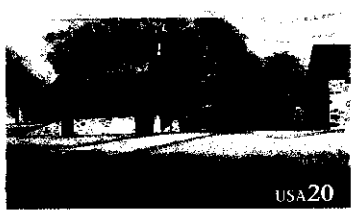
2061-16: The commentors' concern for proper notice of the public hearing process is addressed in response to Comment 2061-13.

2061-17: The commentors' request to establish procedures for unbiased hearings is addressed in response to Comment 2061-14.

2061-18: The issue of opposition groups is addressed in response to Comment 2068-15.

Commentor No. 2062: Aldine P. Gedeon

Mrs. Aldine Gedeon
85950 Territorial Rd
Eugene OR 97402-9206



COLETTE BROWN
U.S. DEPT. OF ENERGY
19901 GERMANTOWN RD.
GERMANTOWN, MD 20874

ATTN: NE-50
20874+1207

RESTART FAST FLUX TEST FACILITY
FFTF IS NEEDED TO PROVIDE
MEDICAL ISOTOPES.

Mrs. Aldine P. Gedeon
85950 TERRITORIAL RD.
EUGENE, OR 97402-9206

2062-1

Response to Commentor No. 2062

2062-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 2063: Robert E. Brown

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

8741207

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: **2063-1**

of the continuing threat to the environment; the waste of resources better directed to other sources of energy. **2063-2** **2063-3**

Name ROBERT E. BROWN
Address 1320 FRANKLIN APT. F
City, state ASTORIA OR. Zip 97103

Response to Commentor No. 2063

2063-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2063-2: The concerns expressed in this comment with respect to a startup of the FFTF are noted. All air emissions and wastewater discharges would be in accordance with applicable permit and regulatory requirements. The releases of air pollutants and contaminated liquid are addressed in Section 4.3 of the draft NI PEIS. The release of air pollutants would result in concentrations well below Federal and state air standards (Table 4-13). The release of radioactivity and hazardous chemicals into the atmosphere would have a negligible effect on human health (Tables 4-17 and 4-19, respectively). There would be no discernible impacts to groundwater or surface water quality (Section 4.3.1.1.4). All impacts on ecological resources, including animals and fish, associated with operation of the FFTF would be small (Section 4.3.1.1.6).

It is concluded that operation of the FFTF would have small adverse effects on the environment.

2063-3: DOE notes the commentor's interest in alternative energy sources, although issues of research and development of alternative energy sources are beyond the scope of this Nuclear Infrastructure PEIS. The DOE missions to be addressed in this EIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies.

Commentor No. 2064: Mary Maythe-Slac

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

3874+1207

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: 2064-1

IT IS DANGEROUS!! THE GOVERNMENT 2064-2
MADE A COMMITMENT TO CLEANING
UP HANFORD. THEY (YOU) ARE NOT KEEPING 2064-3
THAT PROMISE. I AM DISGUSTED BY
YOUR LACK OF INTEGRITY AND DIS-
REGARD FOR OUR SAFETY + OUR PLANET.

Name MARY MAYTHER-SLAC

Address 38707 SE LUSTED RD

City, state BORING, OR Zip 97009

Response to Commentor No. 2064

2064-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2064-2: FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

2064-3: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and 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. 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. 2065: Brian Barnett

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

0874+1307

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:

- the long-run effects have not been adequately answered. — 2065-1
- Democratic processes of economic, technical & environmental impacts have been & are being badly abused — 2065-2, 2065-3

Name Brian Barnett
Address 109 SE ALDER #219
City, state PORTLAND OR Zip 97214

Response to Commentor No. 2065

2065-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2065-2: The concerns expressed in this comment with respect to the long-term effects of FFTF operation are noted. The environmental impacts associated with restart and operation of FFTF are presented in Section 4.3 of the NI PEIS. All air emissions and wastewater discharges would be in accordance with applicable permit and regulatory requirements, such that short- and long-term impacts would be small. The release of criteria air pollutants would result in concentrations well below Federal and state air standards (Table 4-13). The release of radioactivity and hazardous chemicals into the atmosphere would have a negligible effect on human health (Tables 4-17 and 4-19). No long term adverse health effects, including cancer and genetic disorders, would be anticipated. There would be no discernible impacts to groundwater or surface water quality Section 4.3.1.1.4). All impacts on ecological resources, including animals and fish, would be small (Section 4.3.1.1.6). The management of all wastes (Section 4.3.1.1.13) would be conducted in accordance with applicable Federal and state laws and regulations and appropriate DOE orders. The generation of spent nuclear fuel from 35 years of FFTF operations would represent less than 1 weight-percent of the total spent nuclear fuel inventory presently stored at Hanford (Section 4.3.1.1.14). DOE is committed to transfer the spent fuel to the national geologic repository for ultimate disposition.

It is concluded that nuclear infrastructure activities would have small effects on the environment, both in the long term as well as the short term.

2065-3: DOE is committed to discharging its responsibilities in an open and unbiased manner and providing the public with comprehensive environmental reviews of its proposed actions. 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. 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.

Commentor No. 2066: Betty Holman Corker

9/15/2000

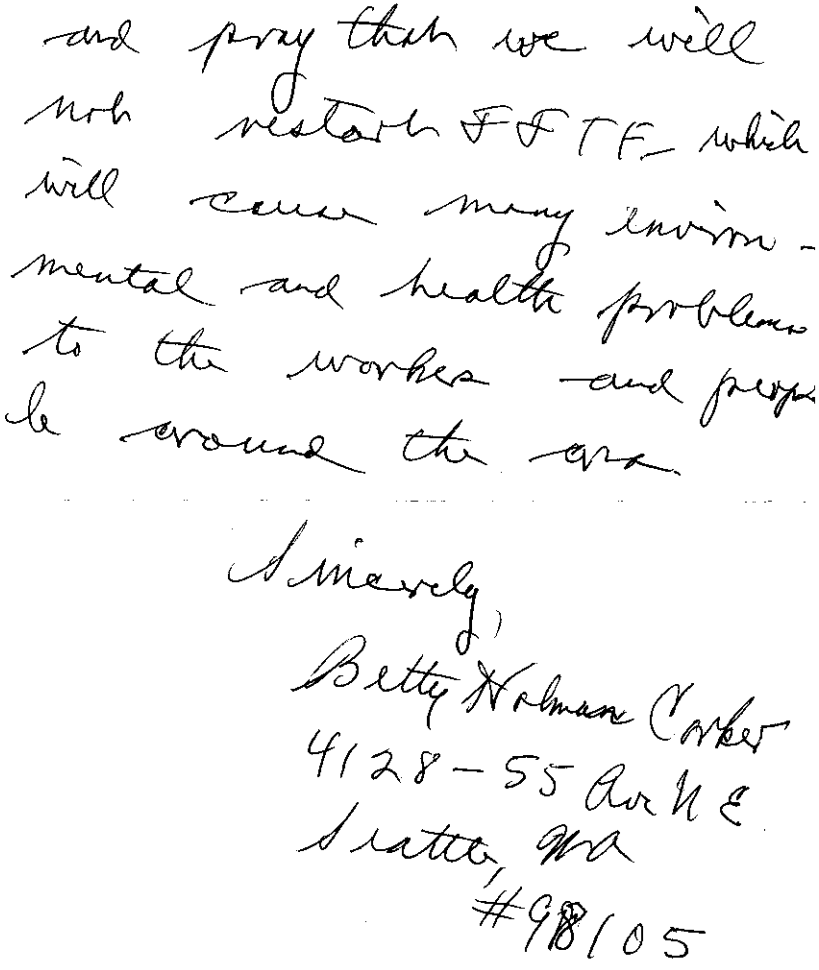
Colette E. Brown
NE-50
U.S. Dept. of Engy
Germantown, MD

Dear Colette Brown

I am 87 years old - was born in the state of Washington and have been very unhappy over the Hanford contaminated nuclear site. I hope

Response to Commentor No. 2066

Commentor No. 2066: Betty Holman Corker (Cont'd)



and pray that we will not restart FFTF which will cause many environmental and health problems to the workers and people around the area.

Sincerely,
Betty Holman Corker
4128-55 Ave NE
Seattle WA
#98105

2066-1

2066-2

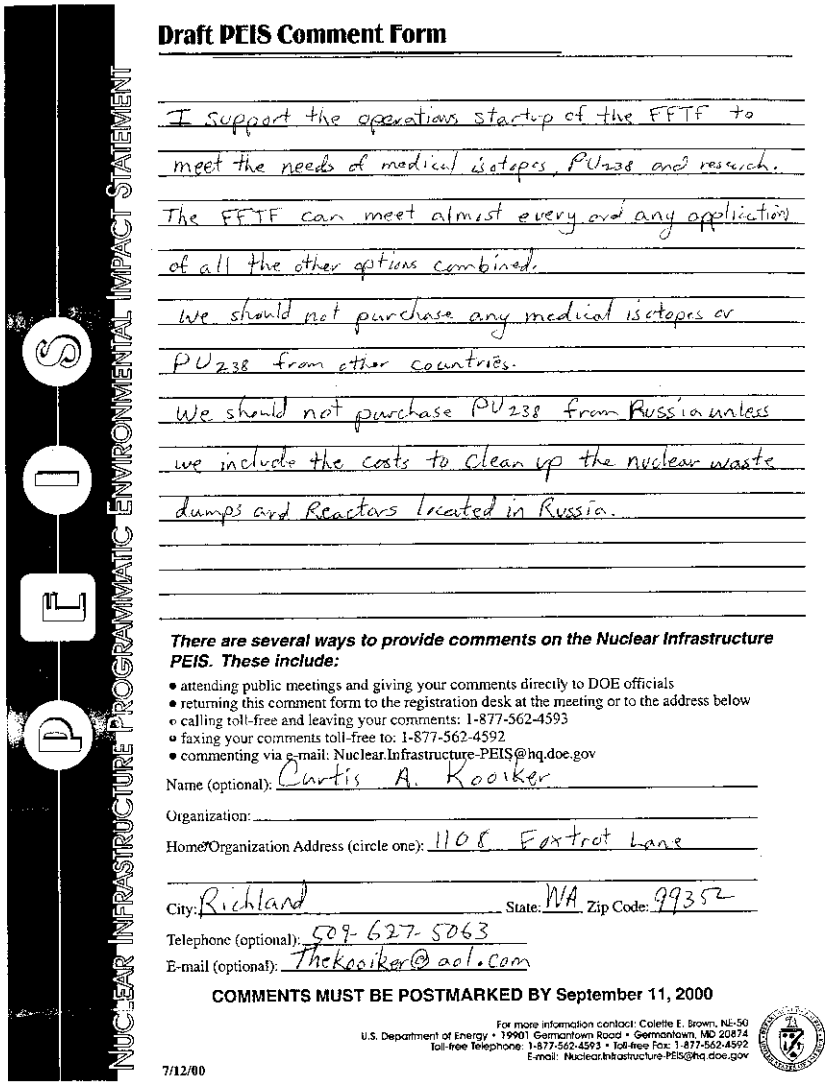
Response to Commentor No. 2066

2066-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2066-2: This NI PEIS provides estimates of human health impacts associated with a range of reasonable alternatives. The methodology used provides realistic results based upon our current knowledge of the health impact of low doses of radiation. Sections 4.3 through 4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from implementation of each of the alternatives. Alternative 1 includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Worker safety is a key element of the Department of Energy's Radiological Health and Safety Policy (DOE P 441.1, April 26 1996). This policy states in part that Department of Energy facilities must "conduct radiological operations in a manner that controls the spread of radioactive materials and reduces exposure to the workforce and the general public and that utilizes a process that seeks exposure levels as low as reasonably achievable." Each Department of Energy site, including Hanford, is required to implement a radiological control program with the intent to meet this policy goal. Based on the assessment of worker health impacts for all of the alternatives and options considered that make use of Hanford facilities, no increase in cancer fatalities among the facility workers would be expected. For example in Alternative 1 option 3, all of the activities (target irradiation and processing) occur at Hanford facilities. As shown in Section 4.3.3.1.9, the expected consequences are less than one additional fatal cancer among the workforce; that is, no additional fatal cancers would be expected.

Commentor No. 2067: Curtis A. Kooiker



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

I support the operations startup of the FFTF to meet the needs of medical isotopes, PU_{238} and research. The FFTF can meet almost every and any application of all the other options combined. We should not purchase any medical isotopes or PU_{238} from other countries. We should not purchase PU_{238} from Russia unless we include the costs to clean up the nuclear waste dumps and Reactors located in Russia.

2067-1

2067-2

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): Curtis A. Kooiker

Organization:

Home/Organization Address (circle one): 1108 Foxtrot Lane

City: Richland State: WA Zip Code: 99352

Telephone (optional): 509-627-5063

E-mail (optional): Thekooiker@aol.com

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

Response to Commentor No. 2067

2067-1: DOE notes the commentor's support for Alternative 1, Restart FFTF, and opposition to purchasing medical isotopes or plutonium-238 from other countries. However, the commentor should note that the United States currently purchases limited quantities of plutonium-238 form Russia and approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada.

2067-2: The public health and safety, the environmental impacts, and the total cost (including cleanup costs) associated with the plutonium-238 production in Russia are under Russian control. The cost for the purchase of Russian plutonium-238 is determined by the terms and conditions of the negotiated contract between the U.S. and Russia.

Commentor No. 2068: Kathleen Trever, INEEL Oversight, State of Idaho, Governor's Office

INEEL Oversight
Idaho's eyes on the INEEL

Dirk Kempthorne, Governor
Kathleen L. Trever, Coordinator

900 North Skyline, Suite C • Idaho Falls, Idaho 83402
1410 North Hilton • Boise, Idaho 83706

September 18, 2000

Colette E. Brown, Document Manager
Office of Space and Defense Power Systems (NE50)
Office of Nuclear Energy, Science, and Technology
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

RE: State of Idaho Comments - *Draft Programmatic Environmental Impact 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* (Draft EIS)

Dear Ms. Brown:

The State of Idaho has the following comments on the above-referenced Draft EIS:

- INEEL appears to have the most existing capabilities for performing this mission at a single location, thereby minimizing transportation and construction and modification of facilities. The Final EIS should provide a more straightforward comparison of the impacts and capabilities for performing the various aspects of this mission at single locations. **2068-1**

- Summary page S-14 indicates the Advanced Test Reactor (ATR) has insufficient capacity to meet long-term needs for medical isotope production and nuclear research and development. The Final EIS should clarify the ATR's capacity to perform these missions, as ATR representatives have previously indicated to us that ATR does have sufficient capacity. The EIS should also provide more detailed projections for medical isotope needs during the timeframe evaluated. **2068-2** **2068-3**

- The Draft EIS does not clearly indicate how much neptunium-237 would be sent to INEEL for irradiation at the ATR. The final EIS should include the volume of neptunium-237 and number of shipments involved over the 35-year campaign. The Final EIS should also clarify how long Pu-238 produced would be stored prior to shipment to Los Alamos National Laboratory. **2068-4**

An Idaho state program that independently monitors activities at the INEEL on behalf of the citizens of Idaho
☎ IF: (208) 528-2600 Boise: (208) 373-0498
IF: (208) 528-2605 Boise: (208) 373-0429
– www2.state.id.us/deqinel/main_op.htm

Response to Commentor No. 2068

2068-1: The impacts associated with performing all mission activities at a single site would be at Hanford and are presented in Section 4.4.2.1, Alternative 2, Option 2. If either Alternative 3, Construct New Accelerator(s) Section 4.5) or Alternative 4, Construct New Research Reactor (Section 4.6) were selected for implementation, INEEL, ORR, and Hanford would be assessed in subsequent NEPA documents as potential sites for all mission activities. This approach is consistent with the programmatic nature of this nuclear infrastructure EIS.

2068-2: The NI PEIS Volume 1, Summary Section S.4 and Section 2.6.1 were revised to include a discussion on ATR capacity.

2068-3: A forecast for future demand for medical isotopes and the expected growth rate of medical isotope use during the next 20 years is provided in Section 1.2 of the NI PEIS. The growth projections were also 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 at levels consistent with the Expert Panel findings.

2068-4: The Final NI PEIS has been revised to clearly indicate in Table J–3 that there would be a total of 24 neptunium-237 shipments from SRS to support the domestic production of plutonium-238. These shipments would occur over a 30-month period. This estimate is based on 446 kilograms of neptunium-237 being available at SRS for shipment. This information was classified at the time the Draft PEIS was developed and has since been declassified. The actual number of shipments to a given irradiation facility, such as ATR, would depend on DOE's future allocation of irradiation core volumes to meet plutonium-238 needs. The Final NI PEIS assumes plutonium-238 produced by irradiation of neptunium-237 would be shipped to Los Alamos National Laboratory annually to meet any demand up to 5 kilograms per year. On this basis, plutonium-238 chemically separated in a given facility would be held there no longer than one year.

Commentor No. 2068: Kathleen Trever (Cont'd) INEEL Oversight, State of Idaho, Governor's Office

- The State of Idaho recommends that the Final EIS explain the difference between what constitutes reprocessing prohibited by U.S policy and the reprocessing proposed in this EIS. The Final EIS should incorporate the recommendations contained on page 6-7 of DOE's Office of Arms Control and Nonproliferation's Nonproliferation Impact Assessment for this project (September 2000). **2068-5**

- The position DOE takes in this Draft EIS regarding the classification of waste derived from dissolved neptunium-237 targets is contrary to DOE's direction, articulated in the ***Implementation Guide*** prepared for DOE Order 435.1. In Volume I, page 4 -70 of the Draft EIS, DOE states, "No high-level radioactive waste would be associated with neptunium-237 target fabrication or processing in the FDPF." And on page 4-72, DOE states, "Although it may be managed as if it were high-level waste, the transuranic waste would not be designated as high-level radioactive waste." In short, in this Draft EIS, it is DOE's position that waste products removed from solutions of dissolved irradiated target material would be classified as transuranic waste.

