

## AR TARGET SHEET

The following document was too large to scan as one unit, therefore, it has been broken down into sections.

EDMC#: 0059236

SECTION: 3 OF 5

DOCUMENT #:

TITLE: Comment and Response Document  
To Proposed TPA Modifications  
Regarding Deactivation of FFTF

0059236  
-3065

216

Piippo, Robert E

From: Kelly Johnson [misconduct1983@aol.com]  
Sent: Sunday, September 15, 2002 3:28 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: Please don't shut down FFTF

Dear Mr. Al Farabee (U.S. Department of Energy)

May I ask that you please NOT shut down the Fast Flux Test Facility in Eastern Washington state.

I think this is a very bad idea and should not be done.

There is too much good that can be done with this facility that will be lost if it is closed. Plus, my Dad wouldn't have a job.

Thank you very much.

Piippo, Robert E

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From: Chapin, Douglas H  
Sent: Thursday, September 12, 2002 3:41 PM  
To: Piippo, Robert E; Wise, Barbara K  
Cc: Dagan, Ellen B  
Subject: 9/11/02 Mike Johnson Email: "Please don't shut down FFTF"

-----Original Message-----

From: Almquist, Rodney A  
Sent: Thursday, September 12, 2002 2:18 PM  
To: Chapin, Douglas H  
Subject: FW: Please don't shut down FFTF

Rod Almquist  
FFTF Project Office  
(509) 376-2171

-----Original Message-----

From: Mike Johnson [mailto:mjohn48@usa.com]  
Sent: Wednesday, September 11, 2002 10:11 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: Please don't shut down FFTF

Dear Mr. O.A. Farabee (U.S. Department of Energy)

May I ask that you please NOT shut down the Fast Flux Test Facility in Eastern Washington state.

I think this is a very bad idea and should not be done.

There is too much good that can be done with this facility that will be lost if it is closed.

Thank you very much.

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**FFTF TPA Draft Change Package**  
Public Comment Period August 28 – October 14, 2002

**Comment Source:** Richland Public Meeting (October 10, 2002)  
**Commenter:** Ralph Johnson

**Comment:** I have no prepared statement, but I've been a student of what's going on here, both politically and technically, as well as, locally and I guess it reminds me almost of when you look at the jury being humanity or the jury being management effectiveness, we're at a state where it's almost like the Nuremberg Trials. And that means that it is very serious consequences. And so if we're going to have a Nuremberg Trial, who do you put on trial? Who can do what with what? And I think, ya know you always want to save face and do what's right and I think the problem here is mission. It was mentioned earlier that the Atomic Energy Act requires DOE to do certain isotope research. So the mission is not let's dump Hanford in the garbage can, the mission is let's find a new venture, new use for the capital investments we have. And the numbers are pretty wild. But then again I think we as taxpayers have probably close to two billion dollars investment in the FFTF and then if you throw in FMEF, which is next door, there's probably another billion. So you've got a three billion dollar investment here and with that kind of capital investment we're going to spend 1-2 billion dollars and even more, because there is sites waste issues involved to get rid of something that's that huge a capital investment. And the people here have presented charts that show there is a potential income that could reach as high as a couple billion dollars in probably 2007. I think it showed on the chart, so it makes no sense whatsoever to throw everything in the trash can, so I'd suggest the issue be adjusted accordingly. And so I guess that's about all I've got to say. I think well let's see, who would you put on trial? First of all I think DOE who has made the initial decision but that could be corrected by changing the purpose. Then the other person I'd hold accountable and I'd like to hear from her is our State Attorney General, who has two responsibilities, one to be the legal representative of the governments within the state but she also has a consumer protection function which means she has to look after our interests which includes our protection for some resistance against cancer. Thank you.

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Piippo, Robert E

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From: Farabee, Oliver A (Al)  
Sent: Monday, September 23, 2002 4:59 PM  
To: Piippo, Robert E  
Subject: FW: I am opposed to the TPA change package for accelerating destruction of FFTF

-----Original Message-----

From: Janice Jolly [mailto:janicej@yahoo.com]  
Sent: Monday, September 23, 2002 12:59 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

The Community Plan will not detract from clean-up budgets, will save the taxpayers over \$1 billion, AND will save millions of lives in the war on cancer.

The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple. Please save the Hanford PLant!!!!

Respectfully submitted:

220

Piippo, Robert E

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From: Connie Kelliher [conniek@iam751.org]  
Sent: Tuesday, September 24, 2002 1:13 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

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Respectfully submitted:

Piippo, Robert E

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From: Michael D. Kent RRPT/ss [mdkent11k@hotmail.com]  
ent: Thursday, September 26, 2002 6:39 PM  
.o: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

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Respectfully submitted:

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***FFTF TPA Draft Change Package***  
Public Comment Period August 28 – October 14, 2002

***Comment Source:*** Seattle Public Meeting (September 26, 2002)

***Commenter:*** David Kerlick

***Comment:*** HI , I'm Dave Kerlick, I'm a private citizen, but I am a physicist. My thesis advisors was one of the principals at Hanford during WWII. It's a white elephant. It should have been closed down in 1995. There should be no delay. Delay is very costly. There are better machines for many of the missions. Using the FFTF is the most expensive, costly and dangerous thing that people could do. We need to do it as fast as people can be hired. Clean it up. Do it right, consistent with worker safety. I think 2007 is a very achievable goal. And the money should that is saved from that, should go to continuing and finally finishing the cleanup, And that's it.

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Piippo, Robert E

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From: Emil Kerimbaev [kerimbaev@cs.com]  
Sent: Wednesday, September 25, 2002 7:07 AM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

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Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

Piippo, Robert E

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From: Val G. Kerrigan [kerrigans@erols.com]  
Sent: Thursday, September 26, 2002 5:42 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup. This resource is needed!! Continue its operation!!

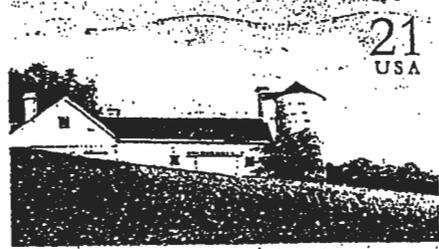
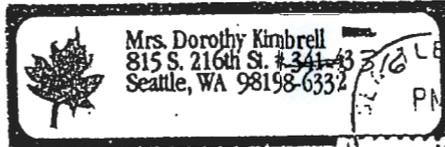
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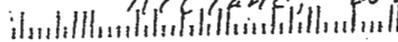
Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

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OA(A1) Farabee  
U.S. Dept. of Energy  
Richland OP Office  
P.O. Box 550 (N2-36)  
Richland, Wa. 99352



8/30/02

Dear Mr. Farabee,

I heartily favor the complete  
shut down of the F.F.T.F.

Every little step we take  
toward eliminating nuclear war  
is to the good. - Thank you!

Sincerely,

Dorothy Kimbrell

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**FFTF TPA Draft Change Package**  
Public Comment Period August 28 – October 14, 2002

**Comment Source:** Richland Public Meeting (October 10, 2002)  
**Commenter:** Betty King

**Comment:** I'm Betty King. I organized a Engineering Reference Library for the Engineer's building, the FFTF. We had two Japanese working with us full time, and one German full time when we built the reactor. The two Japanese returned to northern Japan and built two breeder reactors in northern Japan, and Dr. Meyer returned to Germany and built a breeder reactor in Germany. We shut down things forever and we never did reopen it. The Japanese would really buy the FFTF and the reason the people are fighting to save the FFTF its because it's one of the best built reactors in the whole world There's enough concrete under that dome floor to pave a road all the way to Seattle. And Leon who was just speaking here he was on the Architectural committee with the building of the FFTF so he knows how well built it is. We had Dan Garland who was the Quality Assurance Manager, one of the top Quality Assurance managers in the whole world and it's such a well-built reactor. That's why people are fighting to save it. Warren G. Magnuson was the Senate Appropriations Chairman who fought to build the FFTF. His administrative assistant was Norm Dicks. And today Norm Dicks is a Congressman from the Seattle area. He has said that to save the FFTF we have to have a joint purpose -- Ya know, producing tritium and medical radioisotopes because it is such a huge reactor. It doesn't have to be government funded. We could have the Japanese or other private people come in and use this reactor. It is a shame to tear down one of the best-built reactors in the whole world. But in the reality of today you have the Democratic Heart of America joining with the Republican 30,000 Mormans who moved in for the Vit plant to keep the waste and cleanup program going on for 50 years. And the Bush administration does not have enough money to fund both the Vit plant and FFTF and I think that is why you are deciding to shut down the FFTF, because you want money just for the Vit plant and the cleanup. But, if you don't want to spend government money, why can't we have private money save one of the best built reactors in the world?

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Piippo, Robert E

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From: William.P.Kirk@aqua.siteprotect.com  
Sent: Tuesday, September 24, 2002 5:47 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF. In addition to the taxpayer cost, which I resent, this is a wholly unjustified decision made under the anti-nuclear previous administration.

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

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Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

JOHN A. KITZHABER, M.D.  
GOVERNOR



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October 9, 2002

The Honorable Spencer Abraham  
Secretary of Energy  
U.S. Department of Energy  
1000 Independence Avenue, S.W.  
Washington DC 20585

Dear Secretary Abraham:

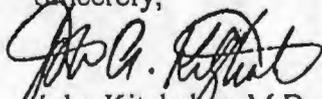
I am writing to reiterate my opposition to restart of the Fast Flux Test Facility at the Hanford Site in Richland, Washington and to express my strong support for the Department of Energy's work to implement your final decision to shut down that facility. I am pleased that proposed changes to the Tri-Party Agreement will establish enforceable deadlines for the work and completion of the shutdown.

The Fast Flux Test Facility has diverted attention and resources from the Department of Energy's central mission at Hanford, protecting people and the environment by cleaning up the extensive soil and groundwater contamination at the site, for far too long. Repeated reviews conducted by the Department of Energy have concluded that there is no viable use for the facility. The reviews have reinforced the State of Oregon's long-held position opposing the restart of the Fast Flux Test Facility.

The recent attempt by some to justify restart of the Fast Flux Test Facility for production of medical isotopes does not pass muster. As a physician, I support the use of medical isotopes for cancer treatment and for other diagnostic and therapeutic purposes. However, the Fast Flux Test Facility was not designed to produce medical isotopes. The Department of Energy's studies have shown repeatedly that other facilities in the United States and Canada are better suited for producing medical isotopes.

I urge the Department of Energy to proceed with permanent shutdown, deactivation and decontamination of the Fast Flux Test Facility as expeditiously as possible.

Sincerely,

  
John Kitzhaber, M.D.

JAK/NR/sm

c: Keith Klein, Richland Operations Office  
A.O. (Al) Farabee, Richland Operations Office  
Governor Gary Locke  
Laura Cusack, Washington Department of Ecology  
Oregon Delegation

STATE CAPITOL, SALEM 97301-4047 (503) 378-3111 FAX (503) 378-4863 TTY (503) 378-4859

WWW.GOVERNOR.STATE.OR.US

Oregon

Office of Energy  
625 Marion St. NE, Suite 1  
Salem, OR 97301-3742

FORWARDING SERVICE REQUESTED



J.A. AL FARABEE  
U.S. DEPARTMENT OF ENERGY  
RICHLAND OPERATIONS OFFICE  
PO BOX 550 (N2-36)  
RICHLAND, WA 99352

99352+0550



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Piippo, Robert E

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om: Kyle.Kleinhans@aqua.siteprotect.com  
nt: Wednesday, September 25, 2002 4:49 AM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

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Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

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# Fast Flux Test Facility

## Deactivation and Decommissioning

### Expert Review Panel



### Report and Recommendations

- Clegg Crawford
- Paul Lorenzini
- Michel Berte
- William Heine
- Michael Lackey
- Andrew Kadak
- Todd Smith

July 26, 2002

*From Paul  
At Risk  
10/10/02  
This accelerator  
needs to be  
seriously considered*

**Introduction:**

The Expert Review Panel (ERP) was convened at the request of Fluor Hanford to identify possible improvements in cost and schedule of the planned deactivation and decommissioning of the Fast Flux Test Facility. The make up of the group included people with commercial reactor decommissioning experience, experience with liquid sodium reactors and expertise in DOE facility operations. The ERP spent a week getting briefed by staff about the proposed deactivation plans, schedules and costs. The ERP met with senior Fluor and DOE management as well as a meeting with plant staff without management present. The ERP had a technical tour of the plant and support facilities to gain an understanding of the equipment and plant configuration to better appreciate the deactivation and decommissioning challenges that will need to be addressed. The ERP reviewed detailed deactivation plans, schedules, cost estimates, plant procedures, and processes that need to be followed, safety analyses, cost control systems, radiological surveys, organizational charts, present staffing, functions, and work control packages for different deactivation and decommissioning scenarios. The committee reviewed in some detail the fuel offloading plans, sodium drain down plans and plant shutdown plans.

We were grateful for the quality of the presentations and the forthright responses to our inquiries by the FFTF team. The purpose of this report is to summarize the findings of the FFTF Expert Review Panel.

**Observations and Recommendations:**

In making our recommendations, we would take note of several strengths which form an important context for our observations and recommendations:

- There is a depth of committed sodium experience that needs to be fully utilized before it is lost. We noted that the average age of the work force was 47 years old. The longer the key steps of dealing with removing the sodium in the systems is delayed the more difficult it will be to find qualified people to perform these tasks world wide.
- There is an obvious commitment to excellence in operations. Plant staff have achieved an enviable operating record and are proud of their accomplishments – this now needs to be refocused on excellence in project management and Decommissioning;
- The use of mock-ups has been effectively employed and will be a necessity to move forward with deactivation and Decommissioning;
- The plant safety record is commendable and will provide a strong safety culture necessary for safe deactivation and Decommissioning activities.
- The ERP believes the formation of the Fix It Now (FIN) team is an example of the aggressive action-oriented approach necessary for successful decommissioning.