  Confusingly, the EIS also indicates that because INEEL does not currently generate transuranic waste, the waste could be managed as high-level waste. The Final EIS should reconcile the definition of waste products with DOE's waste management order 435.1.

  In DOE G 435.1, DOE takes the position that, "For the purposes of managing high-level waste under DOE M. 435.1, spent nuclear fuel includes spent driver elements and/or irradiated target elements that contain transuranium elements."[1] As spent nuclear fuel, the dissolution of such target elements for the purpose of removing Pu-238 would constitute reprocessing. As explained in DOE G 435.1, "...the term reprocessing is not defined statutorily. However, reprocessing is considered by the Department to be those actions necessary to separate fissile elements (U-235, Pu-239, U-233, and Pu-241) and/or transuranium elements (e.g. Np, Pu, Am, Cm, Bk) from other materials (e.g. fission products, activated metals, cladding) contained in spent nuclear fuel for the purposes of recovering desired materials."[2] **2068-6**

  From the above, it should be clear that under the adopted position of the Department as applied to the Draft EIS, irradiated neptunium-237 targets are spent nuclear fuel, since the irradiation process is expressly conducted to produce the transuranic element Pu-238. Using the Facility Dissolution Processing Facility (FDPF) at the Idaho Nuclear

[1] DOE G 435.1, II.A. Definition of High-Level Waste, *Components and Equipment Contaminated with High-Level Waste.*

[2] *DOE G. 435.1, II.A. Definition of High-Level Waste, Background.*

Response to Commentor No. 2068

2068-5: The purpose and scope of the NI PEIS is to evaluate the environmental impacts of no action and alternatives. This is the reason why DOE generated a separate Nuclear Infrastructure Nonproliferation Impact Assessment published in September, 2000. DOE will use the separate nonproliferation impact assessment report in its decision making process along with other factors.
DOE has also provided a summary of the Nuclear Infrastructure Nonproliferation Impact Assessment in Appendix Q in the Final NI PEIS, including an explanation of the difference between what constitutes reprocessing prohibited by U. S policy and the processing proposed in this PEIS. DOE will use the recommendations and information in this impact assessment its decision-making process. DOE's decision will be announced in the formal Record of Decision.

2068-6: The point raised in the comment is that the NI PEIS does not follow DOE Order 435.1 regarding management of radioactive wastes. The confusion seems to arise when the commentor indicates that the wording in the NI PEIS is in conflict with the Implementation Guide for the Order.

The Implementation Guide referred to in the comment is a guidance document but does not impose requirements. In this case, the guidance suggests that it is appropriate to manage radioactive waste, such as wastes from irradiated target elements, as high-level radioactive wastes but it does not mandate management of such materials as spent fuel or the processed wastes as high-level radioactive waste. What DOE Order 435.1 does require is that alternative management practices be safe and protective of human health and the environment. The guidance document is just that, a guidance for how to interpret the orders with the idea of giving several methods for safe treatment and disposal without mandating a change from the Order/Manual. Spent nuclear fuel [in the NWPA of 1982, and in the definitions attached to the Manual for DOE Order 435.1] is defined as fuel that has been withdrawn from a nuclear reactor following irradiation, the constituent elements of which have not been separated by reprocessing.

Technology and Engineering Center to dissolve the irradiated targets and recover the transuranic element Pu-238 for future use is clearly reprocessing as intended in the DOE guidance. Therefore, it follows that any waste generated from the reprocessing of the neptunium-237 targets would be high-level waste, as defined in the Nuclear Waste Policy Act.

Historically, DOE has declared only waste from the first cycle of reprocessing to be high-level waste.[3] In this regard, the removal of transuranic waste products from the dissolved target solution would constitute the first cycle of reprocessing and would qualify as high-level waste. The liquid waste remaining after the first cycle waste is removed and Pu-238 is recovered, may or may not be high-level waste depending upon its characteristics. As provided in the Nuclear Waste Policy Act, it may be high-level waste if it contains fission products in sufficient concentrations to warrant permanent isolation. DOE M 435.1 indicates that the Department can make this determination.

Finally, since the dissolution of irradiated neptunium-237 targets and the recovery of Pu-238 constitutes reprocessing, DOE will have to carefully determine the status of any objects contaminated with associated high-level waste. DOE G 435.1 provides guidance on making waste incidental to reprocessing determinations for such contaminated wastes and residues. It is by following this procedure that DOE can determine whether such wastes would be more properly managed as transuranic or low-level and therefore reclassified accordingly.

The Draft EIS must discuss DOE's position as adopted in DOE Order 435.1 and elaborated in supporting documentation. In addition, the implications of the waste being classified as high-level and the appropriate treatment options should be explained.

2068-6

- DOE is currently preparing a *Final High-Level Waste and Facilities Disposition EIS, DOE/EIS-0287D* (HLW & FD EIS) for the management of liquid and calcined waste generated when uranium-235 was recovered from spent nuclear fuel at the Idaho Chemical Processing Plant, now called the Idaho Nuclear Technology and Engineering Center (INTEC). The preparers of this EIS should coordinate with those involved in the HLW & FD EIS, to determine if the high-level waste from reprocessing neptunium-237 can be added to the existing inventory at INTEC and treated in accordance with related decisions. The current plan is to have all the high-level waste at INTEC treated and ready to leave Idaho for interim storage or disposal in a geologic repository by 2035. This schedule would be relatively comparable to that proposed for the Pu-238 campaign.

2068-7

[3] The State of Idaho disagrees with this position, as indicated in the State's Foreword to the Idaho High-Level Waste and Facilities Disposition Draft EIS. (December 1999)

2068-7: 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 the INEEL site. 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. No existing or planned high-level radioactive waste facilities would be used to treat the wastes resulting from processing the irradiated targets.

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 address comments received during the public comment period. This section now states that "DOE is considering whether the waste from processing of irradiated neptunium-237 targets should be classified as high-level radioactive waste and not transuranic waste. Irrespective of how the waste is classified (i.e., transuranic or high-level radioactive waste), the composition and characteristics are the same and the waste management activities (i.e., treatment and on-site storage) as described in this NI PEIS would be the same. In addition, either waste type would require disposal in a suitable repository. If it is transuranic waste, it would be nondefense waste and could not be disposed of at WIPP under current law. Because nondefense transuranic waste has no current disposal path, DOE Headquarters' approval would be necessary before a decision is made to generate such waste, as required by DOE Order 435.1. If the waste is classified as high-level radioactive waste, it is assumed for the purposes of this analysis that Yucca Mountain, Nevada, if approved, would be the final disposal site for DOE's high-level radioactive waste."

Commentor No. 2068: Kathleen Trever (Cont'd) INEEL Oversight, State of Idaho, Governor's Office

- In any event, DOE should determine an appropriate disposal location for waste classified as non-defense transuranic waste prior to its generation. **2068-7**

If you have any questions or concerns, please call me at (208) 373-0498 or Ann Dold at (208) 528-2615.

Sincerely,

Kathleen E. Trever

Kathleen Trever
Coordinator-Manager

KT/nrh

cc. Ann Dold, Manager
Rick Denning, Environmental Scientist
Richard Kimmel, NEPA Document Manager, HLW & FD EIS
Roger Twitchell, NEPA Compliance Officer, DOE-ID

Response to Commentor No. 2068

Commentor No. 2069: Gloria K. Koll

ATTN: Information for Public Comment

6488 South Admiralty Way
Freeland, WA 98249
Koll@whidbey.com
September 18, 2000

Colette E. Brown
US Department of Energy
Germantown, MD

Dear Colette.Brown:

More wastes and contamination must not be added at Hanford. Restarting the reactor would cause more liquid waste, delay Hanford clean-up, and threaten the Columbia River. **2069-1**

Direct efforts to cleaning up this dangerous area. Do not restart the reactor and add to the uncontrolled, perhaps uncontrollable, mess. **2069-2** **2069-3**

I am further outraged that, in response to my previous letter as a concerned citizen, you spent $15.00 of taxpayer money on postage, not to mention the cost of printing, to send me seven pounds (I weighed it!) of technical material. Rather than your techno-justification for this project, use the common sense you were taught in elementary school: don't make another mess until you've cleaned up the one you already made. **2069-4** **2069-2**

Sincerely,

Gloria K. Koll

Gloria Koll

Copy to Washington Senators Murray and Gorton

Response to Commentor No. 2069

2069-1: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (i.e., solid low-level radioactive waste) annually, in addition to nonhazardous wastes, This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes 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.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action 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.

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.

2069-2: 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. 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. 2069: Gloria K. Koll (Cont'd)

Response to Commentor No. 2069

2069-3: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2069-4: DOE works carefully to strike a balance between keeping the public informed about potential impacts from its proposed actions in a timely manner, as required by NEPA and CEQ regulations, and controlling the cost of the NEPA compliance process. A Summary was prepared for the Draft NI PEIS and this Final NI PEIS as required by CEQ regulations, and the public had the option of receiving the Summary or both the Summary and the NI PEIS in hardcopy or via CD-ROM. Electronic publishing via the Internet is also used extensively by DOE for NEPA analyses and many other types of documents in order to reduce publications costs and material usage. Both the Draft PEIS and this Final NI PEIS have been made available on the NE website (http://www nuclear.gov) and on CD-ROM.

Commentor No. 2070: James L. Johansen

Sept 12 2000

Dear Collette Brown/Secretary Richardson,
Please accept the following as public comments on the Draft Environmental Impact Statement on the Nuclear Infrastructure EIS.
As a citizen of the Pacific Northwest, I am deeply concerned about the United States Department of Energy's proposal to restart Hanford's Fast Flux Test Facility Nuclear Reactor. I wish to have my values incorporated into the formal administrative record and taken into consideration when adopting the final record of decision. I also want you to respond to my concerns before you make your record of decision. **2070-1**

Considering Hanford's overwhelming problems, including the crisis with tank waste treatment, as well as the damage caused by and radiation released from the Hanford wildfire, restarting FFTF is absolutely unacceptable. We must deal with the waste already at Hanford and focus on the clean-up mission. FFTF maintenance has already gobbled up $100 million in clean-up money and distracted from desperately needed clean-up. Tank wastes are already seeping towards the Columbia River. More wastes must not be added to those tanks. Clean-up must be the only priority. We must save the Columbia River. **2070-2** **2070-3** **2070-2**

Also, I object to the fact that you are asking citizens to comment on an incomplete study. You have not told us how you will deal with non-proliferation issues or additional waste from FFTF. Should FFTF be restarted, that decision will be illegal under Federal law and will be overturned! Do the right thing, shut down FFTF now and save the future of the Columbia River! **2070-1** **2070-4** **2070-1** **2070-5**

Sincerely,

James L. Johansen

Please Save the Columbia River!!

Response to Commentor No. 2070

2070-1: DOE notes the commentor's concerns. 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. DOE prepared a separate Nuclear Infrastructure Nonproliferation Impact Assessment 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. Such an ancillary document need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed this document to about 730 interested parties on September 8, 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 Nuclear Infrastructure Nonproliferation Impact Assessment in Appendix Q in the Final NI PEIS. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public. 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.

2070-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford and protection of 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., DOE's Richland Operations Office, U.S. Environmental Protection Agency, and the State of Washington Department of Ecology). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. 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 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. 2070: James L. Johansen (Cont'd)

Response to Commentor No. 2070

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.

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

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.

In regards to the Hanford wildfire of 2000, the DOE Richland Operations Office, the State of Washington Department of Health, and U.S. Environmental Protection Agency performed environmental monitoring on and around the Site to assess potential radiological impacts. The wildfire did not cause a release of radioactive materials from any Hanford facilities but did result in resuspension of radioactive materials which were already in the environment. The very low levels of radioactive materials that were resuspended were slightly above natural background levels and required several days of analysis to quantify. Information on this event has been made available to the public and can be accessed at http://www.Hanford.gov/envmon/indes.html. This site also provides a link to information on the independent offsite air monitoring that was conducted by the U.S. Environmental Protection Agency.

2070-3: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

2070-4: 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 .

2070-5: See response to comment 2070-3. 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. 2071: Marvin M. Johnson

14410 S.W. 112th Ave., #6
Tigard, OR 97224
(503)639-7178
September 18, 2000

Colette E. Brown, NE-50
U.S. Department of Energy
Office of Nuclear Energy,
Science and Technology
19901 Germantown Road, Room A-270
Germantown, Md 20874

Dear Ms. Brown:

Having attended the DOE presentation in Portland on August 29, reading the literature provided, and considering the testimony, I distilled some relevant facts:

1. Medical isotopes are needed now and in the future. **2071-1**
2. The Hanford fast flux test facility cannot produce them simply by restarting. **2071-2**
3. The FFTF is more accident prone than a newer facility designed for isotope production. **2071-3**
4. The impetus for restarting the FFTF for isotope production is a ruse; the isotopes can be produced safer in a new US production site or purchased more economically from new Canadian facilities. **2071-4**
5. Nuclear energy for NASA exploration and military projects is madness. Have NASA engineers forgotten how to use solar power?

Another space probe like the Cassini mission would risk the destruction of all life and the systems that support life as we know it. The Cassini capsule hurtled over 70 pounds of Plutonium 238 back to Earth, using the Earth's gravatation system to pivot and accelerate the space probe. NASA makes mistakes--remember the Mars missions. (The US must unilaterally ban nuclear energy from space, or risk losing what remaining respect it has from the world's peoples).

The No Action Alternative seems prudent to me as long as it does not impede the Hanford cleanup schedule. This action also would be a clear message to Russia that the US does not favor more cold war adventurism. **2071-5** **2071-6**

Sincerely.

Marvin M. Johnson

Response to Commentor No. 2071

2071-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for the No Action Alternative.

2071-2: FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

2071-3: The NI PEIS evaluates the environmental impacts of a range of reasonable alternatives to fulfill the requirements of the proposed action, which include the production of medical and industrial isotopes, the production of plutonium-238 for future NASA space exploration missions, and civilian nuclear research and development. 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.

DOE acknowledges that other manufacturers can produce certain isotopes that are economically attractive. In fact, 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.

Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report,

as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term (less than 5 years). 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 notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternative energy sources for space missions, although issues such as NASA research priorities are beyond the scope of this NI PEIS. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. Plutonium-238 sources are used only when they enable the mission or enhance mission capabilities. None of the missions stated in the NI PEIS are defense- or weapons-related.

2071-4: DOE notes the commentor's concern for 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. The scope of this Nuclear Infrastructure PEIS is limited to analysis of alternatives to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development.

2071-5: See response to comment 2071-1. With respect to cleanup of wastes at Hanford, the proposed action and cleanup of wastes at Hanford are independent programs and actions related to one will not impact the other However, it should be noted that the cleanup of legacy wastes at Hanford is beyond the scope of the NI PEIS.

2071-6: DOE notes the commentor's viewpoint.

Commentor No. 2072: Thomas S. Tenforde

September 15, 2000

Ms. Colette E. Brown
Office of Space and Defense
Power Systems (NE-50)
Office of Nuclear Energy,
Science and Technology
U.S. Department of Energy
19901 Germantown, MD 20874
Germantown, MD 20874

SUBJECT: Nuclear Infrastructure PEIS

Dear Ms. Brown:

I am writing as an advocate for the restart of the Fast Flux Test Facility to produce medical isotopes and to conduct other nuclear services and science missions of importance to the United States.

The need for FFTF as a major supplier of isotopes for the treatment of cancer, cardiovascular disease, and other human health problems is beyond question. At the present time, there are no other reactors in the United States with the capabilities of FFTF for producing medical radioisotopes, and the U.S. must currently rely on foreign suppliers for many of the isotopes used for both the diagnosis and treatment of disease. In addition to its remarkable capabilities for producing isotopes for medicine, industry and research, the FFTF has demonstrated its capability for safe and reliable operations over a ten-year period dating from the early 1980s to 1992.

2072-1

During the past two decades there have been remarkable advances in the use of targeted radioisotope therapy of cancers that are difficult, and in some cases, impossible to treat by conventional methods such as chemotherapy. The basic limitation to using these new targeted therapeutic methods has been the limited supply of medical isotopes in the United States, and the Department of Energy must respond by making these isotopes available for use in nuclear medicine procedures. There is no other available domestic source with the capability of FFTF for producing these isotopes, most of which have short half-lives and must be produced in the United States to assure both reliable delivery and high quality. In addition, the 50-MW pool reactor proposed as one alternative in the PEIS has a thermal neutron energy spectrum and a relatively low neutron flux, making it unable to match FFTF's capability to produce large quantities of a wide variety of medical isotopes.

2072-2

My recommendation to DOE, however, goes beyond just the restart of FFTF for producing isotopes to treat cancer and other diseases. There are several diagnostic isotopes in short supply such as iodine-123, which is used for imaging to detect tumors in the brain and other soft tissues, that can only be produced by cyclotrons. My opinion and strong recommendation to DOE is that a hybrid option should be chosen in which FFTF is restarted and, in addition, for a relatively small incremental cost of approximately 15%, a cyclotron with an energy of 50 to 100 MeV and a high beam current should be constructed at a DOE site with an existing radiochemical processing facility. This low-energy cyclotron would be dedicated to the reliable, year-around production of proton-rich medical isotopes. Because the programmatic EIS considers both the FFTF and low-energy cyclotron options, only site-specific environmental documentation would be required for the cyclotron option in order to implement this full course of action. These additional NEPA

Response to Commentor No. 2072

2072-1: DOE notes the commentor's support for Alternative 1, Restart FFTF, and opposition to Alterntive 4, Construct New Research Reactor.

2072-2: As discussed in Section 1.3 of Volume1, in addition to the range of reasonable programmatic alternatives evaluated in the NI PEIS, DOE could choose to combine components of several alternatives in selecting the most appropriate strategy. The combination suggested by the commentor is an example that could be selected in the Record of Decision.

studies could be carried out in parallel with the initial stages of work required to restart FFTF, thereby avoiding any further delays in the reactivation of FFTF.

The combined FFTF and low-energy cyclotron option would provide the capability to produce the full set of radioisotopes needed by nuclear medicine physicians for the diagnosis and treatment of cancer and other diseases, and for medical research. It is, in my opinion, the optimal approach to take for improving the quality of health care for Americans in a cost-effective manner that uses the full range of technology offered by modern nuclear medicine.

2072-2 (Cont'd)

Sincerely,

Thomas S. Tenforde

Thomas S. Tenforde, PhD
2438 Alexander Avenue
Richland, WA 99352
(509) 375-3089

Commentor No. 2073: Karen Bowman

September 14, 2000

Ms. Colette E. Brown
NE-50 - Office of Nuclear Science
Energy & Technology
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

Dear Ms. Brown:

This letter is to express my support for the restart of the Fast Flux Test Facility, and I would like to state some reasons why I do.

1) There is no question that used in some ways, nuclear materials can and have been very harmful, and also that clean-up of the Hanford Site contamination is very necessary. **This is a unique opportunity to assign a mission to the FFTF that can serve to compensate for some of the harm that has historically been done by actually doing some very real good.** Since it's known that the FFTF is not part of the clean-up problem, will not contribute to the clean-up problem or create one, nor take money from the clean-up budget, it's the **right thing to do**.

2) The FFTF can be likened to a national treasure yet to be unearthed. It is a state-of-the-art facility that's never had a real chance to show what she can do, and **now is her time**. **The mission proposed for the FFTF - producing medical isotopes for diagnostics and treatment and pu-238 for NASA - is a worthy one from every standpoint**:

   - The facility is **capable** of producing large quantities of needed isotopes and pu-238 and is **already built and paid for**. This in itself is a most compelling reason to restart. To shut down this perfectly serviceable reactor and then spend millions and millions building new facilities to do the same thing this reactor is capable of would be just plain stupid, not to mention irresponsible and unaccountable. Startup would cost far less than any other proposed option and would show taxpayers that the government is doing its best to be fiscally responsible, in that it wouldn't just throw away a perfectly good facility to suit political whims.

   - Medical isotopes are sorely needed to battle disease, both to diagnose and to treat. This is the treatment of the future for cancers and many other afflictions, and the future is **now.** Yes, we can buy isotopes from other countries, but why send our dollars elsewhere when we can produce them here? Haven't the lessons been learned about relying on other countries and then falling prey to their changing governments? How many more people must needlessly suffer and die before we provide this product in sufficient quantities to make a difference? **We need first to take care of ourselves**

2073-1

Response to Commentor No. 2073

2073-1: DOE notes the commentor's support for Alternative 1, Restart FFTF, and opposition to building new facilities (i.e., new accelerator(s) or research reactor).

2073-2: DOE notes the commentor's views and observations and concerns regarding misinformation in the public participation process. It is DOE policy to encourage public input on matters of regional, national and international importance as part of its commitment to facilitate a public participation process that is open and unbiased.

from within our own country, and only when we cannot, go to another for what we need.

3) You may be aware that the DOE's Hanford complex has long been the staple of Tri-Cities, Washington economy, and that strong efforts are being made to diversify through attracting new, private businesses. It is interesting that in all the hearings I've attended thus far, not once have I heard the vision been spoken of that seems so clear to me: If we produce isotopes here, many of them, because of their short half-lives, will need to stay here and patients - and perhaps researchers - will need to come here to use them. This will open the doors for a more extensive medical community to serve the public, thus serving the public in two ways:

- First and by far most importantly, by providing a **method to improve health and relieve suffering**;
- Second, by **adding to the desired diversity through creating a major regional "medical hub"** where patients know they'll receive the best of treatment, thus **improving the local economy** while **reducing dependence on Hanford's payroll**.

2073-1 (Cont'd)

I have attended several of the PEIS hearings, and continue to be alarmed and concerned at the misinformation being disseminated by Heart of America and others. How this can be allowed to go on, I simply do not understand. Shame on the DOE for not clearly requiring that information must be **accurately** presented from both sides in the interest of **fully and correctly** informing the public. In my mind, every citizen has the right to disagree with a proposed program, but does **not** have the right to try to sway public opinion through half-truths, blatant lying and fear-mongering, and this is what Gerald Pollett and others do best. As a tragic consequence, otherwise rational people have a great fear of what is being proposed for the Fast Flux Test Facility. (Remember the "Raging Grannies" at the Seattle PEIS hearing last month? I had the opportunity to speak [civilly] with a couple of them; sadly, one of them actually told me she'd rather that one of her children or grandchildren **died** than use "anything nuclear" to help them, even should that be the only method open to them to diagnose or treat. By the way, that comment elicited quite a surprised expression from the other Granny. Perhaps that will cause her to re-think what she's doing.)

2073-2

I appreciate the opportunity to express my views to you in this letter, as well as to attend the hearings. I plead with you to ignore the political aspect and heed the simple truth and common sense of this matter: **Restarting the FFTF is the right decision to make.**

2073-1

Sincerely,

Karen Bowman

Karen Bowman
211 Saint St.
Richland, WA 99352
(509) 375-0731

Commentor No. 2074: Richard J. Giever

Oncology Group PLLC
Excellence in Radiation Oncology and Associated Services

September 12, 2000

Ms. Collette Brown
United States Department of Energy
Office of Space and Defense Power Systems (NE-50)
19901 Germantown Road
Germantown, Maryland 20874

RE: FAST FLUX REACTOR AT RICHLAND WASHINGTON

Dear Ms. Brown:

I have been in the practice of cancer medicine for approximately 18 years. During that time, I have actively been involved with the use of radioactive isotopes in the treatment of malignant disease. I use temporary, permanent and infusional radioactive isotopes in my care of cancer patients as deemed appropriate. There is no question that the medical use of radioactive isotopes is well established and quite beneficial for many cancer patients.

I am aware that the Fast Flux Test Facility at the Hanford Nuclear Reservation near Richland, Washington is currently being assessed for restart versus mothballing. I would strongly urge you to consider a restarting of FFTF. I believe that only through active research and clinical trials using radioactive isotopes can we learn how to optimally utilize their value in the treatment of cancer patients. From everything that I have read and heard, the FFTF facility is an optimal facility for producing radioactive isotopes for medical purposes. I would hope that you would strongly consider this possible benefit to the United States and the people of the world when you review this facility's potentials.

If I can be of any assistance to you in discussing the potential value of radioactive isotopes for the treatment of cancer, please contact me.

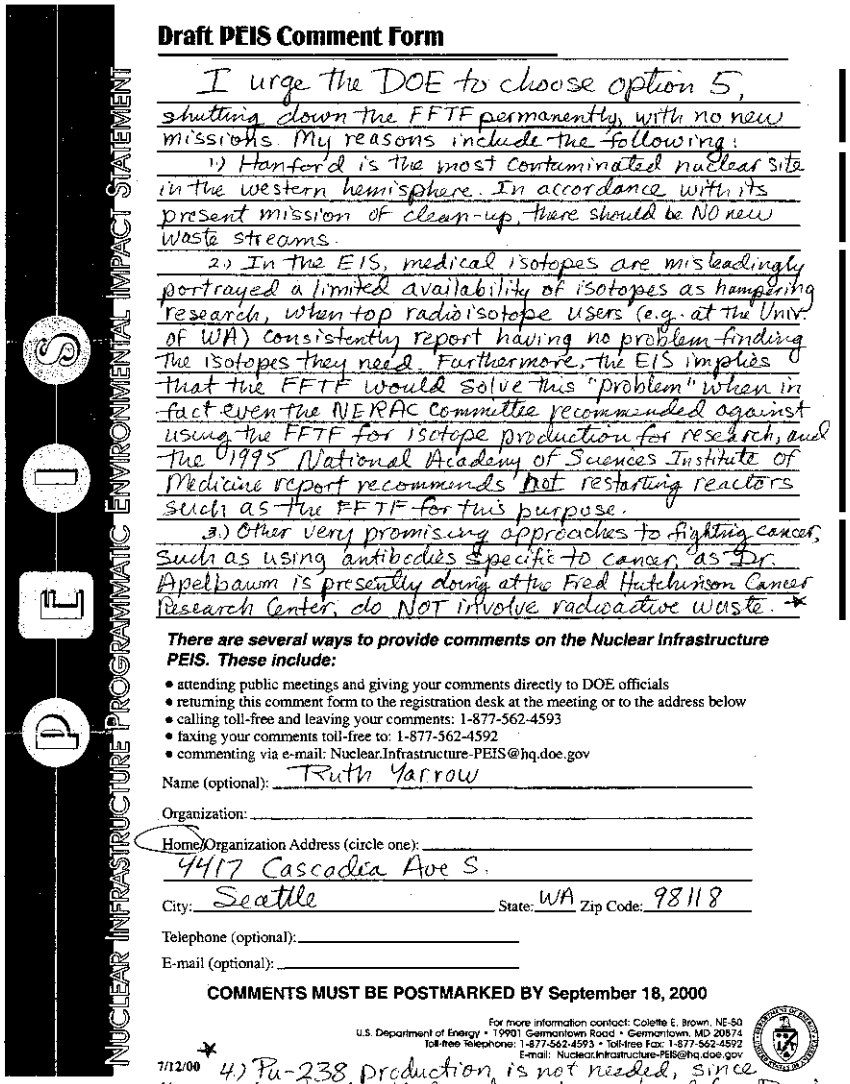
Sincerely,

Richard J. Giever, M.D., F.A.C.R.O.
Chair Cancer Committee
Kennewick General Hospital and Our Lady of Lourdes Medical Center
RJG:TTSjk
09/12/00

2074-1

Response to Commentor No. 2074

2074-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

I urge the DOE to choose option 5, shutting down the FFTF permanently, with no new missions. My reasons include the following: 2075-1

1) Hanford is the most contaminated nuclear site in the western hemisphere. In accordance with its present mission of clean-up, there should be NO new waste streams. 2075-2

2) In the EIS, medical isotopes are misleadingly portrayed a limited availability of isotopes as hampering research, when top radioisotope users (e.g. at the Univ. of WA) consistently report having no problem finding the isotopes they need. Furthermore, the EIS implies that the FFTF would solve this "problem" when in fact even the NERAC Committee recommended against using the FFTF for isotope production for research, and the 1995 National Academy of Sciences Institute of Medicine report recommends not restarting reactors such as the FFTF for this purpose. 2075-3

3) Other very promising approaches to fighting cancer, such as using antibodies specific to cancer as Dr. Apelbaum is presently doing at the Fred Hutchinson Cancer Research Center, do NOT involve radioactive waste. 2075-4

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): Ruth Yarrow

Organization:

Home/Organization Address (circle one):

4417 Cascadia Ave S.

City: Seattle State: WA Zip Code: 98118

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 4) Pu-238 production is not needed, since the small amount NASA needs can be purchased from Russia.

2075-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2075-2: FFTF restart would not impact the schedule or available funding for existing cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram funds designated for Hanford cleanup, regardless of the alternative(s) selected. As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (i.e., solid low-level radioactive waste) annually, in addition to nonhazardous wastes, This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes 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.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action 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.

2075-3: 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.

Commentor No. 2075: Ruth Yarrow (Cont'd)

4417 Cascadia Ave. S.
Seattle, WA 98118
September 14, 2000

To: Colette E. Brown

Public hearings are supposed to be to hear the public. For the public to contribute their wisdom to a decision, key information needs to be available to the public. At the recent hearings on the US Department of Energy's (DOE's) infrastructure, including the Fast Flux Test Facility (FFTF), the opportunity for the public to be informed and to be heard was seriously jeopardized. Here are some of the problems I observed, and suggestions for improvement.

Problem: In Seattle on August 30, you noted that you would present the EIS and the five options for the future of the FFTF but in reality you presented a list of arguments about why the facility should be restarted. Suggestion: The public should have an opportunity to hear an alternative view at the start of the meeting. **2075-5**

Problem: The venue (a room in the Convention Center) was cavernous with serious noise distractions from outside, the date was at the height of interested public being away on vacation, and parking was either very expensive or very difficult. Suggestion: Please hold the hearing in one of the Northwest Rooms at the Seattle Center in late September. **2075-6**

Problem: Information about the projected costs of the five alternatives was not available to the public before the meeting, an appalling omission. Suggestion: Please provide the relevant information or postpone the hearing. **2075-3**

Problem: Central to the entire discussion is the proposed use of the FFTF to produce medical isotopes, and but the specific recommendation of the National Academy of Science's Institute of Medicine report on the nation's radioisotope needs was not included in the EIS. Suggestion: Adhere to the openness initiatives launched by the DOE in 1993, and provide the relevant information to the public in a timely manner. **2075-6**

Problem: Non-proliferation is of critical importance to the survival of life on our planet, but was not considered in the materials for this hearing. Suggestion: Again, provide the relevant information. **2075-7**

Problem: While DOE acknowledged that the plutonium-238 need for NASA could be met more cheaply by purchasing it from abroad than by restarting the FFTF, the environmental impact study dismisses this option, and omits information from NASA about how little is needed. Suggestion: Again, provide the relevant information. **2075-2**

Problem: Any production at FFTF will produce new radioactive waste streams on the most contaminated site in the western world, a fact of overriding importance, not clearly presented in the EIS. Suggestion: Once again, please provide the relevant information.

Thank you for your attention to these requests.

Sincerely yours,

Ruth Yarrow

Ruth M. Yarrow

Response to Commentor No. 2075

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.

The commentor points out that both the National Academy of Sciences Institute of Medicine 1995 Report and the April 2000 NERAC Subcommittee for Isotope Research and Production Planning Final Report recommend against restarting reactors, such as FFTF, for isotope production. However, the conclusions presented in the more recent NERAC Report were made in the context of the facility producing research isotopes as its sole mission. DOE agrees that the FFTF's large size and configuration are not particularly well suited for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of the FFTF for the production 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 use of the FFTF when coupled with the other proposed missions.

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 ww.nuclear.gov.

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. 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.

2075-4: Genetic research and other research will hopefully lead to other effective ways to prevent and fight cancers. However, certain radioisotopes currently offer effective treatment for some cancers. Consistent with its mandates under the Atomic Energy Act, DOE is proposing this enhancement for the purposes of addressing three primary needs: 1) to support the 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 for which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear energy research and development in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio.

2075-5: DOE notes the commentor's views concerning DOE's presentation at the Seattle, Washington public hearing.

2075-6: The costs and nuclear nonproliferation impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment 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. Such ancillary documents need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed these documents to more than 730 interested parties on August 24 and September 8, 2000, respectively. Both reports were made available immediately upon release on the NE web site (http:/ www.nuclear.gov) and in the public reading rooms. DOE has also provided summaries of the Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment in Appendixes P and Q, respectively in the Final NI PEIS.

2075-7: 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

Commentor No. 2075: Ruth Yarrow (Cont'd)

Response to Commentor No. 2075

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 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.

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.

Commentor No. 2076: David Wootan

David Wootan
1476 Oxford Ave
Richland, WA 99352
(509)627-5663

September 17, 2000

Colette E. Brown
Office of Nuclear Energy, Science and Technology
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

Dear Ms Brown:

Attached is a paper that I would like to submit for consideration in determining the preferred option for the Programmatic Environmental Impact 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. This paper illustrates the flexibility and effectiveness of the FFTF in producing unique neutronic environments for medical isotope production, basic nuclear research, and development testing. The large available volume and high neutron flux level make the FFTF uniquely suited to simultaneously perform the anticipated civilian nuclear energy research and development and isotope production missions for the United States. **2076-1**

Sincerely,

David Wootan

Response to Commentor No. 2076

2076-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 2077: John Serop Simonian

9759 El Arco Dr.
Whittier, CA 90603-1303

September 17, 2000

Colette Brown
Department of Energy
Office of Space & Defense Power Systems, NE-50
19901 Germantown Rd.
Germantown, MD 20874

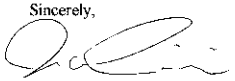
Dear Ms. Brown:

It has come to my attention that the Department of Energy is considering reopening previously closed plutonium-238 production facilities. The stated purpose for this expansion of Pu-238 use is to power future space missions. The production of Pu-238 would resume at Hanford, Washington; Oak Ridge, Tennessee; or Idaho Falls, Idaho.

Any expansion of the use of nuclear power anywhere in the world should concern us as Americans. The branching out of this dangerous energy source into space is even more alarming. Since the discovery and implementation of nuclear fission and fusion in the middle of the twentieth century, scientists have promised us that nuclear power would only benefit the world. The benefits, however, come at enormous cost to human life and freedom. One need look no further than the tens of thousands of civilians incinerated in Japan in 1945, the Polynesian islanders forced to undergo irradiation at the hands of Western powers in the 1950s and 1960s, the thousands around the world who have suffered unspeakable health problems because of meltdowns at nuclear power plants, and the billions of tax dollars wasted by world governments on building huge nuclear arsenals. 2077-1

Clearly, the Department of Energy's love affair with nuclear power and with the almighty nuclear power industry's lobbyists has caused our government to move away from safer sources of power. It is understandable that NASA would like to travel to Mars more quickly, but the professional curiosity of already over-funded scientists should not override the rights of all Americans and all people to a world habitat free from nuclear power and its unmanageable waste, not to mention the disastrous effects of nuclear accidents. For this reason, I join with millions around the world in calling on you to halt the expansion of plutonium production. Will you please send me a summary copy of the final environmental impact study of the expansion of production of Pu-238? 2077-2

Sincerely,



John Serop Simonian

Response to Commentor No. 2077

2077-1: DOE notes the commentor's opposition to the use of nuclear power. The scope of this Nuclear Infrastructure PEIS is limited to analysis of alternatives to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development. The three missions are civilian nuclear energy missions and are not defense-related.

2077-2: The purpose of the NI PEIS is to evaluate the environmental impacts of a range of reasonable alternatives to fulfill the proposed action, one of which is the domestic production of plutonium-238. 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. 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. 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. The commentor has been added to the NI PEIS mailing list and will receive a copy of the Final NI PEIS Summary.