Based upon our review and in the context of these strengths, we offer the following observations and recommendations. The recommendations and the analysis often refer to a baseline schedule and improvements which can be made with respect to that schedule. The Panel was shown

several schedules, both during the sessions and in the advanced material sent for our review. For purposes of clarity, the baseline schedules which form the basis of these recommendations showed completion of deactivation in February of 2011 and did not include removal of residual sodium. Recommendations relating to completion of D&D are not tied to any particular baseline schedule.

#### **1.0 A Baseline Master Plan for the Complete Deactivation and Decommissioning of FFTF is Needed**

The Review Team believes there is an urgent need for Fluor Hanford to take the lead and develop a complete master plan reflecting their recommended approach for the complete Deactivation and Decommissioning of FFTF. The plan should cover all phases and include a total cost estimate and schedule reflecting the contractor's view of the best way to proceed with FFTF Deactivation and Decommissioning. It should not be constrained by annual DOE funding and should reflect the contractor's view of the lowest cost option for safely completing both efforts - within the shortest time frame, consistent with governing regulatory requirements and safe practices. It should assume all Deactivation and Decommissioning efforts which can be accomplished within the current scope of the current contract begin immediately. It would cover all phases of these efforts including the contractor's proposed end state of the facility and when it would be achieved.

This plan would form the basis for on-going discussions with both DOE and all stakeholder groups, including discussions concerning how all CERCLA and other regulatory requirements will be met. Part of this process would be to develop a clear CERCLA plan for approval. Moreover, with such a baseline plan establishing a context for such discussions, the impact on total cost and/or schedule of alternative approaches would be easily identified. The ERP believes that Fluor Hanford should take the lead in convincing DOE and other stakeholders that the plan is the best way to deactivate and decommission the FFTF.

#### **1.1 Deactivation Plan**

The Deactivation plan reviewed by the ERP covered three major activities - fuel removal, sodium draining and shutting down systems. The completion schedule for this phase is shown to be February, 2011. It assumed a prolonged period of Surveillance and Maintenance followed by an undefined closure, either to a greenfield condition, or entombment of facilities which would exist at that time. It is important for Fluor Hanford to view the Deactivation and Decommissioning project, schedule and cost as if they made up a fixed price contract and act accordingly. Our recommendations with regard to each of the three major activities within the deactivation plan follow:

##### **1.1.1 Fuel Removal**

The total Deactivation of the FFTF is constrained by requirements for sodium washing of all fuel elements prior to removal. Because these operations are limited by existing equipment

which was not designed for Deactivation operations, these operations will be slow and time-consuming. If quantum improvements are to be achieved, they will require a relaxation of the requirement for fuel washing. The Panel pressed on this issue and determined that it was not viable. Sodium washing is required to avoid the need for hazardous material permitting for any subsequent disposal of FFTF fuel, as well as assurance that sodium corrosion will not compromise the integrity of the fuel. The Panel considered other facilities and believe further consideration should be given to exploiting the MASF facility, but was advised that this facility would have its own limitations requiring new safety documentation and equipment modifications to make full use of it. Nevertheless, we believe considerable shortening of the schedule for fuel removal and washing is possible. At least two years could be saved by enhancements to the existing process and washing facilities. We specifically recommend the following:

1. Optimize the Fuel Off-Loading Schedule

Panel reviews of the schedule for fuel offloading show an optimum plan of 8 critical path days per cask (10 days total start to finish). The schedule provided to the ERP by the staff assumed 26 critical path days per cask used in the plan for the first 12 casks, and 19 critical path days per cask for the remaining 27 casks. The Panel does not believe 8 critical path days per cask is a sustainable target since it assumes 100% reliability at every stage although the staff has achieved this performance in the past. Making the same basic assumptions of the staff regarding equipment down time, maintenance windows, T-3 cask shipments, Disposable Solid Waste Cask (DSWC) operations and ACN-1 processing, the ERP believes by going to a 24-7 operation and overlapping non-critical path activities in the fuel offloading cycle, the critical path off-loading process can be performed in less than 14 days per cask and the entire off-load process can be performed in less than 2 ½ years.

The ERP recommends a more realistic approach to the overall schedule as shown above. Overly conservative/non-optimal scheduling can lead to a reduced sense of urgency for near critical path activities and make a longer schedule become a self-fulfilling prophesy (example: ISCs may not be available when needed).

2. Parallel IEM Operations

Both the above schedule and the FFTF schedule assume ACN-1 disassembly (and other fuel disassembly tasks) is performed as a critical path activity in series with fuel washing. The Panel believes these IEM activities can most likely be performed in parallel with the fuel washing operations saving an additional 6 months off of the 2 ½ year critical path schedule as discussed above.

3. Consider other fuel washing techniques

French experience has proven the use of other washing techniques will improve the overall productivity of fuel washing. The French have demonstrated that they can wash a fuel assembly in less than 3 hours compared to the FFTF schedule which shows only 1 fuel assembly washed in a 24 hour period. At Super Phenix, the fuel washing process is based on injection within the washing pit of water mist and CO<sub>2</sub> through nozzles, while

at the FFTF water vapor and argon are used. The quantity of residual sodium in the subassemblies to be washed is comparable for the two cases (300 gm at FFTF, 300 to 500 gm at Super Phenix). In both cases, the water mist/vapor sequence is followed by three rinsing and one drying sequence. Although some additional time may be required at FFTF for drying the fuel in preparation for dry storage, the Panel recommends that the reasons for such a significant difference in duration of the washing process between the FFTF and the Super Phenix case should be reviewed. In addition, the Panel believes that the feasibility of a second wash station should be evaluated.

4. Accelerate the procurement of the Interim Storage Casks (ISC's).

A choke point in the fuel removal and washing cycle is the availability of ISC's. If the schedule is accelerated as proposed, the problem becomes more severe. Even so, procurement of additional ISC's is not scheduled to begin until October of 2003. The Panel believes this should be accelerated by at least a full year and the cask fabrication expedited.

5. Alternate Cask Options

The Panel recommends that the staff identify if there are existing licensed casks available to meet the FFTF needs. (e.g. Ft. St. Vrain)

6. Critical Path Improvements within the IEM

Evaluate the possibility of moving more storage racks into the IEM so that the washing is not interrupted. It is recommended that a special drying rack be installed to free up the washing facility. Additionally, a clean CCC should be installed to provide for additional storage space. It should be possible to provide the IEM with a sufficient storage space for clean and contaminated fuel assemblies to avoid the potential for congestion of fuel movement vehicles.

7. Install another water filter in the system to allow for operation while one filter is replaced reducing critical path time by at least 16 hours per cask.

8. Evaluate the possibilities to increase motor speeds of BLTC and other transporters.

9. The Panel is very concerned about single point failures on the critical path of fuel removal. Present estimates assume a 70% availability of fuel handling equipment. Programs should be put in place to reduce single point failures or to plan for repair of possible failures. For example, consider developing a new fuel handling transfer bell or something similar that can transfer spent fuel in one operation to improve speed and reliability.

10. Conduct thorough inspections and overhauls of fuel handling equipment to improve overall reliability prior to initiating major fuel movements. Conduct a failure modes and effects analysis on the fuel handling equipment if not already done to identify vulnerabilities. Conduct a peer review on equipment readiness.

### 1.1.3 Balance of Plant Shutdown

Our review of the plan and schedule for deactivation of the balance of plant led us to believe the schedule could be shortened by up to two years. This would mostly be achieved by more aggressively completing deactivation operations in parallel and earlier in the cycle – deactivating and removing systems as soon as they are no longer needed. Comments from plant personnel suggest they agree with this assessment. Moreover we believe that shutting these systems down early and contracting/isolating plant systems will send an important message to plant personnel. Examples of the type of effort we believe should be considered are provided below:

1. Review all essential systems necessary to maintain basic functions to keep sodium hot until draining. This may require some new equipment/systems and plant modifications to simplify and reduce the number of operating systems. (example – a new smaller control room and simpler sodium heating system).
2. Once sodium has been drained, consider using construction power and going “cold and dark” to reduce worker risk and to expedite the shutdown and removal of unnecessary plant systems. Maine Yankee is using this process.

~~In summary, we believe that shortening the fuel removal by at least 2 years and shortening the deactivation of the balance of plant systems by up to two years will provide a realistic deactivation end date of December 2007. In addition this date, which will save 4 years in the deactivation process, appears to be similar to the schedule presented in the Fast Flux Test Facility Project Management Plan (HNF-SD-FF-SSP-004, Rev. 4) dated May 24, 2001.~~

### 1.2 Completion of Decommissioning – Definition of the “End State”

In the base line master plan, we believe, as previously stated, that the contractor should propose an end state which would achieve the safe Decommissioning of the FFTF in the shortest time and lowest cost consistent with regulatory requirements and safe operating practices. While the Panel did not engage in detailed reviews, our belief is that entombment immediately following Deactivation of the plant offers the best alternative for achieving this goal. This view is based on the following: (1) the 400 Area is sufficiently isolated from the Columbia River to make entombment viable; (2) Hanford as a site already has the on-going surveillance and technical capability to support an entombment option, (3) entombment does not measurably add to the site radioactive contamination loading; and (4) entombment offers the lowest cost option for early Decommissioning of the FFTF site.

Broadly, we believe the contractor should target an overall plan that achieves deactivation and Decommissioning using the entombment approach of the FFTF Plant by 2011 at a total cost at less than of approximately \$670 million. This rough estimate is based on taking the entombment numbers from the February 22, 2002 presentation to DOE (\$810 Million – completion date 2019) and removing one half of the hotel loads due to the new completion date resulting in a total cost estimate of \$670 million. This estimate includes \$320 million for

deactivation including residual sodium removal. The entombment option assumes that buildings on the site are removed with the reactor entombed in place. This is consistent with costs for commercial decommissioning efforts, appears to be consistent with a recent briefing given to DOE on February 22, 2002 and should be a reasonable target for the FFTF.

In making this recommendation, we identified a number of specific practices which would help to achieve a shorter schedule. We have not attempted to quantify the benefits from these recommendations, but believe collectively they have the potential to significantly improve overall cost and schedule performance.

## 2.0 FFTF Culture and Work Practices

It is the Review Panel's observation that the FFTF culture is still an operating mode culture. All decommissioning projects go through this phase and the longer it takes to transition to decommissioning culture and mission, the longer it will take to decommission the plant efficiently. It is recommended that a review be conducted of the resources that are needed for decommissioning and the processes in place that need to be modified to allow for the transition to a decommissioning environment. This may result in reposting of jobs and hiring new talent for the mission ahead. It will also change engineering and work practices procedures reflecting the safety significance of the activities.

## 2.1 Changes Required to Shift from an Operating to a D&D Mode.

1. Outside Decommissioning experience needs to be acquired as part of the in-house staff.
2. Restructure to a deactivation and decommissioning project organization with focus on how to accomplish all Decommissioning tasks. See Attachment 1.
3. Strong project managers need to be brought into the decommissioning organization.
4. The use of configuration management and quality practices geared to an operating facility need to be modified. Adapt configuration control requirements to the needs of a D&D operation.

Both Maine Yankee and PGE are available as examples of commercial facilities that have made these adjustments. Plant staff are encouraged to review and adopt practices at these facilities. This may require making FFTF an island on the Hanford site.

5. Efforts to D&D plant equipment and facilities that are no longer needed should be pursued immediately.

Procedures for plant and equipment abandonment should be incorporated into day-to-day practices and work begun immediately where appropriate.

6. Radiation surveys should be initiated as required for D&D efforts.

Current surveys are geared to health physics practices for operating facilities. A detailed site characterization survey would establish a baseline for future operations and provide necessary data for planning future D&D activities. Such surveys do not now exist and immediate efforts should be initiated to develop them. As an example, measurements should be taken of all contaminated or activated areas such as the reactor vessel, cold traps, hot cell areas, etc.

2.2 An aspect of this shift is adopting a greater sense of urgency and goal-oriented effort aimed at completing the deactivation and Decommissioning activities

The Panel noted a consistent mind set that, for want of a better description, lacked a "bias for action", the kind of "can-do" attitude that will be essential for timely completion of this effort. This was pervasive throughout the discussions - the following examples are offered to elaborate on the Panel's concerns:

1. During several discussions NEPA implementation issues were identified as barriers to moving forward with particular options. The Panel reacted to this by recommending ways the NEPA implementation issues might be addressed. After some intense discussions, it became apparent that NEPA implementation was not a significant constraint after all. The discussion itself, however, was striking in that it was illustrative of a mind-set that thinks in terms of barriers rather than in terms of what can be done and why superficial impediments do not need to block efforts to complete tasks.

2. The current deactivation and D&D plan is serial in its approach. Many of the basic decontamination and dismantling operations, for example, are not being pursued pending completion of a final approved plan. Yet the Panel believes much of this work can be started immediately in the deactivation phase without a final plan, with adjustments being made as necessary once a final decommissioning plan is approved. The Maine Yankee experience was offered as a commercial example of precisely this approach - in that case, initial dismantling operations were well underway even though the final plan was not approved, a plan which was eventually disapproved. The impact of disapproval required some adjustment, but did not invalidate the efforts that had already been completed.

3. At an even higher level, as already noted, the Panel was advised that DOE has not established any Fluor Award Fee goals for Deactivation and Decommissioning during the current period because a TPA has not been finalized. The impact of this is a reduced level of focus on D&D at FFTF within the contractor operation because it will not affect the fee for the period. The simple expedient of placing a priority on D&D activities and identifying those which could be accomplished today has apparently not been given attention because the final plan is not in place.

4. Develop a mission/vision statement for the FFTF deactivation and decommissioning.

5. What the Panel would like to suggest to management is that they press for how staff can accomplish objectives and not why they can't.

3. Incentive arrangements with key staff are necessary to generate the kind of motivation for achieving aggressive D&D schedule and cost targets. These arrangements should both provide financial bonuses for achieving performance targets, they should also provide incentives for key staff with sodium operating experience critical to FFTF D&D to remain on the project.
4. Both DOE and the contractor should engage in mutual discussions to explore creative contracting schemes which would motivate the staff and key personnel to find ways to more creatively address problem issues and achieve D&D goals beyond those which would normally be associated with incentive arrangements. Other decommissioning operations should provide ample examples where such schemes have proven valuable to both client and contractor. They seem especially appropriate given the obvious problem that completion of D&D eliminates employment for those involved.