Commentor No. 2330: Victoria Meier

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

3874+1207

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: **2330-1**

It is unsafe. It is already horribly **2330-2**
polluted and we need to use the money for **2330-3**
clean-up. Too much time has been wasted.
The FFTF is actually not a good source for **2330-1**
radioisotopes. We must work for peace, not war.

Name VICTORIA MEIER

Address 4669 EXETER STREET

City, state WEST LINN, OR Zip 97068

Response to Commentor No. 2330

2330-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

While it would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes, 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 supporting the other stated missions.

2330-2: FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

2330-3: 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., DOE's Richland Operations Office, U.S. Environmental Protection Agency, and the State of Washington Department of Ecology). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. 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. 2331: Andrew Cook

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

3874+1207

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: 2331-1

Nuclear power in the United States has been produced for 60-years without an effective way of disposing of the waste, highly toxic waste. Until this issue is resolved in a cost effective and environmentally manner, it is unethical to pursue nuclear power any further. 2331-2

Name ANDREW COOK

Address 2261 SE 37TH Avenue

City, state Portland, OR Zip 97214

Response to Commentor No. 2331

2331-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2331-2: DOE notes the commentor's views. However, the purpose of the NI PEIS is to evaluate the environmental impacts of reasonable alternatives to enhancing DOE's existing nuclear facility infrastructure to support production of isotopes for medical, research, and industrial uses, production of plutonium-238 for use in future NASA space exploration missions, and U.S. nuclear research and development needs for civilian application. No component of the proposed action is for the purpose of producing nuclear energy.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action 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 applicable DOE orders.

The NI PEIS assumes, for the purposes of analysis, that Yucca Mountain Nevada, would be the final disposal site for DOE's high-level radioactive waste and spent nuclear fuel. As directed by the U.S. Congress through the Nuclear Waste Policy Act, as amended, Yucca Mountain is the only candidate site currently being characterized as a potential geologic repository for high-level radioactive waste and spent nuclear fuel. DOE has prepared a separate EIS, "Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High Level Radioactive Waste at Yucca Mountain, Nye County, Nevada" DOE/EIS-0250D, July 1999), which analyzes the environmental impacts from construction, operation and monitoring, related transportation, and eventual closure of a potential geological repository.

Commentor No. 2332: Port of Pasco Commissioners (O.E. Boston, Jim Klindworth, Del Lathim)

PORT OF PASCO
Economic Development and Transportation

904 E. Ainsworth
P.O. Box 769
Pasco, WA 99301
Phone 509.547.3378
Fax 509.547.2547
portofpasco@portofpasco.org

August 31, 2000

Colette Brown, Document Manager
Office of Nuclear Energy, Science and Technology
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

Dear Ms. Brown:

The Port of Pasco has been a long time supporter of the Fast Flux Test Facility (FFTF) and strongly supports the objectives of the Department of Energy's Energy Program and specifically the implementation of the various uses attributed to the restart of the Fast Flux Test Facility (FFTF) as outlined in the Draft Environmental Impact Statement. We unequivocally support the use of FFTF for production of isotopes for medicine, space missions as well as other commercial isotope research and development projects. **2332-1**

The Draft EIS evaluation of these alternatives clearly shows the capability and superiority of the FFTF over other alternatives being considered.

Residents of Franklin and the surrounding counties were involved in the design construction and operation of FFTF. They are extremely knowledgeable about the facility's track record for safe operation. We would object to our federal tax dollars being spent to build a new facility, or retrofit an existing facility that has less capability than FFTF. We were pleased that the cost analysis done by the Department of Energy, as part of the current Environmental Impact Statement, confirms that FFTF is clearly the preferred alternative for the programs considered based on the availability, capacity for multi product missions, demonstrated technology, cost effectiveness, safety and minimal environmental impact. **2332-2**

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. Not only through its capability to supply currently unavailable or limited medical isotopes for general use but for its other capabilities attributed with a reactor of this magnitude. **2332-3**

Columbia Snake River

Response to Commentor No. 2332

2332-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

2332-2: DOE notes the Commissioners' concerns and their support for Alternative 1, Restart FFTF.

2332-3: No decisions have been made with regard to the facilities and locations evaluated to fulfill the requirements of the DOE missions. However, in accordance with Council on Environmental Quality regulations (40 CFR 1502.14(e)), DOE has identified its preferred alternative in Section 2.8 of Volume 1 of the Final NI PEIS. 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.

2332-4: The commentor is correct on the separation of DOE program funding sources. 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. Therefore, restart of FFTF would not impact current cleanup schedules.

Decommissioning FFTF, including associated costs and cleanup, is not within the scope of the NI PEIS. Before decommission activities were undertaken, DOE would prepare the appropriate environmental documentation to address the associated environmental impacts. Cost assessments would also be prepared.

DOE remains committed to cleaning up the Hanford Site independent of ultimate decision on FFTF. The amounts of wastes associated with decommissioning FFTF would be small. The schedule for cleaning up these other wastes would not be affected if FFTF were restarted.

Commentor No. 2332: Port of Pasco Commissioners (Cont'd) (O.E. Boston, Jim Klindworth, Del Lathim)

Furthermore, 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. But, if the decision is made to shutdown FFTF and decommission it, then responsibility for the facility would be transferred to the Environmental Management program, which would have a major negative impact on the limited cleanup program funding that is available. **2332-4**

It is time for the Department of Energy to develop a new legacy and the Port of Pasco is asking you to make the bold decision to restart the reactor. 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 EIS. **2332-3**

Respectfully, Port of Pasco Commissioners,

O.E. "Ernie" Boston
President

Jim Klindworth
Vice-President

Del Lathim
Secretary

Response to Commentor No. 2332

Commentor No. 2618: Lesley Pomeroy

Secretary, The

From: Lesley Pomeroy [apigee@hotmail.com]
Sent: Tuesday, August 29, 2000 4:03 PM
To: Secretary, The
Subject: Hanford

Dear Secretary Richardson,

Please do not allow the restarting of the test reactor at Hanford Nuclear Reservation!!! There are so many reasons why this project should be stopped. The fact that we still have the radioactive and chemical wastes up there are polluting the environment should be reason enough not to continue. As the Secretary of Energy, why won't you shut this facility down and invest our tax dollars and future in safe renewable energy sources like solar energy? I doubt you will even read this e-mail, but whoever does, it's your planet too. We can still make a difference. Stop the Fast Flux Test Facility!

Sincerely,
Lesley Pomeroy

2618-1
2618-2
2618-3

Response to Commentor No. 2618

2618-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2618-2: 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. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a 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 remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.

2618-3: DOE notes the commentor's interest in alternative energy sources, although issues of research and development of alternative energy sources are beyond the scope of this Nuclear Infrastructure PEIS. The DOE missions to be addressed in this EIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies.

Commentor No. 2619: Patrick Sobotta Nez Perce Tribe

Nez Perce
ENVIRONMENTAL RESTORATION & WASTE MANAGEMENT
P.O. BOX 365 · LAPWAI, IDAHO 83540-0365 · (208) 843-7375 / FAX: 843-7378

September 15, 2000

William D. Magwood, IV, NE-1
U.S. Department of Energy
1000 Independence Ave., S.W.
Washington, D.C. 20585

RE: Draft Programmatic Environmental Impact 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, July 2000; DOE/EIS-0310D

Dear Mr. Magwood:

The Nez Perce Tribe's Environmental Restoration and Waste Management (ERWM) Program's main purpose is the oversight and participation in the clean-up and restoration at the Hanford Nuclear Reservation. The basis for the Tribe's involvement is the Treaty of 1855, in which the Federal Government acknowledged committed to protecting our retained usual and accustomed Columbia River rights. Resource areas in the Hanford Reach and elsewhere are protected by our treaties and provide the basis for the relationship between the U.S. Department of Energy (DOE) and the Nez Perce Tribe.

The Nez Perce Tribal Executive Committee has passed a Resolution (see attachment) opposing the restart of the Fast Flux Test Facility (FFTF) and to permanently deactivate FFTF (with no new missions). FFTF could potentially impede upon access to treaty resource sites. The possible health benefits do not outweigh the creation of new waste when new technologies are still needed to treat waste already in existence. Obligated funding should be redirected to the mission of clean-up and restoration efforts at Hanford. Treatment of wastes are still in need of new technologies. 2619-1 2619-2 2619-3

The Nez Perce Tribe ERWM appreciates the opportunity to provide comments on the **Draft NI PEIS, July 2000; DOE/EIS-0310D**. If you have any questions please contact Patrick Sobotta at (208) 843-7375 or e-mail at pats@nezperce.org.

Sincerely,

Patrick Sobotta
ERWM Director

Response to Commentor No. 2619

2619-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

2619-2: DOE values its relationship with the Nez Perce Tribe and remains committed to treaty resource rights and access. Based on your discussion on September 28, 2000, with Mr. Dan Tano of the Department's Richland Operations Office staff, the concern about access to treaty resource sites is premised on your understanding of the waste and funding impact the Fast Flux Test Facility could have on Hanford Nuclear Reservation cleanup and restoration, a program in which the Nez Perce Tribe participates and provides oversight, pursuant to its interests under the Treaty of 1855. Specifically, we understand your position to be that in order to protect Tribal treaty-reserved resources, funding should be used for environmental cleanup at Hanford rather than for the Fast Flux Test Facility.

First, should the Department decide to restart the Fast Flux Test Facility, the waste streams would not impact the Hanford cleanup and would be managed according to a Waste Minimization and Management Plan being developed in consultation with the States of Oregon and Washington. Second, the Secretary is committed to maintaining the Hanford cleanup as a top priority. The management and possible enhancement of DOE's nuclear facility infrastructure based on the Secretary's decision, including the Fast Flux Test Facility if the decision called for its restart, would not divert or reprogram any funding from Hanford cleanup activities. The Hanford Site environmental restoration activities would continue in accordance with the Tri-Party Agreement.

Therefore, should DOE restart the Fast Flux Test Facility, we believe its operation would not impede in any way Nez Perce Tribe access to treaty resource sites. The Fast Flux Test Facility may eventually serve an important role in the Nation's science infrastructure. Given the limited and declining nuclear research infrastructure in the United States, we believe that an exhaustive evaluation of this facility is warranted.

2619-3: 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

Commentor No. 2619: Patrick Sobotta (Cont'd) Nez Perce Tribe

NP 00-470

RESOLUTION

WHEREAS, the Nez Perce Tribal Executive Committee has been empowered to act for and in behalf of the Nez Perce Tribe, pursuant to the Revised Constitution and By-Laws, adopted by the General council of the Nez Perce Tribe on may 6, 1961 and approved by the Acting Commissioner of Indian Affairs on June 27, 1961; and

WHEREAS, the Nez Perce Tribal Executive Committee (NPTEC) is the governing body of the Nez Perce Tribe; and

WHEREAS, the Nez Perce Tribe has been designated an affected Tribe since 1982 under the Nuclear Waste Policy Act (NWPA); and

WHEREAS, the Nez Perce Tribe has interests on the Hanford Nuclear Reservation, that include protecting our sovereignty, resources, culture, health and safety; and

WHEREAS, the Fast Flux Test Facility (FFTF) is an experimental facility consisting of special custom made components with no real mission that has been shown to cost $60 million per year to keep it in standby mode; and

WHEREAS, the United States Department of Energy is currently drafting an Environmental Impact Statement (EIS) that will consider options for the disposition of the FFTF, including the restart of the facility.

NOW, THEREFORE BE IT RESOLVED, that the NPTEC opposes the spending of dollars on projects such as the FFTF and urges that those dollars be used to clean up and protect those Tribal treaty-reserved resources which have been contaminated or are being threatened by Hanford activities.

BE IT FINALLY RESOLVED, that the Nez Perce Tribe urges the United States Department of Energy to select as the preferred alternative for the FFTF draft EIS the permanent closure and demolition of the FFTF.

Response to Commentor No. 2619

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. 2619: Patrick Sobotta (Cont'd) Nez Perce Tribe

NP 00-470

CERTIFICATION

The foregoing resolution was duly adopted by the Nez Perce Tribal Executive Committee meeting in Regular Session on September 12, 2000, in the Richard A. Halfmoon Council Chambers, Lapwai, Idaho, a quorum of its members being present and voting.

BY: _____
for Arthur M. Taylor, Jr., Secretary

ATTEST:

_____
Samuel N. Penney, Chairman

Response to Commentor No. 2619

Commentor No. 2620: Janet Kimball

8051 28th NE
Seattle WA 98115
20 September 2000

Secretary Bill Richardson
Department of Energy
1000 Independence Avenue
Washington, D.C. 20585

Dear Mr. Richardson:

I am writing about the Hanford Nuclear Reservation.

I am encouraging you to shut down the FFTF and focus on CLEAN UP. Although Senator Gorton states the FFTF will generate radionuclides for cancer therapy, these can be made more efficiently in newer facilities. And although he states that restarting the FFTF will bring needed jobs to the Richland area, true clean up of existing problems will generate jobs and provide a lasting legacy of environmental restoration.

2620-1 2620-2 2620-3 2620-4

Yours truly,

Janet Kimball

Janet Kimball

Response to Commentor No. 2620

2620-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2620-2: Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a 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 remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.

2620-3: The NI PEIS evaluates the environmental impacts of a range of reasonable alternatives for enhancing DOE's existing nuclear facility infrastructure to support production of isotopes for medical, research, and industrial uses; production of plutonium-238 for use in future NASA space exploration missions; and U.S. nuclear research and development needs for civilian application. 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 specifically designed to support the proposed action.

2620-4: The Record of Decision for the 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. 2621: Luis Ojeda

Secretary, The

From: Luis A. Ojeda [laojeda@owt.com]
Sent: Sunday, September 10, 2000 1:05 PM
To: Secretary, The; INFRASTRUCTURE-PEIS, NUCLEAR; senator_torricelli@torricelli.senate.gov%internet; senator@dpm.senate.gov%internet; senator@scumer.senate.gov%internet; senator_dewine@dewine.senate.gov%internet; senator_voinovich@voinovich.senate.gov%internet; senator_specter@specter.senate.gov%internet; senator@santorum.senate.gov%internet; senator@hollings.senate.gov%internet; senator@thurmond.senate.gov%internet; senator@hutchinson.senate.gov%internet; phil_gram@gramm.senate.gov%internet; Senator_frist@frist.senate.gov%internet; senator@breauz.senate.gov%internet; senator@feinstein.senate.gov%internet; senator@boxer.senate.gov%internet; b_graham@graham.senate.gov%internet; connie@mack.senate.gov%internet; frank_lautenberg@lautenberg.senate.gov%internet; Rick Mounce
Subject: For Medical Isotopes!

Dear Senators,

I write to you today to ask you to support the restart of the Fast Test Flux Facility (FFTF) for the production of medical isotopes. Medical isotopes are changing the face of medical treatments in the area of cancer treatment and arthritis therapy, just to name a few. Some scientists think they may be the long sought after "cure" for cancer. The FFTF is undergoing the preparation of an Environmental Impact Statement (EIS)right now. The Department of Energy (DOE) is expected to issue a record of decision in December of this year on the fate of the FFTF based on this EIS and comments from the public. Thanks for your time and consideration on this matter.

Luis Ojeda
3001 South 38th Avenue
West Richland, WA 99353
(509) 967-5864

2621-1

Response to Commentor No. 2621

2621-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 2622: Sandra Piper

Secretary, The

From: S Piper [sun4sand@yahoo.com]
Sent: Wednesday, September 20, 2000 12:13 PM
To: Secretary, The
Subject: Fires at Hanford

Sandra Piper
14837 206th Ave. SE
Renton, Wa 98059

Mr. Bill Richardson
1000 Independence Ave. SW
Washington, DC 20585

Dear Secretary Richardson,

I'm writing to let you know of the concern I have about the present and future site conditions at the Hanford reservation.

I understand that the most recent wildfires traveled across two areas of waste storage at Hanford. I also understand that when it was monitored six miles from the site during the fire, levels of radiation detected were 50 clicks of the geiger counter (1000x) above the normal level.

I believe it is time to pay attention to the potential for disaster that exists with the improperly stored containers of radioactive waste. It's time to admit scientists have been unable to find a way to safely hold these wastes for their entire projected radioactive lifespan.

The proximity of Hanford's leaking containers to the Columbia River, which brings water along the southern part of our state and our border with Oregon must be respected. Since the waste can't be seen; the tendency may be to deny it's a problem. We all know that scientists have detected radiation in the groundwater next to the site.

2622-1

Response to Commentor No. 2622

2622-1: DOE notes the commentor's concerns regarding the high-level waste tanks at Hanford 200 Area. The high-level waste tank issues are not within the scope of this NI PEIS, as none of the alternatives described in Section 2.5 of Volume 1 would add to these waste volumes. The Hanford Site environmental restoration activities are a high priority to DOE and 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 remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.

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.

With regard to groundwater contamination, it is currently limited to the Hanford Site and no food or water restrictions are currently in place outside the Hanford Reservation as a result of Hanford activities. All environmental parameters (e.g. air, soil, surface water, groundwater, vegetation, animals, etc.) in and around the Hanford Site are monitored on a periodic basis. The information is available to the public in annual monitoring reports.

With regard to the Hanford wildfire of 2000, the DOE Richland Operations Office, the State of Washington Department of Health, and U.S. Environmental Protection Agency performed environmental monitoring on and around the Site to assess potential radiological impacts. The wildfire did not cause a release of radioactive materials from any Hanford facilities but did result in resuspension of radioactive materials which were already in the environment. The very low levels of radioactive materials that were resuspended were slightly above natural

Commentor No. 2622: Sandra Piper (Cont'd)

In the worst case scenerio; let's say the toxic wastes mingle with the waters of the Columbia, and bring the radiation along it's path out to the ocean. What effect would it have on our ecosystem and our food sources? Would you want to tell your children you were partly responsible? The prospects are grim and the consequences will be, local, national or even global. **2622-1 (Cont'd)**

I urge you to consider the futures of our children and make the truly courageous decision to shut down the reactors. Let's end the creation of more "unstorable" waste and refocus on cleaning up the area as carefully as possible. **2622-2**

2622-1

Sincerely,

Sandra Piper

P.S. Please include my comments as part of the Draft Nuclear Infrastructure Peis on the FFTF Nuclear Reactor!