#### 5.0 More aggressive efforts are needed to remove self-imposed constraints on operations.

The ERP found during the interviews with plant staff that their perception was that site wide procedures are impacting productivity. The observation was made that since Fluor Hanford took over operations the size and complexity of procedures have doubled overwhelming plant staff. The plant staff feels that their existing procedures to handle safety related and normal site activities were acceptable as demonstrated by over 20 years of operation. It is recommended that a team be formed to address these issues with management.

#### 6.0 Bench-marking of costs is needed

Once the detailed bottoms up deactivation and decommissioning plan, schedule and cost estimate is prepared, outside contractors who have been involved in decommissioning processes should be retained to review the plan, cost and schedule.

#### 7.0 Implementation Suggestions

- X 1. Take dramatic visible action to show that the plant is in a new mode. Removal of the closed loop cooling towers would send a message to plant staff that the project is focused on deactivation and decommissioning.
2. Push for a decision on availability of spent fuel storage at Hanford CSB. (could save money on new casks).
3. Reduce hotel loads as quickly as possible
- X 4. Spend any underruns to accomplish deactivation tasks early.
- X 5. Start preparing special fuel assemblies for packaging and shipment.

## Changes in Work Processes and Procedures

1. Assign a team of FFTF staff to spend a period of time at active decommissioning plants to learn about processes, procedures, work practices and challenges of decommissioning commercial plants. These lessons should be the basis for improved practices at FFTF.
2. It is the intent of these visits to transfer commercial practices to FFTF. It will be critical that senior management support these initiatives.
3. Modify configuration control procedures and eliminate FSAR and replace with decommissioning safety analysis report to reflect decommissioning - See Trojan or MY procedures
4. Modify authorization basis process for use in deactivation and decommissioning.
5. Implement the benefits of NRC 50.59 process for FFTF.
6. Build on the existing D&D worker classification to fully exploit opportunities to reduce jurisdictional issues.

### 3.0 Department of Energy Support

The Expert Review Panel believes DOE has a key role to play in the decommissioning of FFTF. In order to achieve minimum life cycle costs, DOE must embrace the concept of total project funding, the use of commercial decommissioning practices and actively support the end state vision for FFTF decommissioning.

### 4.0 Retention, Severance and Incentive plans need to be realigned to fit the challenge of FFTF D&D

One of the most important aspects of a successful D&D project is to identify the staff needs to be sure that the skill and management resource base is retained and properly incentivized to gain the most productivity.

1. This requires that a retention plan for key personnel be instituted with a severance plan that is important for long term workers at FFTF. The severance plan should include not only salary but also job placement services. Incentive plans for achieving goals for the staff remaining should encourage innovative and productive work.
2. The current Award Fee arrangement ignores FFTF D&D. This not only sends a wrong signal to the contractor regarding DOE's priority for achieving FFTF D&D, it does not provide the proper incentive for the contractor to emphasize FFTF D&D within their own operation.

- 6. Start scheduling hot cell work to handle all material flows.
- 7. Develop a public information plan for deactivation and decommissioning and final site condition.
- 8. Consider hiring salvage contractor to remove non-nuclear equipment at no cost to the project.
- 9. Release excess equipment to the asset management function to remove equipment (cooling towers, transformers, motors, valves, switchgear, etc) to help reduce costs.

**8.0 Final Considerations**

As previously mentioned, the FFTF has had an excellent safety record. The Expert Review Panel emphasizes the deactivation and decommissioning without an excellent safety program is a failure. All the initiatives proposed must and can be accomplished with **SAFETY IN MIND**.

**Expert Review Panel**

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**Clegg Crawford**

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**Paul Lorenzini**

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**Michel Berte**

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**William Helne**

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**Michael Lackey**

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**Andrew Kadak**

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**Todd Smith**

- 11. Verify that spare parts in fact exist for the fuel handling equipment and other critical equipment.

Overall, we believe a shortening of the proposed schedule for fuel removal by at least two years is realistically achievable if some of these steps are taken.

1.1.2 Sodium Drain Down and Residual Sodium Removal

The removal of residual sodium is not part of the current plan or the plans being developed despite the staff's belief that it should be performed at this time. The review Panel believes that residual sodium removal should be performed during the deactivation phase to eliminate a long term legacy issue while the expertise is available. The problem of residual sodium removal is exacerbated by the aging workforce which will not be available in the future. This problem was experienced at Fermi 1. If residual sodium removal were completed, future decommissioning issues would be more conventional and more easily dealt with. This is also a recommendation of the ACT Panel. The plant should be left with essentially no sodium.

Additional recommendations follow:

1. Accelerate the sodium drain from the IDS which can be accomplished by scheduling the 6 months processing of ACN-1 in the IEM after the last fuel assembly is removed from the IDS. (Only if ACN-1 disassembly can not be performed in parallel with fuel washing).
2. The removal of residual sodium should also include the cold traps on the primary and secondary side. This would change the current plans for the sodium draining and may require the acquisition of casks to transport the primary cold traps.
3. Review alternatives for removal of residual sodium -- carbonization, water vapor, or steam for maximum effectiveness and time. For example, at Argonne, the process used to remove residual sodium from primary and secondary systems was carbonization based on circulation of wet CO<sub>2</sub> inside the circuits. It is a solid phase process that converts sodium into sodium carbonate at room temperature then the carbonated residues can be flushed out by water. This process has also been applied at Super Phenix in France for the dismantling of a sodium fuel storage facility and it is also planned to apply this technique for removal of sodium residues from the main circuits. This is believed to be the most efficient and safest technique. However, other techniques such as water vapor or superheated steam should be carefully assessed considering that each has specific constraints.
4. There is considerable international experience relating to the removal of sodium from reactors that are being decommissioned. The FFTF project would benefit greatly by learning from their experiences.

*We need to focus on cancer prevention - elimination of both long lived wastes*

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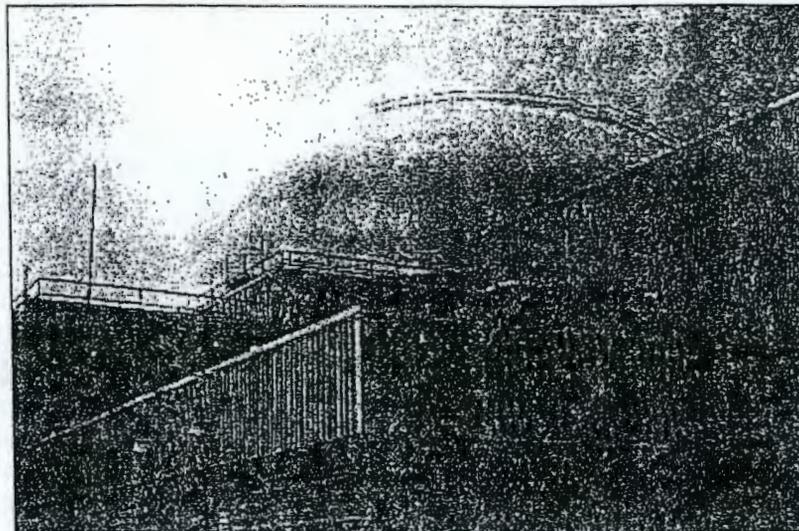


Photo by Sabine Hilding

## Nuclear Control Institute Comments on FFTF By Tom Clements

Comments of the Nuclear Control Institute for the Department of Energy's scoping process on the Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Mission in the United States including the role of the Fast Flux Test Facility

October 29, 1999

The Nuclear Control Institute (NCI), a non-profit research center working to halt proliferation of nuclear weapons materials, hereby submits the following comments for the Programmatic Environmental Impact Statement (PEIS) scoping process on restart of the Fast Flux Test Facility (FFTF).

NCI supports the goal of reliable production of adequate quantities of medical isotopes to meet the country's needs, via the use of non-weapons-usable fuel and target materials. We therefore find questionable the Department of Energy's proposal to use a 400 MW sodium-cooled breeder reactor fueled with both plutonium and highly-enriched uranium to produce such isotopes. Given that much smaller water-cooled reactors fueled with materials which do not present proliferation risks are more appropriate for isotope production we are opposed to the proposal put forward for FFTF. As FFTF has been without a clear mission since the early 1980s, the proposal to now produce medical isotopes appears disingenuous. The PEIS which is now being conducted is not the best way to help identify and meet the nation's medical isotope needs but rather is being used as a way to keep an unneeded breeder reactor in operation.

As NCI's work is focused on nuclear non-proliferation issues, we will focus on two major concerns related to the proposed restart of the FFTF located at the Department of Energy's Hanford site:

1) FFTF is a plutonium breeder reactor and its continued operation will

Dawn Watch

undermine both the efforts of the United States and the international community to halt the spread of weapons-usable plutonium.

Webmaster: Lynn Porter

2) The proposed use in FFTF of mixed plutonium-uranium oxide (MOX) fuel imported from Germany and use of weapons-grade uranium -- highly enriched uranium (HEU) --will jeopardize established and successful non-proliferation policies of the United States.

### FFTF: Relic Plutonium Breeder Reactor

FFTF was originally built as a part of the Department of Energy's Clinch River Breeder Reactor (CRBR) program based at Oak Ridge. When the CRBR program was terminated in 1983 during the Reagan Administration any perceived justification for the reactor vanished though various uses of it were devised, such as testing of fuel for Japan's Monju breeder reactor. In spite of a lack of a mission for FFTF it continued in operation until 1992 and has since been kept in a standby mode without any mission whatsoever.

The fate of FFTF to this point is not dissimilar to other sodium-cooled fast breeder reactors (FBRs) around the world. The Advanced Liquid Metal Reactor Breeder program in the United States was terminated in 1994 and FBR programs in Germany and Britain have ended as the technological problems and expense associated with breeder operation have proved insurmountable. France has closed its large FBR, Superphoenix, and a smaller breeder, Phoenix, is due to soon close. Breeder programs limp along in Russia, India and Japan, though the near-catastrophic sodium leak in 1995 at Japan's Monju breeder has resulted in the indefinite closure of the reactor. In short, the breeder reactor is a reactor whose time has never come, whose promise has withered in the face of daunting technological and economic problems.

From a non-proliferation perspective it is good that breeder reactor programs around the world have been terminated or failed as breeders are the perfect machine for producing weapons-grade plutonium. The wisest choice from a non-proliferation perspective has been the path that the United States has finally chosen -- to avoid development of this risky proliferation-prone technology. Yet, in spite of a policy not to pursue breeders the Department of Energy (DOE) is now engaged in a frantic search to find a new mission for FFTF, in part to keep the breeder "dream" alive.

*From Nuclear Control Institute - Tom Clements 1999*

Restart of FFTF could thus result in the de facto reversal of the earlier decision to halt research and development of breeder reactors. Although FFTF may be operated in a non-breeding mode, its operation will yield information helpful to breeder development and send the message to those countries still pursuing the breeder that such programs are acceptable. In July 1999, officials associated with the breeder program in both France and Japan expressed to DOE's Nuclear Energy Research Advisory Committee (NERAC) their interest in the maintenance in this country of FFTF as a fast reactor research facility and indicated that FFTF could be used to carry out research in conjunction with their own Phoenix and Joyo reactor programs. (It must be noted that the September 30, 1999, criticality accident at the Tokai-mura site in Japan was caused by mishandling of uranium being used to fabricate fuel for the Joyo fast reactor.)

The PEIS as well as a separate non-proliferation assessment must address the proliferation implications of operating the FFTF breeder reactor. We find

continued operation of FFTF unacceptable and call for its permanent closure and decommissioning.

**Plutonium Fuel Import: Serious Policy Questions**

The DOE has stated that MOX fuel which was fabricated for FFTF in the past could be used for years 1 through 6 of its operation. It has not been established that this fuel is in safe enough condition or of the right isotopic content to run the reactor for the myriad of missions which have been discussed. The PEIS process must thus include results of a thorough examination and analysis of this fuel in its present condition and how its use, from a physics perspective, relates to any proposed mission.

The PEIS must evaluate the conditions under which the fuel stored at Hanford was fabricated, including the quality control system which was in place when it was fabricated. All fabrication records must be examined in order to guarantee that quality control which would be used today for such fabrication was met at the time of its fabrication.

As proper mixing of the plutonium and uranium oxides is essential in MOX fuel, a thorough examination of all fuel assemblies and pellets must be carried out to insure that no off-spec pellets are considered for use and that current DOE regulations and standards pertaining to such things as pellet size and isotopic concentration are met by the fuel. Any change in the physical state of the pellets due to long-term storage in a radioactive environment must likewise be identified via non-destructive and destructive analysis.

If insurmountable problems with use of the existing MOX fuel are identified, DOE would likely want to develop a new MOX facility at Hanford or pursue the production of MOX pellets in the new facility now being considered for construction at Savannah River Site as part of the plutonium disposition program. Construction of a MOX plant dedicated solely for FFTF will lead to extremely high fuel costs and additional environmental problems. Given questions about adequate fuel supply for operation of FFTF, the environmental impacts of an FFTF-dedicated MOX plant must be included in the PEIS.

All environmental and licensing factors associated with an FFTF MOX production line at any SRS MOX facility must also be considered in the PEIS. To underscore the lack of agreement and coordination between FFTF promoters and the Office of Fissile Material Disposition, the EIS on surplus plutonium disposition has excluded FFTF from any plutonium disposition mission. Thus, the Office of Fissile Material Disposition has no plan to fabricate FFTF MOX and is not considering such a plan in the design of the MOX facility. Any change to the MOX facility being considered for the light-water reactor program will be costly and bring additional delays and environmental impacts to that program.

DOE has stated that it will acquire MOX fuel from Germany to operate FFTF in years 7 through 20. The fuel in question was fabricated for the SNR-300 breeder program but never irradiated. The SNR-300 reactor, owned by the German company SBK and constructed at the Karlsruhe Nuclear Research Center, never operated and the program was terminated in 1991 after questions arose about both the safety of the reactor and financing for it. (The Karlsruhe site was sold in 1995 for development as a recreational theme park and it has been reported that the SNR-300 reactor itself will be used as a hotel and sports

*MOX fuel may not be safe enough to run the reactor thus requiring a new MOX facility at Hanford*

complex.)