=====

Sandy.

Response to Commentor No. 2622

background levels and required several days of analysis to quantify. Information on this event has been made available to the public and can be accessed at http://www.Hanford.gov/envmon/index.html. This site also provides a link to information on the independent offsite air monitoring that was conducted by the U.S. Environmental Protection Agency.

More specific to the stated missions presented in the NI PEIS, FFTF is located approximately 4.5 miles from the Columbia River and will have no discharges to the river 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 from the stated missions.

It is DOE's policy that all wastes 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.

2622-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2623: Shelley Cimon

September 12. 2000

The Honorable Bill Richardson
Secretary of Energy
Forrestal Building
1000 Independence Avenue SW
Washington D.C. 20585

Dear Secretary Richardson:

This letter is in response to a request for comment on the recently issued draft Environmental Impact Statement that discusses the restart of Hanford Nuclear Reservation's Fast Flux Test Facility (FFTF) to meet expanded isotope production and nuclear energy research missions. I am adamantly opposed to the restart of FFTF for these missions. You must permanently shut down this reactor. 2623-1 2623-2

The Hanford Nuclear Reservation is a national, environmental disaster, the scale of which most Americans are unaware. I have formally participated in the cleanup dialogue for the past 13 years now, representing Oregon through a governor appointed board and currently as co-vice chair of the site specific advisory board. It is requisite that we keep our vision to the task at hand: the cleanup of Hanford. 2623-3

We have seen no compelling need for the production of medical isotopes through a restart of FFTF. This mission, though important, is not of a magnitude great enough to justify the restart of an aging relic of the cold war when we currently have, at hand, an adequate source for these isotopes. A report published by a subcommittee of the Department of Energy's Nuclear Energy Research Advisory Committee states that FFTF is not economically viable, and that we have other reactors within the DOE complex which could serve that purpose. They are located in Tennessee and Missouri. They have been identified and their efficacy must be addressed in this EIS. 2623-4

I have continually heard for countless years the DOE position that we cannot look outside of our country for isotopes, yet Canada is currently one of our major suppliers. They are also in the process of building two more heavy water reactors expressedly for the purpose of producing medical isotopes. This stance does not hold water, (nor do 67 leaking tanks at Hanford). Our needs for an adequate supply for these isotopes can most certainly be met without a restart of FFTF.

It is incredible, to me, that this EIS ignored addressing very viable alternatives to fill the demands for isotopes. Nor did it include in it the issue of the waste produced by this proposed production and the inability and unwillingness of our government to address the fundamental cleanup issues of waste already produced and ill-managed at Hanford. 2623-5

It is my understanding that in May NASA informed the Department of Energy that they would no 2623-6

Response to Commentor No. 2623

2623-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

2623-2: See response to comment 2623-1.

2623-3: DOE notes the commentor's concerns regarding high-level waste tank and cleanup issues at Hanford. The high-level waste tank issues are not within the scope of this NI PEIS, as none of the alternatives considered would add to these waste volumes. The Hanford Site environmental restoration activities are a high priority to DOE and 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 remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.

FFTF is located approximately 4.5 miles from the Columbia River and will have no discharges to the river 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 no discernible impacts to groundwater or surface water quality would result from implementation of the alternatives described in Section 2.5 of Volume 1.

Chapter 4 of Volume 1 addresses the environmental impacts that would be due to the treatment, storage, and disposal of the waste generated by the nuclear infrastructure missions 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 applicable DOE orders.

2623-4: 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

Commentor No. 2623: Shelley Cimon (Cont'd)

longer need the fuel that FFTF might have produced. This underscores, once again, the lack of missions which would justify economically or morally the restart of this reactor. **2623-6 (Cont'd)**

There is no justifiable mission for the restart of the FFTF. It is time to stop spending taxpayer money trying to build a structurally robust case for restart. Let's focus instead on structurally robust designs for containment of the waste we've already produced. People of the Northwest have paid dearly for the cold war effort. The Columbia River which is the lifeblood of the NW is already compromised. The future health of our children should not be jeopardized, too. Permanently shut down the FFTF. It is the morally right thing to do. **2623-7** **2623-3**

Sincerely,

Shelley Cimon
1208 First Street
La Grande, Oregon 97850
(541) 963-0853

Response to Commentor No. 2623

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.

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.

2623-5: 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 remains committed to upholding this agreement. Hanford Site

cleanup is funded through the DOE Environmental Management Program Office. The stated missions considered in this PEIS would be funded by the DOE Office of Nuclear Energy, Science and Technology, which has no funding connection to cleanup and waste management activities. Therefore, the stated missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

The NI PEIS addresses the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed missions 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.

2623-6: 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 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup. 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.

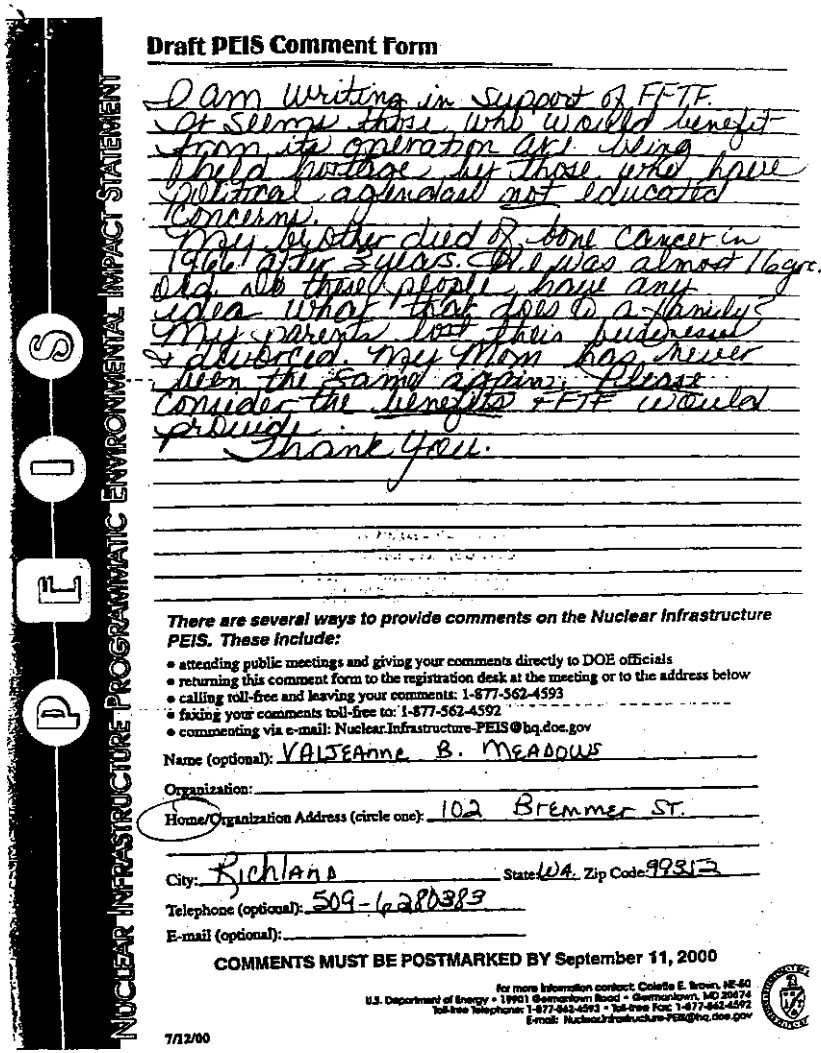
2623-7: DOE notes the commentor's opposition to restarting FFTF for expanding its existing nuclear facility infrastructure. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs: 1) to support 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

Commentor No. 2623: Shelley Cimon (Cont'd)

Response to Commentor No. 2623

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.

Commentor No. 2624: Valjeanne B. Meadows



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

I am writing in support of FFTF. It seems those who would benefit from its operation are being held hostage by those who have political agendas and not educated concerns. My brother died of bone cancer in his late 30's. He was almost 16 yrs. old. Do these people have any idea what that does to a family? My parents lost their firstborn & daughter. My Mom has never been the same again. Please consider the benefits FFTF would provide. Thank you.

2624-1

2624-2

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): VALJEANNE B. MEADOWS

Organization:

Home/Organization Address (circle one): 102 Bremmer ST.

City: Richland State: WA. Zip Code: 99352

Telephone (optional): 509-628-0383

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

Response to Commentor No. 2624

2624-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

2624-2: DOE notes the commentor's views. The selection of facilities and site locations for accomplishing expanded civilian nuclear energy research and development and isotope production missions is not a political decision. 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. 2625: Paige Knight Hanford Watch

HANFORD WATCH
2285 S.E. CYPRESS
PORTLAND, OR 97214
(503) 232-0848

September 12, 2000

The Honorable Bill Richardson
Secretary of Energy and Cleanup
Forrestal Building
1000 Independence Avenue SW
Washington, D.C. 20585

Dear Secretary Richardson:

I am writing you and sending a copy of this statement to Colette Brown rather than the reverse because I do not trust that you will get a full and accurate accounting of public comments here in the Northwest on the restart of the Fast Flux Test Facility. My doubts are based on past experience, since this is our fifth time in addressing these issues. After five different attempts and 8 years to get the public to support the restart of the waste producing FFTF and the FMEF (although it was not given a full view of environmental and cost impacts in the Draft PEIS), you can imagine the discouragement we feel as well as our outrage.

Before I summarize some of the specific faults in this promotional document, let me give you a sense of the public interest in this issue. In the last 3 hearings in Portland, we have had a turnout of 350, 400 and nearly 500 citizens. Hood River and Seattle have had significant attendance from their citizens as well -- from 250 in the small town of Hood River to 400 at each of two of the Seattle hearings. This past week the Tri-City FFTF boosters made a concerted attempt to skew the sentiments across the region of Oregon and Washington by bussing around 50 supporters of the restart to each hearing. Yes, there are around 5 or 6 activists who travel to the Tri-Cities on these rounds of hearings to represent a different point of view, but we have not attempted to demonstrate to the U.S. DOE that there is mixed sentiment in the Tri-City area. Thus, I encourage you to look at the testimony coming from these hearings in an accurate light. This may not be presented to you by Ms. Brown and the Office of Nuclear Energy, Science and Technology, who obviously have their own financial interest at heart rather than the health and safety of the residents of this region. **2625-1**

It is of deep concern to us that at a recent meeting of the Environmental Restoration Committee of the Hanford Advisory Board , when Keith Klein, Richland DOE Manager presented us his vision for accelerated Hanford cleanup, he was surprised to learn that some of the buildings he envisioned being demolished in the 300 area at Hanford were included in the PEIS to support the restart of the FFTF. As usual there is a disconnect between local sites and Headquarters, between cleanup programs and production programs. Around 8,000 people over the past several years have wisely stated that the cleanup mission at Hanford is thwarted when production missions create more wastes. This PEIS stated that the wastes to be produced by restart of the FFTF were "insignificant" compared to the wastes already tallied at Hanford. In light of the lack of adequate funding and delays in the cleanup of no amount of waste can rightfully be considered INSIGNIFICANT. **2625-2** **2625-3** **2625-4**

Throughout the entire PEIS, the longest term view of wastes and impacts was for the supposed 35 years the reactor would be operating. The wastes from it (16 tons), while deemed miniscule in the draft publicity piece, are part of the everlasting gargantuan legacy of wastes that are not being

Response to Commentor No. 2625

2625-1: DOE, and the Secretary of Energy in particular, is aware that there is a considerable difference of public opinion regarding the alternatives evaluated in this NI PEIS to accomplish the DOE missions, including direct support as well as opposition to Alternative 1 (Restart FFTF).

The commentor's concerns regarding the attendance of persons from the Tri-Cities area at the Seattle, Washington and Hood River and Portland, Oregon public hearings are noted. It is DOE policy to encourage public input on matters of regional, national and international importance as part of its commitment to facilitate a public participation process that is open and unbiased. It is not uncommon or illegal under CEQ regulations for individuals and special interest groups, who may be for or against a particular proposed action or alternative, to attend multiple meetings including those outside their "home" area. However, DOE believes and strives to ensure that the hearing format used serves to promote open and equal representation by all individuals and groups, regardless of the motivation for attending.

CEQ (40 CFR 1500 et seq.) and DOE (10 CFR Part 1021) implementation regulations do not require inclusion of cost and nonproliferation studies in an environmental impact statement. The basic purpose of the NI PEIS is to describe the alternatives under consideration for implementation (Section 2.5 of Volume 1) and the environmental impacts that would occur if these alternatives were implemented (Chapter 4 of Volume 1). 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. The associated cost report and nonproliferation report were made available to the public on August 24, 2000 and September 8, 2000, respectively. DOE mailed these documents to approximately 730 interested parties, and these reports were made available immediately upon release on the NE web site (http://www.nuclear.gov) and in public reading rooms. DOE has also provided summaries of the Cost Report and Nuclear Nonproliferation Impact Assessment in Appendixes P and Q, respectively, in the Final NI PEIS.

cleaned up at Hanford as promised us since 1989. Hanford is the only DOE site that has no tank waste treatment system, it is the most contaminated site in the Western Hemisphere, and it is the most urgent environmental disaster facing our nation. We continually face budget shortfalls. We are told that the money for FFTF comes from a different budget. We find this kind of rhetoric and money shell- game deceitful. The PEIS' exploration of environmental impacts and risks to the public is a sham. One of the speakers who has degrees in environmental science state that this PEIS is a bad piece of homework on the part of the writers. That is an understatement! It is hopefully the last in a long series of studies and documents that has cost the taxpayer millions of dollars. Just think of how much more work on cleanup could have been accomplished for the same price! 2625-3

Let me summarize a few other aspects that lead so many of us to oppose the restart of the FFTF: 2625-5

· The need for the use of this reactor is questionable at best: the PEIS refused to look at our current contractual supplies of PU-238 from Russia; NASA has stated that it no longer needs PU-238 in quantities to justify the restart of the reactor; we already have a ready supply of isotopes from Canada and other reactors—Colette Brown stated that the goal is to have all capacities for these product be within our own country – who has come up with this national policy in the midst of our country's dogged drive toward a global economy? 2625-3

· The cost document on this proposal just arrived in the mail-after the hearings, as has the non-proliferation document. The DOE continues this duplicitous piece-mealing of issues which is also a tremendous waste of taxpayer money. For those who took the time to make their statements at the hearings, they now have to incorporate two new documents into their previous statements or not be heard. 2625-6

· The subcommittee of the DOE's Nuclear Energy Research Advisory Committee states that the FFTF would not be an economically viable or dependable source of isotopes for research purposes and that other reactors are better suited to this mission. This committee's findings which were published in April, were completely missing from the PEIS which came out in August. Disconnect???? Deceit???? 2625-7

· Viable alternatives to the proposed uses for the FFTF were glossed over or disregarded in the PEIS. 2625-1

It is obvious to those of us who stand to gain no jobs, but all of the ill effects of the restart of the FFT, that far too much time, energy, and money has been diverted by the special interests of the Nuclear Research Institute, Pacific Northwest National Laboratories and others. Dollars, time and energy diverted away from cleanup. This reactor is truly in search of a mission. The Department of Energy owes it to the Northwest region to close the reactor down and focus on Keith Klein's vision for cleanup of the Hanford site. 2625-8

Sincerely, 2625-9

Paige Knight, President

Paige Knight, HANFORD WATCH 2625-3

2625-10

In preparing the Final NI PEIS, DOE carefully considered comments received from the public. All pertinent information and public input will be provided to the Secretary so that he may make an informed and unbiased decision with respect to the alternatives presented in this NI PEIS.

2625-2: The 300 Area Revitalization Plan (DOE 1999) provides for continued Multi-program R&D operations in the 300 Area, including operation of various laboratories, office facilities, and services. It also provides for consolidation (but not complete elimination) of radiological operations, with support for Hanford Site facility transition and environmental restoration efforts. The plan does not require closure of the 325 and 306-E buildings as long as they are needed for active research projects. Operation of these facilities would not violate any existing agreements between DOE and stakeholders or other legal obligations, nor would it affect ongoing or planned environmental restoration and facility transition activities.

2625-3: 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., DOE's Richland Operations Office, U.S. Environmental Protection Agency, and the State of Washington Department of Ecology). 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

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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. Therefore, FFTF restart would not impact the schedule or available funding for existing cleanup activities.

2625-4: 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 remains committed to upholding this agreement.

As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (i.e., solid low-level radioactive waste) annually, in addition to nonhazardous wastes, This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes 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.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action 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 cumulative environmental impact assessment provided in Section 4.8.3.3 takes into account the radiation exposure to the public from all reasonably foreseeable Hanford Site activities over the 35 year timeframe. The activities considered in the cumulative impact assessment

include future waste management activities as estimated in the Hanford Comprehensive Land Use Plan, tank waste remediation, K Basin spent nuclear fuel management, decommissioned naval reactor plant disposal, Plutonium Finishing Plant Stabilization and the proposed NI PEIS operations at FFTF and FMEF or RPL. As shown in Table 4-173, the dose to the maximally exposed individual would be expected to remain well within regulatory limits. Based on an exposure period of 35 years, 0.21 (<1) latent cancer fatalities would be expected to occur among the local population over the 35-year period as a result of Hanford related radiation exposure.

2625-5: The commentor's concerns about the adequacy of the impact and risk assessments are noted.