Some of the SNR-300 fuel is stored in the Hanau plutonium storage facility as well as at the United Kingdom Atomic Energy Authority's reprocessing facility located at Dounreay, Scotland. It has been reported in the German media that Siemens, which fabricated some of the SNR-300 fuel at its now-closed MOX plant, wants to have those fuel elements and other plutonium materials removed from the storage facility by 2002. Thus, it appears that there are forces in Germany which are pushing for use of the fuel in FFTF for solely domestic reasons. As Germany must one day reckon with the growing mountain of plutonium accumulating due to continued reprocessing of German spent nuclear fuel, any shipment of the SNR-300 fuel to the United States will have slight impact on the plutonium disposition crisis facing Germany.

Additionally, some of the SNR-300 may also be stored at Belgonucleaire's plutonium site at Dessel, Belgium. The exact location of the fuel being discussed for importation into the United States thus must be clearly identified in the PEIS. The regulatory and environmental review role of the pertinent European government agencies as well as the role of the public in any decision to export the fuel or not must be clarified in both discussions between DOE and German authorities as well as the PEIS.

Decisions taken by the German or any other government to transport MOX fuel containing weapons-usable plutonium across Europe could well be controversial. Just three years ago, an attempt to export a sea shipment of SNR-300 fuel from Germany to Dounreay failed due to confrontational public protest and the material had to be placed back in storage at Hanau. Given the political sensitivity of plutonium shipments in Europe and the possibility that a shipment of SNR-300 might not take place in spite of formal agreement, the PEIS must include a detailed discussion of an alternative fuel source in the eventuality that the shipment does not proceed due either to licensing problems or public or political concerns in Germany.

*Handwritten note:* [As regulations in the United States prevent all commercial air shipment of plutonium either over or into the country, transport of plutonium fuel to Hanford can only be done via purpose-built ships and with armed naval escort, as established by policy. Environmental and security hazards along potential sea and land shipping routes as well as cask safety questions must be discussed in the PEIS.]

Export of the SNR-300 fuel may also be controversial among politicians and the public in both Germany and those who reside in countries which are members of EURATOM given that FFTF is not under the International Atomic Energy Agency's (IAEA) safeguard regime. Export to such a non-safeguarded facility may run counter to both domestic and EURATOM policy. Likewise, export to a facility not licensed by the domestic licensing authority in the United States, the Nuclear Regulatory Commission, may run into regulatory and policy problems in Europe. The PEIS thus must include discussions of action necessary for DOE to bring the FFTF both under IAEA safeguards and NRC licensing oversight.

Little information is publicly known about the fabrication of the SNR-300 fuel. Evidently it was fabricated both at Belgonucleaire's MOX plant located at Dessel, Belgium as well as at the closed Siemens MOX plant. As is the case for the old FFTF fuel, the history of the MOX fuel considered for import must

be reconstructed. Company records which establish details of fabrication, quality control, and inspection must be examined in order to determine the quality of the fuel in question and if it meets current DOE regulations and standards. Given questions about fabrication and aging of the fuel, the history and condition of each individual pellet must be established. DOE must independently establish the condition of the fuel and not rely on German authorities for this information.

Plans for refabrication of MOX pellets from SNR-300 fuel assemblies into FFTF assemblies must be fully discussed in the PEIS. DOE plans for testing of such assemblies manufactured from aging pellets must also be addressed. The facilities which will handle the SNR-300 assemblies, disassemble them, test the pellets, and manufacture new assemblies have not been identified. Such new production missions at Hanford or any other site will obviously bring environmental and economic impacts which must be analyzed. Disposal of German-origin wastes associated with remanufacture of FFTF assemblies not only brings questions about volumes and handling of waste streams but also policy questions concerning disposal of foreign-origin waste in the United States. Likewise, disposition of spent SNR-300 MOX fuel and its impact on any spent fuel repository must be discussed in the PEIS.

The origin of the plutonium in the SNR-300 fuel must be established. Evidently the fuel was fabricated from plutonium of both U.S.-origin and non-U.S.-origin. U.S.-origin plutonium resulting from the European reprocessing of irradiated U.S.-supplied uranium comprises part of the MOX and plutonium from other sources comprises the remainder. Importation into this country of both U.S.-origin foreign-owned plutonium stored overseas and non-U.S.-origin foreign-owned plutonium could not be done under any existing policy. Importation of such material would have such serious environmental and policy implications that a full intergovernmental non-proliferation assessment and EIS review would have to be conducted to change current policy. Importation of either U.S.-origin or foreign-origin plutonium is a major federal action unto itself and would possibly establish a precedent for importation of other such materials, thus underscoring the need for a National Environmental Policy Act (NEPA) review process apart from the PEIS now in question.

#### **Highly Enriched Uranium Use: Counter to Non-Proliferation Policy**

DOE has proposed use of highly enriched uranium (HEU) as fuel in FFTF after year 20 of operation but DOE has not made clear if it also intends to use HEU as a target material in any type of isotope production. DOE must immediately clarify the exact role it intends for weapons-grade uranium in FFTF and if such material would be used before year 20 as target material.

For many years the DOE and other branches of the government have been working to implement a non-proliferation policy to halt the commerce in and use of HEU in research reactors around the world. This program, the Reduced Enrichment for Research and Test Reactors (RERTR), has had success in bringing about the conversion of most reactors originally supplied by the United States with HEU to low-enriched uranium (LEU). This policy of ending use of HEU has been a cornerstone of non-proliferation policy and has had a measurable impact in reducing use of HEU.

Given the backdrop of a successful program to end use of HEU as a reactor fuel or target, any discussion of use of HEU in FFTF flies fully in the face of

existing non-proliferation policy and the achievements of the RERTR program. Planned use of HEU in FFTF would be a dramatic reversal of an effective U.S. non-proliferation policy and could well spur other nations to reconsider their own programs to halt use of HEU. The implications of new use of HEU in a research reactor in this country are thus far beyond mere fuel selection or target considerations by FFTF operators.

Since its inception in 1978, the RERTR program has in a step-by-step way been successful in nearing the goal of phasing out use of HEU. Yet, the promoters of HEU in FFTF are threatening such success by the reckless and ill-conceived proposal to operate FFTF with HEU. From a non-proliferation perspective this proposal is dangerous and discussion of HEU use in FFTF must be halted. The PEIS must analyze the policy and associated environmental implications associated with use of HEU in FFTF.

Those who have proposed use of HEU have failed to reveal the source of the fuel or what its isotopic composition would be. Bill Madia, Director of Pacific Northwest National Laboratory, at a July 29, 1999, presentation on FFTF before the Nuclear Energy Research Advisory Committee (NERAC) -- which failed to endorse FFTF restart -- presented an overhead which stated that the HEU fuel would be "purchased." Given existing policy to phase out use of HEU, it is unknown where FFTF operators intend to purchase such fuel. This source of HEU and how it will be transported must be specified in the PEIS. With DOE likely out of the business of supplying HEU fuel to research reactors, the sources of such fuel will be limited indeed. Russia could be a possible source but major policy and EIS implications accompany the mere consideration of importing weapons-grade uranium from Russia for use as HEU fuel in FFTF.