The impact assessments performed for the NI PEIS are comprehensive in scope, employ state-of-the-art analytical methodologies, and are consistent with the approach taken by the Department in the preparation of numerous other environmental impact assessments. The results of the impacts associated with nuclear infrastructure actions that may be implemented are presented and discussed in Chapter 4; each of the environmental disciplines that may be affected is addressed. More detailed discussions of the impact methodology, including computer codes and other assessment techniques, are presented in Appendixes G through M. Appropriate references are given to support the presentations.

2625-6: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

2625-7: 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

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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.

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 as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup. 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.

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.

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. Further, supplies of many research isotopes are not readily available from existing foreign or domestic sources, causing a number of medical research programs to be

terminated, deferred, or seriously delayed. As such, reliance on these other 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.

2625-8: 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 disturbing the existing missions of these facilities.

2625-9: A number of alternatives to the use of FFTF were considered in the NI PEIS. In addition to FFTF, the PEIS evaluated ATR, HFIR, commercial light water reactors, a new accelerator(s), and a new research reactor. It also evaluated a number of other irradiation facilities; however, these were dismissed from further consideration for a variety of reasons Volume 1, Section 2.6). Among the reasons they were dismissed was the fact that they lacked sufficient neutron production capacity, were fully dedicated to existing missions, were not capable of steady-state neutron production, had insufficient power to sustain adequate steady

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state neutron production, were unable to produce a constant, reliable source of neutrons due to dependency on operating schedules of their primary missions, are under construction with capacity fully dedicated to other panned mission, or have been permanently shut down.

2625-10: See response to comment 2625-6.

Commentor No. 2626: Barbara Clark

P.O. Box 1222
Walla Walla, WA 99362
September 5, 2000

Secretary Bill Richardson
US Department of Energy
Germantown, MD 20874-1290

Dear Mr. Richardson: RE: PU-238/FFTF EIS

I was unable to attend the August 31 public hearing held in Richland regarding plutonium production at FFTF, and hope that this letter may be considered as testimony.

I am dismayed that once again it is proposed to add more waste to the Hanford site before the contamination already here is cleaned up. The existing soil and water contamination and leaking tanks are a serious and continuing hazard to health and safety.

The recent fire on the reservation and releases of plutonium into the air demonstrated clearly that existing wastes are not adequately confined or protected from spreading. It would be irresponsible and unfair of the DOE to add further contamination until we have learned how to deal with the waste that is already here.

Nor is it ethical to divert money from cleanup into production. Cleanup has to be the first and only mission of the Hanford site until it is completely accomplished. Although some work has been done, the most critical cleanup has not even begun. 2626-1

At a time when the Northwest is being threatened with breaching of dams to save salmon, it certainly makes no sense to retard cleanup of the Columbia River and even possibly increase contamination of salmon habitat. Is there no coordination of policy in this area?

We have wasted unconscionable amounts of time, money, and energy since 1987 continually re-visiting the question of new production at Hanford. It's time to stop allowing the federal government and the majority who live in this region to be jerked around by a few people in Richland who can't see beyond their own personal wants. I spoke to one scientist who wants to re-start FFTF because "it's such an elegant little reactor"; others I've discussed this with consider cleanup to be trivial and unmanly..

The Tri-Cities economy does not need new production; cleanup provides immense amounts of federal money. What Tri-Cities does need is an unequivocal and final decision from DOE that there will be no re-start of plutonium production and equally unequivocal direction to get on with the cleanup that they're being paid to do. 2626-2

Very truly yours,
Barbara Clark
Barbara Clark

Response to Commentor No. 2626

2626-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford and protection of 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 remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.

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 stated mission is not resumption of weapons production. 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.

Regarding the concerns over the possible migration of contaminants to the Columbia River, the Hanford Site has a comprehensive waste minimization and pollution prevention program in place as summarized in Section 3.4.11.8 of Volume 1 that would govern any proposed site

Commentor No. 2626: Barbara Clark (Cont'd)

Response to Commentor No. 2626

activities. More specific to the alternatives evaluated 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 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) indicate that there would be no discernible impacts to groundwater or surface water quality at Hanford from 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).

Regarding the Hanford wildfire of 2000, the DOE Richland Operations Office, the State of Washington Department of Health, and the U.S. Environmental Protection Agency performed environmental monitoring on and around the Hanford site to assess any potential radiological impacts. The wildfire did not cause a release of radioactive materials from any Hanford facilities, but did result in the resuspension of radioactive materials which were already present in the environment. The very low levels of radioactive materials that were resuspended were only slightly above natural background levels and required several days of analysis to quantify. Information on this event has been made available to the public and can be accessed at http://www.Hanford.gov/envmon indes.html. This site provides a link to information on the independent offsite air monitoring that was conducted by the U.S. Environmental Protection Agency.

2626-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, for plutonium-238 production.

Commentor No. 2627: Eric L. Platz

1524 South Sunset Drive
Tacoma, Washington 98465

August 31, 2000

William Richardson
Secretary of Energy
USDE
James Forrestal Building
1000 Independence Ave. S. W.
Washington, DC
20585

Dear Secretary Richardson,

I am writing as a member of Physicians for Social Responsibility to strongly protest the proposal to restart the Fast Flux Facility at the Hanford Nuclear Reservation. I am especially concerned that the public is being misled with bogus claims regarding a potential shortage of medical isotopes. It is my understanding that A) No such shortage exists, B) In the event of a shortage, a *clean* facility would be used for their production, and C) This issue is being used as a "Let's use Hanford to *cure cancer*" smokescreen to obscure the facts about plutonium production, the real motive for reactivation. 2627-1 2627-2

In addition, the Fast Flux restart issue potentially draws attention away from the mandate to clean up the entire Hanford Reservation, a *true* public health hazard. 2627-3

Please put me on record as *absolutely opposed* to any plan to restart the Fast Flux Facility.

Sincerely,

Eric L Platz, MD

Response to Commentor No. 2627

2627-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2627-2: DOE notes the commentor's opposition to restarting FFTF for enhancing its existing nuclear facility infrastructure. Consistent with its mandates under the Atomic Energy Act, DOE is proposing this enhancement 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.

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.

Commentor No. 2627: Eric L. Platz (Cont'd)

Response to Commentor No. 2627

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.

While some existing DOE reactors may possess the potential capability or capacity to support research isotope production, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without disturbing the existing missions of these facilities. Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions (basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short term (less than 5 years).

2627-3: DOE notes the concern of the commentor that the restart of the FFTF draws attention from the mandate to clean up the Hanford facilities. 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 remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.

Commentor No. 2627: Eric L. Platz (Cont'd)

Response to Commentor No. 2627

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 of Appendix N, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

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.

Commentor No. 2628: Donlee and William Deamud

1700 Fowler St.
Mount Vernon, WA 98274
September 7, 2000

Bill Richardson,
U.S. Energy Sec'y
Washington D.C.

Dear Mr. Richardson:

We can hardly believe that once again the issue of restarting a test reactor at Hanford has slithered onto the DOE table, smelling very much like pork barrel.

PLEASE! Let WA State be without more nuclear waste and let the gov't keep it's word in really cleaning up the horrific contamination of 50 years. There have been endless delays, promises, and much shifting of the blame with little progress. Now, even the glassification complex and process has been delayed to begin in 2007 with an extension to 2011, but DOE is willing to spend millions to restart the reactor. 2628-1

Why doesn't the DOE and gov't officials just admit they don't know what to do with "IT" and will postpone dealing with "IT" indefinitely, that is, the tons of nuclear waste. 2628-2

However, the U.S. has recently become interested in the world environment intending to help Russia clean up its nuclear sub base and save the oceans from further contamination. What other country might we volunteer to help out in this regard - maybe start bringing the waste from other countries to Hanford again as was done in the past. 2628-1

So many people have been lied to regarding their health and safety in working in nuclear weapons production plants, exposure of persons to radiation releases, and from lies, servicemen have become ill from nuke tests and chemicals. 2628-3

There are hazardous waste sites everywhere, fertilizers even showing up with radioactive material as well as asbestos and heavy metal products.

There are unbelievable amounts of chemical warfare cannisters, stockpiled, (with some leakage), and it is not known how to safely dispose of them. 2628-2

Does any of the above facts sound rational to you?

The U.S. needs to sign the non-proliferation treaty and become a true world leader, commanding respect at home and abroad. 2628-4

Sincerely,

Donlee Deamud
William Deamud

P.S. $50 million or more to Russia

Response to Commentor No. 2628

2628-1: Restoration of the Hanford Site and waste management activities are the primary missions at Hanford.

Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a 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 remains committed to upholding this agreement.

Implementation of the nuclear infrastructure alternatives described in Section 2.5 of Volume 1 would not impact Hanford cleanup activities. Potential health effects associated with normal operations and releases from a spectrum of accidents, including severe accidents, were evaluated for the alternatives described in Section 2.5 of Volume 1. All of the alternatives, including the restart of FFTF, are shown to pose little risk to the health and safety of the public.

2628-2: The incremental impacts associated with managing an additional 16 metric tons of heavy metal of FFTF spent nuclear fuel were evaluated in Section 4.3.1.1.14 of the NI PEIS for the restart of the FFTF. The radiological impact to the public from overall radionuclide releases from the entire FFTF complex during the last year of reactor operation was less than 0.0001 mrem/year. Additionally, the dose contribution from FFTF spent nuclear fuel management would be expected to be a small fraction of the FFTF reactor operation dose. Therefore, it would have no discernable impact on the 0.1 mrem/year dose from the existing 2133 MTHM Hanford spent nuclear fuel inventory. The currently used FFTF specific spent nuclear fuel storage system designs (i.e., facility storage vessels and dry storage casks) are the key contributors for determining that the incremental radiological and environmental impacts are small.

In addition to evaluating on-site management of the NI PEIS related FFTF spent fuel, section 4.3.1.1.14 also states that “the spent [FFTF] nuclear fuel would be packaged in acceptable containers and shipped to a geologic repository for ultimate disposal.” Disposal of DOE spent nuclear fuel is within the scope of a separate EIS titled, “Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent

Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada" (DOE/EIS-0250D, July 1999). As directed by the U.S. congress through the Nuclear Waste Policy Act, as amended, Yucca Mountain is designated, and is currently being characterized, as the candidate site for constructing a geologic repository for disposal of high-level radioactive waste and spent nuclear fuel.

2628-3: The purposes for which FFTF, and the other facilities evaluated under each of the alternatives, does not include any defense-related activities.

Current DOE safety regulations require the accurate reporting of radiological exposures. The data used to quantify offsite consequences is derived from reports (available to the public) on the normal operational releases at the facilities being evaluated (for example DOE/RL-99-41 Radiological Air Emissions Report for the Hanford Site Calendar Year 1998). These reports are generated in response to DOE requirements for radiological control. DOE Order 231.1 Environment, Safety, and Health Reporting requires an annual radiation dose summary addressing doses to workers and members of the public. DOE radiological control requirements are designed with the intent to meet the legal requirements of 10CFR 835, and there are provisions for enforcement actions should the requirements of 10CFR835 not be met. In order to meet these requirements, DOE has established the DOE Radiological Health and Safety Policy (DOE P 441.1, April 26 1996). Accuracy of radiological records is among the goals of this policy: the policy states in part "Ensure radiological measurements, analyses, worker monitoring results and estimates of public exposures are accurate and appropriately made."

DOE notes the commentor's concern regarding waste generation. As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes 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.

Commentor No. 2628: Donlee and William Deamud (Cont'd)

Response to Commentor No. 2628

The NI PEIS addresses 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.

This NI PEIS has provided estimates of human health impacts associated with a range of reasonable alternatives for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems, including the restart of FFTF. The methodology used provides realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

2628-4: The U.S. has signed the nuclear non-proliferation treaty. The plutonium being considered for production in this EIS is plutonium-238 which is not an isotope of plutonium that is used in nuclear weapons. The production of plutonium-238 does not present a nonproliferation concern. DOE developed a separate Nuclear Infrastructure Nonproliferation Impact Assessment, published in September, 2000, that analyzed the nonproliferation impacts of the actions considered in this PEIS and found that, "There are currently no U.S. nonproliferation policies, laws, regulations or international agreements that preclude the use of any of the facilities in the manner described in the Draft NI PEIS."

Commentor No. 2630: James R. Beaver, Mayor, City of Kennewick

KENNEWICK
Office of the Mayor

August 31, 2000

The Honorable Bill Richardson, Secretary
U.S. Department of Energy
1000 Independence Avenue SW
Washington, D.C. 20585

RE: Fast Flux Test Facility (FFTF) Draft Environmental Impact Statement (EIS)

Dear Secretary Richardson:

The Tri-Cities offers a National Laboratory that is known throughout the world for its innovations. The Hanford Site brings to our community a highly skilled workforce that contributes greatly to the success of the Department of Energy. The restart of the FFTF for the production of isotopes for medicine, space missions and research and development projects will only add to the success of DOE and this community. I understand the Department of Energy's position for the EIS scooping hearings. Preparing an Environmental Impact Statement formally involves the public in any decision about FFTF's future. I want to address the positive effects of an expanded role for the FFTF.

Are Medical Isotopes needed? Medical isotopes are increasingly being used in research and in providing new, cost-effective, cutting-edge technologies for the diagnosis and treatment of disease, including cancer, heart disease, and arthritis. Diagnostic isotopes provide improved images of internal organs. This makes earlier detection possible and provides better data for diagnosis. The United States is importing more than ninety percent of the reactor-produced medical isotopes currently used to save a significant number of the lives of our citizens. Market projections for utilization of medical isotopes for diagnosis and treatment show our country will need new production sources to assure a domestic supply to meet the increasing demand.

Reactor Safety – The FFTF was designed, constructed, and safely operated as a state of the art reactor with world isotope production capabilities and is the newest, most sophisticated reactor in the U.S. Department of Energy's complex and as such is an irreplaceable national asset. The reactor's cooling system is inside a building that was designed and tested to meet stringent containment criteria. The reactor uses a safety system designed to automatically shutdown if there is an abnormal condition. Before FFTF began operation, the Nuclear Regulatory Commission and the advisory Committee on Reactor Safeguards performed an extensive review of the Plant design and the Final

2630-1

Response to Commentor No. 2630

2630-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 2630: James R. Beaver, Mayor, City of Kennewick (Cont'd)

Safety Analysis Report. Our community helped design and construct the operation of the FFTF and is very knowledgeable about the facility's track record for safe operation.

How Will Wastes Be Stored & Disposed? The current storage of contaminated waste from patients at hospitals and treatment centers has in some cases been managed poorly due to lack of proper training and facility needs. The DOE site has the capabilities and knowledge base on how to store waste associated with medical isotope research and treatment, and a final waste minimization plan will be conducted to include an analysis of all waste associated with medical isotopes.

2630-1 (Cont'd)

FFTF should no longer be maintained in a stand-by mode. The citizens of our country deserve better. Our country needs the capability to provide isotopes for cancer victims. FFTF provides that solution.

Sincerely,

James R. Beaver
Mayor

Response to Commentor No. 2630

Commentor No. 2631: Stephen Bomkamp

3944 SW 97th St.
Seattle, WA 98136
8/31/00

Secretary of Energy
U.S. Department of Energy
Washington, D.C.

Secretary Bill Richardson:

Last night I attended the hearing in Seattle on the draft Environmental Impact Statement concerning the restart of the FFTF at Hanford and found it very interesting. I heard two groups giving conflicting testimony. It boiled down to an issue of credibility. Arguing against restart was Heart of America and the Physicians for Social Responsibility and some other groups and also a number of unaffiliated individuals. Arguing for restart was a group of men who identified themselves as "private citizens, representing no one but myself", who were, apparently, nuclear industry workers from Hanford, all wearing matching T-shirts.

The Hanford engineers have a large vested interest in this issue. I do not know if they work directly for the Department of Energy or if they work for private companies who do contract work for the DOE, but, either way, they probably have high-paying jobs, milking taxpayer money from the government cash cow. And here they were, lobbying the Energy Department for an expansion of their job opportunities while claiming to be just ordinary citizens concerned by the shortage of nuclear isotopes. They were well rehearsed and well orchestrated. Each speaker had a slightly different emphasis, leading me to believe that they had worked together on their prepared statements, so that all points would be covered without much overlap and repetition. Perhaps they did not even write their own statements but were merely reading pieces of their company position. If they were truly "private citizens" acting on their own, who just happened to have picked out the same T-shirts to wear last night, they all got themselves to the meeting on their own, taking vacation time as necessary. I suspect that it is more likely that they were paid to be there and arrived together in a bus chartered by their employer. I would not be surprized if this same group of men attended the hearings in Hood River, Portland and Richland as well as in Seattle. You might check with Colette Brown to verify this.

The people opposed to the restart of FFTF were not wearing matching T-shirts and were obviously private citizens who were not being paid to be there or, if they were being paid, it was by a non-profit organization subsisting on donations from other concerned citizens and dedicated to promoting a safer

2631-1

Response to Commentor No. 2631

2631-1: It is DOE policy to encourage public input on matters of regional, national and international importance as part of its commitment to facilitate a public participation process that is open and unbiased. It is not uncommon or illegal under CEQ regulations for individuals and special interest groups, who may be for or against a particular proposed action or alternative, to attend multiple meetings including those outside their "home" area. While DOE does not pay contractors working on DOE projects or its civil service personnel to attend public hearings, it does not specifically prohibit individuals from attending as private citizens.

2631-2: 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.

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. 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.

Commentor No. 2631: Stephen Bomkamp (Cont'd)

world. There is not much money to be made in opposing nuclear power. I felt more inclined to believe these people.

Each group accused the other of dishonesty, but I could see and hear the Hanford engineers misrepresenting themselves.

Also at the meeting was a woman who read a letter that Senator Gorton wrote for the meeting in which he said that Heart of America was lying. Senator Gorton is often referred to as "Slippery Slade". He is notorious for sneaking controversial legislation through the Senate by attaching the legislation as riders to important appropriations bills. I do not think Senator Gorton is an honest man. When he says someone is lying, it makes me think they are telling the truth. 2631-1 (Cont'd)

One of the arguments presented in favor of restarting FFTF is that medical isotopes are in critically short supply. Is this true? If it is true, why do I not know about it? I know that transplantable organs are in critically short supply. Hardly a month goes by that I do not hear about someone on a waiting list for a heart or a liver. And I have known people undergoing cancer treatment and I hear about many more people in that situation and never once have I heard about medical isotope shortages. The only time I hear about isotope shortages is when people are arguing to restart the FFTF. Is this just more deception by the nuclear industry? 2631-2

Ever since the Manhattan Project, the nuclear industry has been surrounded by secrecy, obfuscation and deceit. We are constantly reassured that nuclear power is safe. And we are constantly shocked by Three Mile Island, Chernobyl, Hanford downwinders, and on and on. How are we to believe assurances of safety this time after what has gone before? 2631-3

It is utter lunacy to be manufacturing substances which will be lethal for ten times longer than our civilization has existed. It is even worse to be storing these substances in un-lined pits and allowing them to leak into the groundwater and into rivers. Until safe methods of storage and disposal are devised I promise I will oppose any moves to expand the nuclear industry. 2631-4

Please, Secretary Richardson, if you are a sane and honorable man, do not restart the FFTF. 2631-5

Please, clean up the mess at Hanford as you are required by the 1995 Tri-Party Agreement and put those engineers in matching T-shirts to work developing a safe, permanent waste-disposal system. 2631-6

Sincerely,
Stephen Bomkamp

Stephen Bomkamp

Response to Commentor No. 2631

Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions basic energy sciences or defense. DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term (less than 5 years).

2631-3: DOE is required under the National Environmental Policy Act (NEPA) 42 U.S.C. 4321 et seq., to prepare an environmental impact statement when its actions could significantly affect the quality of the human environment. The NEPA public participation process has provided an opportunity for all interested parties, including members of the public, and local, state, and Federal officials, to independently review and comment on the Draft NI PEIS. Therefore, any interested party has the capability to examine the data, assumptions, and analytical techniques used in the assessments of the impacts of each alternative.

The analyses in the PEIS have been performed using radiological data taken from the three sites considered in the range of reasonable alternatives. This data is collected under controls instituted to meet DOE radiological control requirements which are in turn designed with the intent to meet the legal requirements of 10CFR 835, and there are provisions for enforcement actions should the requirements of 10CFR835 not be met. In order to meet these requirements, DOE has established the DOE Radiological Health and Safety Policy (DOE P 441.1, April 26, 1996). Accuracy of radiological records is among the goals of this policy: the policy states in part "Ensure radiological measurements, analyses, worker monitoring results and estimates of public exposures are accurate and appropriately made." DOE Order 231.1 Environment, Safety, and Health Reporting requires an annual radiation dose summary addressing doses to workers and members of the public. The data used to quantify offsite consequences has been derived from reports (available to the public) on the normal operational releases from operation of the facilities at Hanford, INEEL, and Oak Ridge (for example DOE/RL-99-41

Radiological Air Emissions Report for the Hanford Site Calendar Year 1998).

2631-4: The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action 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 applicable DOE orders.

As discussed in Volume 1 of the NI PEIS (Section 3.4.11.2), low-level radioactive waste and mixed low-level radioactive wastes are the only types of radioactive wastes that can be disposed in a burial ground. Low level radioactive waste that would qualify for disposal by this method would have to meet stringent waste and package acceptance criteria (i.e. only short half-life radionuclide content, high integrity packaging, etc.). The Hanford Site's 200 Area's Low-Level Waste Burial Ground (i.e., trenches) are regulated by DOE under the Atomic Energy Act of 1954, as amended, and under DOE Order 435.1, Radioactive Waste Management.

The 200 Area's Low-Level Burial Ground also contain the following three active permitted mixed waste trenches whereby mixed low-level waste is both stored and disposed of: (1) Trench 31 is a permitted, lined Subtitle C disposal trench that is currently utilized for greater than 90-day storage of mixed low-level radioactive waste; (2) Trench 34 is permitted, lined Subtitle C disposal trench currently utilized for the disposal of mixed low-level radioactive waste that has been treated and is compliant with Land Disposal restrictions; and (3) Trench 94 is a permitted, unlined disposal trench utilized for the disposal of decommissioned naval reactor components. Use of Trench 94 for naval reactor compartments is authorized under a special exemption from the State of Washington Department of Ecology (Ecology). Currently, the Low-Level Burial Ground has a Part A Permit approved by Ecology under the State of Washington Dangerous Waste Regulations, State of Washington Administrative Code (WAC) 173-303, and, as such, is an interim status treatment, storage, and disposal (TSD) unit under the Resource

Commentor No. 2631: Stephen Bomkamp (Cont'd)

Response to Commentor No. 2631

Conservation and Recovery Act (RCRA). The permitted active and future mixed waste units of the Low-Level Burial Ground meet all regulatory requirements of WAC 173-303 and RCRA and will be incorporated into the Hanford Site RCRA Facility Part B Permit and will operate under final status regulations. In early June 2000, a working draft of the Hanford Site RCRA Facility Part B Permit application was submitted to Ecology.

2631-5: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2631-6: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a 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 remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.

Commentor No. 2632: T. James Bigham

T.James Bigham
6125 Rowena River Rd.
The Dalles, OR. 97058

Secretary of Energy
U.S. Department of Energy
1000 Independence Ave.
Washington D.C. 20585

9-5-2000

Dear Mr. Richardson;

Are you listening? Do you have trouble understanding? **I am opposed to the restart of the FFTF reactor for any reason.** I ask you to stop this study process! If you proceed, I request you include the following in your environmental impact statement on this issue: 2632-1

1.Demonstrate a compelling need for any new missions recommended, with full consideration of alternative means of meeting those needs. 2632-2

2.Characterize all existing contaminant sources at Hanford and all other sites before adding additional waste. Analyze all potential new waste streams and their cumulative impact to the environment at all sites. 2632-3

3.Do a cost benefit analysis for all alternatives, including total life cycle costs, waste treatment and disposal costs. Examples - Linear accelerator vs FFTF. 2632-4

4.Analyze the cost to the current clean-up budget for both maintenance and possible restart. Accurate and verifiable startup figures must be calculated and included.

5.Include any other companion facilities and their costs, waste streams and potential impacts to the environment, including reprocessing. 2632-5

6.Analyze all transportation costs and risks, including public safety and any counter terrorist actions that may be needed. 2632-6

7.Allow for independent nuclear safety oversight of FFTF restart and operation if restart is recommended. 2632-7

8.Analyze all impacts from additional spent fuel storage. 2632-8

9.Disclose all safety and environmental risks associated with FFTF restart based on a new safety analysis. 2632-9

In addition, there needs to be another alternative #5 that deactivates FFTF without new production missions. 2632-10

Response to Commentor No. 2632

2632-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF. It should be noted that Alternative 5 as presented in the NI PEIS does not include any new missions.

2632-2: 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. The NI PEIS evaluates the environmental impacts of a range of reasonable alternatives for accomplishing this mission. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

2632-3: 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., DOE's Richland Operations Office, U.S. Environmental Protection Agency, and the State of Washington Department of Ecology). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

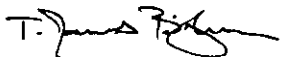
Ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The current inventory of wastes managed at the Hanford Site are identified in Section 3.4.11.1 of Volume 1. In addition, the generation rates of wastes associated with the NI PEIS options that use Hanford facilities are compared with the current waste generation rates at the site in Section 4.3 of Volume 1. As stated in Sections 4.3.1.1.13, 4.3.3.1.13, and 4.4.3.1.13, the generation rates of wastes at Hanford associated with the options that utilize either FFTF, FMEF and or RPL/306-E would be much smaller than the current waste

Commentor No. 2632: T. James Bigham (Cont'd)

I sent you the following some time ago. Perhaps you would do me the service of reading it. How many more do you suppose I will send before I decide that the department of energy of the United States does not serve me and does not work for me. That the department is not my servant but a monolithic juggernaut that caters to the interests of corporations while it ignores the citizens.

Please do the right thing- no fftf-complete clean-up now.

Sincerely,



T. James Bigham

Secretary of Energy *1-24-99*
U.S. Department of Energy
1000 Independence Ave.
Washington D.C. 20585

Dear Mr. Richardson;

My family and I live in a house we have built on the banks of the Columbia River. We recognize the rarity of the natural beauty of this part of our land and do what we can to be responsible stewards of the Columbia and its environment. We have lived here for ten years and have sadly witnessed other Secretaries of the DOE backslide, prevaricate, or in the best of cases, stand idle while promised efforts to deal seriously with the environmental crisis of the Hanford area slip way unmet and unfulfilled.

The problems at Hanford are not being addressed in any meaningful way. The Department of Energy has not made a good faith effort to clean up the disgusting and lethal mess it has made. USDOE has constantly resisted acknowledging the seriousness of this problem and has resisted accepting responsibility for getting on with the clean-up.

Now you have announced that you have ordered an environmental impact study of restarting the FFTF. Does your job have anything at all to

2632-11

2632-12

Response to Commentor No. 2632

generation rates at the site. These volumes would also be small in comparison to the existing inventory at the site (Section 3.4.11.1, Volume 1). These comparisons were also made for the other options which involved INEEL and ORR facilities. 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.

2632-4: NEPA does not require that cost-benefit analyses be provided in an EIS, and none have been provided in this Final NI PEIS. 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. According to 40 CFR Section 1502.23, if a cost-benefit analysis exists, it must be reported and summarized in the NI PEIS.

2632-5: Companion (to FFTF) facilities at Hanford that have the potential to provide nuclear infrastructure support activities are FMEF and RPL Building 306-E. FMEF could support plutonium-238 and medical industrial production and nuclear research and development (Volume 1, Section 2.3.2.3 of the NI PEIS); RPL/Building 306-E could support medical/industrial isotope production and nuclear research and production (Volume 1, Section 2.3.2.4). FMEF is assessed in the NI PEIS for possible use in each alternative except Alternative 5, "Shutdown FFTF." RPL/Building 306-E is assessed for possible use only in Alternative 1, "Restart FFTF."

Potential impacts to the environment associated with FMEF and RPL Building 306-E operations are addressed in Chapter 4 of the NI PEIS. Consequences are shown to be small during normal operations; risks associated with postulated accidents are also shown to be small. Specific to waste streams, there would be no discharges to the Columbia River and no radioactive or hazardous discharges to groundwater; impacts to groundwater or surface water quality would not be discernible.

Commentor No. 2632: T. James Bigham (Cont'd)

do with the development and exercise of responsible energy policy?. Do you care that DOE has not lived up to its promise to clean up the Hanford site? Are you aware that DOE's request to relax the standards for cleanup violate state and federal standards and endanger the lives and the health of citizens, especially children, who live in this area? Do you understand that FFTF will generate more liquid high level radioactive waste, the very problem USDOE has thus far done so little to deal with?

I want to believe in my government. I want to believe in its laws and the administration of justice. I need you to now demonstate that this government seeks to safeguard its citizens and act in the long term best interests of its people. In the warm months of the year, my family plays in the water of the Columbia nearly every day . We should be able to do this without the danger of being affected by our goverment's negligence.

Please, I beg you, shut down the FFTF. Do not mothball it. Do not delay a decision. Shut it down forever and get on with the real job at hand. Clean up the Hanford site so that you would feel safe feeding fish caught there to your family.

2632-12 (Cont'd)

2632-13

2632-10

2632-12

Sincerely,

T. James Bigham

Response to Commentor No. 2632

CEQ (40 CFR 1500 et seq.) and DOE (10 CFR Part 1021) implementation regulations do not require inclusion of cost studies in an environmental impact statement. The basic purpose of the NI PEIS is to describe the alternatives under consideration for implementation (Section 2.5 of Volume 1) and the environmental impacts that would occur if these alternatives were implemented (Chapter 4 of Volume 1). 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. The associated cost report was made available to the public on August 24, 2000.

2632-6: 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 and nuclear nonproliferation impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. As discussed in the response immediately above, a separate cost report was made available to the public on August 24, 2000 A nonproliferation report was mage available to the public in September 8, 2000. DOE mailed these documents to more than 730 interested parties. Both reports were made available immediately upon release on the NE web site (http://www.nuclear.gov) and in the public reading rooms. DOE has also provided summaries of the Cost Report and Nuclear Nonproliferation Impact Assessment in Appendixes P and Q, respectively, Final NI PEIS.

Appendix J contains a comprehensive risk analysis of all materials transported under the alternatives defined in the NI PEIS. The results of the risk analysis is shown in detail in Table J-7 and J-8, and summarized in Chapters 2 and 4 of Volume 1 and the Summary Volume for this PEIS These results show that the risk to the public is small under all alternatives.

Sections 2.4.3 and 2.4.4 of Volume 1 provide general descriptions of DOE's systems to protect special nuclear materials from possible terrorist activities. DOE would rely on the Transportation Safeguards System for overland transportation and purpose-built ships operating in accordance with International Atomic Eneragy Agency guidance for the at-sea transportation.

Commentor No. 2632: T. James Bigham (Cont'd)

Response to Commentor No. 2632

2632-7: At this time, an independent safety review of the restart of FFTF is not required. Thet FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

In the event that FFTF restart is selected in the Record of Decision, complete safety and operational readiness reviews will be performed prior to the restart. The FFTF Safety Analysis Report is routinely reassessed and updated when required to address any changes in plant configuration due to physical modifications or changes in plant operation procedures. The operational readiness review would assess the current updated Safety Analysis Report to ensure that the analyses bound the reactor-operating envelope for the stated missions. The analyses presented in this NI PEIS reflect the proposed changes to the reactor core (including fuel and irradiation targets) to perform the stated missions.

2632-8: The discussion in the Summary and Section 4.8.3.5 of Volume 1 on the cumulative impacts for spent nuclear fuel management at Hanford was 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 ot 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.

2632-9: FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. This NI PEIS has examined the risks associated with the operation of the FFTF for 35 years for the purpose of producing isotopes for medical use, research and development, and for the production of radioactive heat sources for power supply systems. Section 4.3 of Volume 1 provides the results of

the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. (Accident analysis is described in Appendix I and the normal operations risk analysis is described in Appendix H.) The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Additionally, in the event that FFTF restart is selected, a new Safety Analysis Report will be prepared and subjected to a thorough independent review process. The facility reanlysis as part of the Safety Analysis Report update process would ensure that the analyses bound the reactor-operating envelope for the duration of FFTF operation, The Safety Analysis Report would be routinely reassessed and updated when required to address any changes in plant configuration or changes in plant operation procedures. This continuing safety analysis updating would include analysis of changes that may occur as a result of facility aging during the 35 years of operation

2632-10: See response to comment 2632-1.

2632-11: 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 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. These comments are summarized, tabulated, and cross-referenced by commentor, category, and method of submission. A summary discussion is also provided of the overall prevailing issues raised during the public comment period.

2632-12: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE

Commentor No. 2632: T. James Bigham (Cont'd)

Response to Commentor No. 2632

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 remains committed to upholding this agreement.

A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Public meetings were held on this formal milestone change. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.

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.

Implementation of the alternatives described in Section 2.5 of Volume 1 would not relax the standards for cleanup or violate laws or regulations. Potential health effects associated with normal operations and releases from a spectrum of accidents, including severe accidents, were evaluated for the alternatives described in Section 2.5 of Volume 1. All of the alternatives, including the restart of FFTF, are shown to pose little risk to the health and safety of the public.

2632-13: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (i.e. solid low-level radioactive waste) annually, in addition to nonhazardous wastes, This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. High-level radioactive waste would not be generated from merely operating FFTF. It is DOE's policy

that all wastes 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.

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 Hanford. The higher activity waste would be treated as a solid form via a stand-alone vitrification system, separate from any tank waste treatment system. Therefore, the existing Hanford high-level radioactive waste facilities would 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.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action 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.

Commentor No. 2633: Bob Anderson Benton County Democratic Central Committee

Bob Anderson, Chairman
Benton County Democratic Central Committee
1108 W. 14th Avenue
Kennewick, WA 99337
(509) 586-8056

August 31, 2000

The Honorable William Richardson
Secretary of the United States Department Of Energy
1000 Independence Avenue SW
Washington, D.C. 20585

Dear Secretary Richardson:

The Benton County Democratic Central Committee (BCDCC) met on October 20, 1999 and passed the attached resolution in support of restarting the Fast Flux Test Facility (FFTF) at Hanford.

On April 22, 2000 the Benton County Democratic Party adopted a platform, which states:

"Cancer is the second leading cause of death in this country, with 600,000 cancer victims dying annually. The American public cannot accept current expensive and agonizing traditional treatments with their devastating side effects. Chemotherapy and radiation use a buckshot approach which frequently causes nausea, hair loss, bone weakness, lymph edema, burned and blistering skin, chronic coughing, and increased susceptibility to shingles. These old-fashioned treatments are effective for 40 percent of the patients and cost $105 billion annually. It is unconscionable not to devote all efforts to starting production of medical isotopes at the Fast Flux Test Facility (FFTF).

Good results with kinder and gentler treatment of cancer using medical isotopes have been achieved at the University of Washington Fred Hutchinson Cancer Treatment Center in Seattle. Outstanding success has been achieved in treating blood cancers, such as non-Hodgkin's lymphoma. Prostate cancer can be treated on an outpatient basis using medical isotope seeds instead of expensive surgery and hospitalization.

If these and additional new developments in cancer treatment are to be available to every American citizen in the future, we will need the production capability of FFTF to provide the quantity and quality needed of several different and new medical isotopes. The American public should not have to depend on medical isotopes produced in Canada, Russia, and South Africa when we have a facility right in our own back yard (Richland, Washington) which is not being adequately funded because of political manipulations and delays.

2633-1

Response to Commentor No. 2633

2633-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Continued operation of FFTF has widespread support among scientists, educators, informed physicians, cancer survivors, and knowledgeable grass roots organizations because medical isotopes, which can be produced at FFTF, are an effective way of treating several kinds of cancer."

The Nuclear Infrastructure Draft Programmatic Environmental Impact Statement released on July 21, 2000 has reinforced our belief for the need to restart FFTF.

As Chairman and spokesman for the Benton County Democratic Central Committee I ask that restart of FFTF be ordered.

2633-1 (Cont'd)

Sincerely,

Bob Anderson

Bob Anderson, Chairman
Benton County Democratic Central Committee

Attachment: Resolution in Support of Restarting FFTF adopted October 20, 1999

Commentor No. 2633: Bob Anderson (Cont'd) Benton County Democratic Central Committee

Resolution In Support of Restarting the Fast Flux Test Facility at Hanford [1]

WHEREAS, medical isotopes are increasingly being used in research and in providing new, cost-effective, cutting-edge technologies for the diagnosis and treatment of disease, including cancer, heart disease, and arthritis; and

WHEREAS, the United States is importing more than ninety percent of the reactor-produced medical isotopes currently used to save a significant number of the lives of our citizens; and

WHEREAS, market projections for utilization of medical isotopes for diagnosis and treatment show our country will need new production sources to assure a domestic supply to meet the increasing demand; and

WHEREAS, the Hanford Fast Flux Test Facility (FFTF) has unique capabilities for providing large quantities and a wide variety of high quality medical isotopes; and

WHEREAS, the FFTF was designed, constructed, and safely operated as a state of the art reactor with world class isotope production capabilities and is the newest, most sophisticated reactor in the U .S. Department of Energy complex and as such is an irreplaceable national asset; and

WHEREAS, the FFTF is presently being maintained in a stand-by mode;

NOW, THEREFORE BE IT RESOLVED, the Benton County Democratic Central Committee hereby encourage U.S. Department of Energy Secretary William Richardson to order the restarting of the FFTF.

[1] Adopted by Benton County Democratic Central Committee on October 20, 1999

Response to Commentor No. 2633

Commentor No. 2634: Robert O. Olson, Sr.

ROBERT O. OLSON, MD, FACOG
1478 E. KELLY RD. BELLINGHAM, WA. 98226
PHONE:(360)398-7153 FAX:(360)398-8094
email:drboolson@aol.com
29 August 2000

Secretary of Energy William Richardson
US Department of Energy
James Forrestal Building
1000 Independence Avenue, SW
Washington, DC 20585

Dear Mr. Richardson:

I am writing as a Physician and Public Health advocate to urge you to **not fund restarting of the Fast Flux Test Facility at Hanford Washington.** Studies clearly show that this technology is not necessary for medical isotope purposes.. **This facility needs all funding to be directed toward cleaning up that facility.** Cleaning the facility would create far more jobs for the area and would finally stop the pollution to the air, soil, and ground water. 2634-1 2634-2 2634-3

From a Medical standpoint, further testing and development for nuclear weapons or medical isotopes will serve no worthwhile purpose and will just further contaminate the Hanford area. **This is totally unacceptable.** Please review testimony of groups supporting no further funding and I trust you will come to the right decision on this matter. 2634-2

I shall be looking forward to your reply and thank you for your consideration.

Sincerely,

Robert O. Olson,Sr., MD

Response to Commentor No. 2634

2634-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2634-2: The only missions being considered by DOE are those analyzed in the NI PEIS, which are the production of isotopes for medical, research, and industrial uses; plutonium production for future NASA space exploration missions; and U.S. nuclear research and development needs for civilian application. None of the alternatives in the NI PEIS include defense missions and would not contribute to future weapons testing and development.

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.

2634-3: 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.

Commentor No. 2634: Robert O. Olson, Sr. (Cont'd)

Response to Commentor No. 2634

Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a 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 remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.

Socioeconomic impacts of the alternatives are discussed throughout Chapter 4 of Volume 1. The analysis shows that none of the alternatives would significantly impact direct and indirect jobs in the potentially affected areas.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

I SUPPORT THE SELECTION OF FFTF AS THE PREFERRED ALTERNATIVE TO MEET THE PRESSING UNITED STATES NEEDS FOR RESEARCH AND MEDICAL ISOTOPES.

2635-1

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): Spencer Marston

Organization:

Home/Organization Address (circle one):

City: Clifton Hts State: PA Zip Code: 19018

Telephone (optional):

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

2/00

2635-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 2636: Tom Clements Nuclear Control Institute

From: Tom Clements [mailto:clements@nci.org]
Sent: Thursday, September 28, 2000 2:41 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Cc: Brown, Colette
Subject: for NI PEIS

To Whom it Concerns:

The following facility which is discussed in a LANL news lease MUST be considered as part of DOE's NI PEIS. Exclusion of this facility and isotope production at Brookhaven National Laboratory in the final PEIS will taint the NEPA process.

Mention of isotopes in the news release underscores the need for the NI PEIS to present a list of all isotopes currently used and projected for use and which facilities currently produce them and which facilities could produce them in the future. All U.S. potential and actual production facilities much be included, not just FFTF, HFIR, and ATR.

2636-1

Tom Clements

Nuclear Control Institute

New facility will ensure steady supply of medical isotopes
Los Alamos National Laboratory

News Release

September 11, 2000

LOS ALAMOS, N.M., Sept. 11, 2000 __ To ensure that U.S. researchers have a steady supply of medical isotopes, the U.S. Department of Energy's Los Alamos National Laboratory is building a new Isotope Production Facility to replace an existing facility. Construction of the $16.5 million IPF began in February, and the project should be completed in June 2002.
Once operational, the IPF will support eight months of isotope production annually. Combining its output with similar isotope production capabilities at

Response to Commentor No. 2636

2636-1: DOE notes the commentor's views. The Isotope Production Facility IPF) at Los Alamos National Laboratory produces radioisotopes using the Los Alamos Neutron Science Center's (LANSCE) half-mile accelerator that delivers medium-energy protons. Among other isotopes, the IPF's three major products include germanium-68, strontium-82, and sodium-22. As a result of changing DOE missions, the production of radioisotopes at target area "A" of the LANSCE has been rendered inoperable. In order to replace the level of production lost due to this change, DOE is completing a new and more efficient IPF that would allow DOE to continue to produce most of these same isotopes in an effort to meet existing demand. As addressed in Section 2.6.1 of the NI PEIS, IPF at LANSCE was considered but dismissed from further evaluation because, although it can be used in tandem with the Brookhaven Linac Isotope Producer (BLIP) located at the Brookhaven National Laboratory to supply near-term isotope requirements, it is unlikely that these facilities could accomplish reliable, increased isotope production at the level needed to support projected needs.

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. As addressed in Section 2.6.1 of the NI PEIS, IPF at LANSCE was considered but dismissed from further evaluation because, although it can be used in tandem with the Brookhaven Linac Isotope Producer BLIP) located at the Brookhaven National Laboratory to supply near term isotope requirements, it is unlikely that these facilities could accomplish reliable, increased isotope production at the level needed to support projected needs.

For the purposes of analyses in the NI PEIS, a representative set of isotopes was selected on the basis of the recommendations of the Expert Panel, medical market forecasts, reviews of medical literature, and more than 100 types of ongoing clinical trials that use radioisotopes for the treatment of cancer and other diseases. These isotopes, which are

Commentor No. 2636: Tom Clement (Cont'd) Nuclear Control Institute

Brookhaven National Laboratory in New York will ensure doctors and researchers an adequate, year_round supply of accelerator_produced medical isotopes.

U.S. researchers use medical isotopes to perform 36,000 diagnostic procedures daily and 50,000 therapies annually, along with 100 million lab tests annually. DOE's Office of Isotopes for Medicine and Sciences estimates the annual value of these procedures to the medical industry at between $7 billion and $10 billion.

Los Alamos' Neutron Science Center Division and Chemistry Division have produced some of these medical isotopes, such as Strontium_82 and Germanium_68, at Technical Area 53 for more than 20 years under DOE's Isotope Production and Distribution Program, said Carol Burns, deputy director for C Division.

"The program is an essential element of the nation's overall health_care system, and Los Alamos' ability to deliver key medical isotopes to customers is a critical part of the DOE program," she added.

Researchers use radioisotopes in clinical trials; to diagnose and treat diseases such as cancer, epilepsy and coronary artery disease; to perform research and development of new pharmaceuticals; and in other medical research and treatment applications. Millions of patients would be adversely affected if medical isotopes weren't available.

In the past, targets were irradiated with LANSCE's half_mile_long linear accelerator, then shipped to a Chemistry Division facility at Technical Area 48 for processing. Los Alamos processes irradiated targets obtained from other sources worldwide as well.

Needed upgrades to LANSCE's facility and accelerator eventually will make it impossible for Los Alamos to continue using the currentisotope production facility. To avoid interruption of the nation's medical isotope supply and continue serving this important mission, DOE's Office of Nuclear Energy funded construction of the new Isotope Production Facility.

Response to Commentor No. 2636

comprised of both reactor- and accelerator- produced isotopes, are listed in Chapter 1, Volume 1 of the NI PEIS along with a brief description of their medical and/or industrial applications. These include research isotopes with currently limited availability, such as Copper-67, as well as commercial isotopes whose current application is inhibited by lack of availability or high cost, such as Palladium-103. However, the absence of any specific isotope from these tables should not be interpreted to mean that it could not be considered for production under the proposed action. DOE expects that the actual isotopes and specific amounts produced as a result of the proposed action would vary from year to year in response to the focus of clinical research and the specific market needs occurring at that time.

Commentor No. 2636: Tom Clement (Cont'd) Nuclear Control Institute

The new facility, also located at TA_53, will irradiate a wide range of materials underground, including rubidium chloride, gallium and other targets, using a portion of the LANSCE proton beam. The irradiated targets will be raised to ground level via a specially designed transport system and placed in certified shipping containers. Los Alamos then will ship the targets to TA_48 for isotope processing and recovery via chemical processes.

The new building is a collaborative effort among Los Alamos, Michael S. Rich Contractors, Inc., J.B. Henderson Construction Co. and Merrick and Company. Los Alamos' Design Engineering Group and Accelerator Maintenance and Development Group designed the special beam line and target handling equipment for the IPF, in collaboration with experts inside and outside the Laboratory.

Richard Heaton of Los Alamos' Nuclear and Radiochemistry Group is the IPF project manager, and Armando Cordova of Los Alamos' Project Management Division is the engineering and construction project leader.

{http://www.lanl.gov} Los Alamos National Laboratory is operated by the University of California for the U.S. Department of Energy.

{http://ext.lanl.gov/worldview/news/releases/lansce.shtml} More news releases</underline><color><param>0100,0100,0100</param> from the Los Alamos Neutron Science Center (LANSCE)

http://www.lanl.gov/worldview/news/releases/}News releases

http://www.lanl.gov/orgs/pa/} Public

Response to Commentor No. 2636

Commentor No. 3462: Edward Deutsch University of Missouri Research Reactor

Crockett, Tamara R.

From: Edward Deutsch [eddeutsch@earthlink.net]
Sent: Monday, September 18, 2000 8:59 PM
To: www.Nuclear.Infrastructure-PEIS@hq.doe.gov
Cc: Butler, Ralph; Tamara Crockett; Crockett, Tamara R.
Subject: FFTF Statement

STATEMENT

Dr. Edward Deutsch

Director

University of Missouri Research Reactor

Columbia, Missouri

September 18, 2000

I am pleased to present the following statement regarding the programmatic environmental impact statement for the Fast Flux Test Facility. To provide context for my comments, I will first briefly describe my own background. I have extensive experience in the research, development and clinical use of medical isotopes. Prior to joining MURR as Director in 1997, I spent nearly nine years in the nuclear medicine and isotope industry as a Vice President for Research at a major U.S. radiopharmaceutical company. Prior to that, I spent more than twenty years in academic institutions where I and my students conducted research on isotopes of medical benefit. I personally know very well the medical isotope marketplace, including how isotopes are used for both diagnosing and treating human diseases.

Response to Commentor No. 3462

3462-1: 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.

The United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. Although other 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 isotopes are not generally purchased in large-enough quantities to make their production financially attractive to private industry. However, supplies of many research isotopes are not readily available from existing domestic or foreign sources, causing a number of medical research programs to be terminated, deferred, or seriously delayed. Under the NI PEIS proposed action and consistent with its mandates under the Atomic Energy Act, DOE would enhance its existing nuclear facility infrastructure to, among other things, more effectively support production of radioisotopes for medical applications and research. DOE's intent is to complement commercial sector capabilities to ensure that a reliable supply of isotopes is available in the U.S. to meet future demand, and to encourage the commercial sector to privatize the production of isotopes that have established applications to a level that would support commercial ventures.

Commentor No. 3462: Edward Deutsch (Cont'd) University of Missouri Research Reactor

What I do not know, and do not believe anybody to know, is the future of the isotope industry. Prior to the advent of financial reimbursement for positron emission tomography (PET), for example, PET appeared destined to remain a research tool to be used only in the most advanced medical schools. Now, with reimbursement, it is rapidly becoming the tool of choice for diagnosing cancer in community hospitals around the nation. Similarly, several market studies, including one by Frost and Sullivan, forecast a boom in the use of radiopharmaceuticals for cancer therapy and other medical applications. Although some strides have been made in this area, including advances at my own institution, these advances have not had as a great an economic or clinical benefit as hoped. The market demand for radioisotopes has simply not met the expectations of some of these studies. I am very skeptical , therefore, of market studies that promise a several hundred percent increase in future isotope sales. I am especially skeptical when these studies are used to justify investments of tens of millions of dollars in infrastructure aimed at isotope production and processing. **3462-1**

From the perspective of an organization that sells in isotopes to both academic and commercial customers, I do not foresee a huge near- or mid-term surge in demand for isotope production and processing for biomedical applications. Furthermore, there already exists substantial domestic capacity to meet any rationally foreseen demand. A relatively small federal investment into existing facilities, rather than a multi-million dollar capital investment, could much better serve the needs of domestic isotope customers.

My own organization, the University of Missouri's Research Reactor (MURR), for example, is a major player in both domestic and international isotope markets. MURR makes approximately 2,000 radioisotope shipments annually and thereby reaps several millions of dollars in sales each year. We supply the bulk of the world's phosphorous-32 and we are developing, either alone or in collaboration with private companies, new cancer therapeutics based on radiopharmaceuticals. MURR has three FDA-approved radiopharmaceuticals currently in the marketplace, and several in development. MURR's entire budget, however, is less than $10 million annually, of which it receives very little support from the federal sector. MURR could do much more with small infusions of federal resources. **3462-2**

Despite its successes, however, either the marketplace or politics have kept private companies and the federal government from investing in MURR's infrastructure. My bottom line is: if MURR will not be able to make the next large leap in radiopharmaceutical production, processing, and distribution, then federal facilities, in the absence of significant subsidies, also will not be able to make such a jump. This is especially true given that MURR's overhead costs are a fraction of those at federal facilities, and our operating schedule is an enviable 6.5 days per week each and every week of the year.

MURR has safely produced and distributed radioisotopes nationally and internationally for over 30 years. From 1968 to 1983, MURR was a major supplier of technecium-99 for Mallinckrodt, Inc. and Medi+Physics, Inc. when this radioisotope was produced by neutron irradiation of molybdenum. MURR radioisotope production escalated in 1974 when the reactor was upgraded to 10MW. Because of demand for more continuous research capability and radioisotopes supply, the reactor went to an operating schedule of 155 hours/week in 1978. Since that time the reactor has operated at full power over 90% of all clock hours and greater than 100% of scheduled hours. **3462-3**

In addition, MURR is an integral part of the University of Missouri's medical R&D, health care delivery, and science and technology education programs. MURR is a multidisciplinary research center that serves the School of Medicine, College of Veterinary Medicine, College of Agriculture,

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SEP-19-2000 10:31 REACTOR FRONT OFFICE 573 882 6360 P.03

Response to Commentor No. 3462

Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term (less than 5 years). 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.

3462-2: DOE acknowledges that while some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the "NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000," it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without disturbing the existing missions of these facilities. As described in Table 2-4 of Volume 1 of the NI PEIS, the research reactor at the University of Missouri lacks sufficient neutron production capacity to support the proposed action without impacting existing missions.

3462-3: DOE notes the commentor's views and the University of Missouri Research Reactor's (MURR's) contributions to domestic isotope production. As described in Volume 1, Section 2.6 of the NI PEIS, DOE considered the use of MURR for supporting the proposed action, but subsequently dismissed it from further consideration. This was based on DOE's understanding that MURR could not likely accomplish reliable, increased production of isotopes at levels necessary to support projected needs without disturbing the existing missions of the facility.

Commentor No. 3462: Edward Deutsch (Cont'd)
University of Missouri Research Reactor

College of Engineering, and the College of Arts and Science.

Specific to this statement, MURR is instrumental in: 1) developing and producing isotopes for use in cancer research and treatment; 2) developing and producing isotopes for cardiovascular research; and 3) providing a stable supply of radio- and stable-isotopes for biomedical applications. In addition, MURR is active in the commercialization of University technology via the creation of public-private partnerships.

MURR is the largest, most powerful university research reactor in the nation. It has an extremely consistent operations record that has provided unparalleled access for national and international researchers. Preparations are underway for renewal of the facility's Nuclear Regulatory Commission operating license. In addition, MURR is in the planning stages for a $20 million building expansion aimed at providing state-of-the-art biomedical research laboratories. If managed to meet its full potential, MURR could amply provide unique resources and services aimed at radiopharmaceutical research, production and processing.

MURR is exploring collaborative partnerships with several DOE national laboratories in areas of mutual benefit. Coordinating MURR's research reactor capabilities, for example, with Los Alamos National Laboratory's accelerator-produced isotopes program seems to offer obvious benefits. Prior to making substantial, multi-year programmatic commitments, I urge that the Department of Energy consider fully all existing domestic isotope production and processing resources, such as MURR, and potential relationships that would obviate the need for substantial investment of federal resources in facilities such as FFTF.

Thank you.

3462-3 (Cont'd)

Response to Commentor No. 3462