As plans for use of HEU targets is also unknown, the role of DOE labs or foreign entities in development of such targets must be clarified. Environmental impacts associated with target development must be discussed in the PEIS. Likewise, processing of such irradiated targets will have both worker and environmental impacts and must be discussed in the PEIS. Any plan to develop LEU targets or fuel, which would be consistent with existing non-proliferation policy if used in non-breeder reactors, and associated environmental impacts also must be part of the NEPA process.

Thank you for considering these comments in the development of the PEIS and other EIS and policy documents which will result if FFTF restart and fueling plans proceeds as now presented.

For the PEIS record, the following documents were submitted on October 27 at the PEIS scoping meeting in Washington, D.C.:

- 1) April 27, 1999 letter from NCI to Secretary Richardson on the FFTF restart decision.
- 2) NCI paper entitled A Level Playing Field for Medical Isotope Production -- How to Phase Out Reliance on HEU, presented in September 1999 in Budapest at the annual RERTR meeting.

Tom Clements  
Nuclear Control Institute

## FFTF is a pork project

by Paige Knight

*Comments read by Paige at the January 14, 1998 meeting.*

Let me premise the safety issues and common sense concerns I enumerate below with the belief of our members that this country does not need to produce tritium until well into the next century, nor can it afford the cost in dollars or the cost in the change of mission at Hanford from it's current mission of cleanup.

We are facing the close of the century in which War has reigned supreme. We have not experienced the peace dividend that was promised us with the advent of the nuclear age by the sponsors of the Manhattan Project. What is more, the nuclear age has put at risk the health and safety of our environment and people, from Hanford communities; to the residents of St. George, Utah who were showered with massive doses of radioactive fallout; to those around the Fernald site in Ohio who found massive levels of nuclear contamination in their drinking water wells; to those near the Savannah River site who have suffered the poor health of downwinders all over the world. The Manhattan project of the US Government has turned out to be a war against its own people.

This hearing tonight is the beginning of a larger debate that this region and our country needs to have to bring a more far-sighted and truly humanitarian vision to the realm of science-- in this case to nuclear science. This is one of the first in a series of battles that are at the forefront in the Northwest to stop a whole new generation of nuclear production that feeds the corporate pockets and shortchanges, harms the ordinary citizen.

### **Tritium**

If FFTF should be chosen for a tritium mission (and remember there is no medical isotope production without tritium production), it will bring us transportation of plutonium from around the country to be used as fuel; it will call into production mode the start up of the Fuels Fabrication and Examination Facility (FMEF) at Hanford; and it could eventually lead to the government subsidized refurbishing of the WPPS nuclear power plant at Hanford. A perfect scenario for the revival of the nuclear industry at Hanford.

The will of Congress to affect and fund true cleanup is already diminishing; this could be the death knell for cleanup. You will be called upon to attend other hearings over the next year or two, all equally important as this. I urge you to listen, learn

form one another, and speak out tonight and usher forth a new course of stewardship for our human and natural resources as we near the beginning of a new century, a new era.

With that said I will address the following concerns--others have and will speak more eloquently to issues I have only alluded to.

### Safety

The Jason panel raised very serious questions about the safety of starting the FFTF. If the Dept. of Energy, as they have stated, have found no *new* concerns beyond what the Jason report has identified, does this mean they are dismissive of the concerns or that they aren't looking very hard?

FFTF sits in an area of higher earthquake risk than was believed when it was designed. Do we insist that these Washington legal standards be met or will the federal government continue to argue that they only have to comply with nationally accepted standards and not with local and state standards?

+ FFTF has archaic control systems for which spare parts are no longer available; these should all be replaced.

The FFTF cannot safely produce more than 1.5 Kg/yr of tritium. Will the DOE push that limit to its desired goal of 2 kg/yr at the expense of the safety of workers and the region? High production levels may reduce the controllability of the reactor. Safety risks increase almost linearly with tritium production rates.

Where will the DOE dispose of (legally and safely) the spent fuel with very rich weapons grade plutonium and what proliferation safeguards will it put in place, to what expense?

In the last two years of operation of the FFTF the reactor top block shield, which was made of depleted or natural uranium, had to be removed because of severe corrosion.

### Common Sense

We have been accused by the Tri-City people of having the "wrong" facts, of being too emotional over this issue. The same can certainly be said of them. We are both operating on emotions and opinions. Anyone can find the science to validate these on either side of the issue. The analysis of the feasibility of resurrecting the FFTF should be reviewed by neutral technical experts who are critics, rather than by proponents of the project. You can't see flaws you don't want to see.

The real question is whether we should be promoting a

weapons industry renewal at Hanford when we have not cleaned up the mess at Hanford. The ground water under Hanford is threatened, endangering the Columbia River which sustains salmon, recreation, agriculture and transport, all economic issues as well as quality of life issues. Can we afford to not cleanup 50 plus years of weapons production poisoning and continue to create more?

We have an obligation to our children, to future generations to prevent the causes of cancers rather than to create more in the process of trying to find a cure from medical isotopes. Competing technologies for treating and preventing cancers are available. We are not decrying the need for cures, we are calling for prevention on a grander scale.

The plain fact is that medical isotope production is not financially feasible without 10 to 20 years of tritium (weapons) production first. If isotopes are such a great venture it would be of interest to know why Battelle Laboratory is looking for a buyer of some of their isotopes (as referred to in a recent Tri-City Herald article).

According to some of the FFTF documents, a 20 year span of producing tritium would cost in a perfect scenario \$2 billion dollars. I can only dream of what it would mean for the cleanup of Hanford if that money were given to cleanup instead. That is the only right direction for Congress, the President and the US Department of Energy to go. The restart of the FFTF regardless of the guise of the mission is purely and simply a pork project.

## New missions imperil Hanford cleanup

Paige Knight, Hanford Watch

*This article was printed in The Oregonian, December 12, 1998*

Seventeen Northwest environmental groups have recently sent a letter to Secretary of Energy Bill Richardson opposing any new production missions at Hanford. Currently proposed missions include restarting the Fast Flux Test Reactor (FFTF) and the Fuels and Materials Examination Facility (FMEF) to produce tritium for nuclear weapons, to produce plutonium-238 (and reprocess it) for use in space batteries, to transfer the battery assembly operations from the Mound site in Ohio to Hanford and to make medical isotopes.

The recent history of opposition to any nuclear restart at Hanford, only 215 miles from Portland, stems from the extensive and ominous contamination of land and ground water from the production of plutonium for atomic bombs over the past 50 years, and from promises from the two most recent former Secretaries of Energy and former President Bush — that the only mission left at Hanford is that of cleanup.

Since those promises have been made, costly delays have occurred in the cleanup of the two most serious threats: the 177 Hanford waste tanks that are already leaking into the ground water which threatens the Columbia River; and the K-Basins, which hold 2300 tons of highly radioactive irradiated (spent) fuel from weapons production and sit only 400 yards from the banks of the Columbia.

As the cleanup budget for Hanford continues to shrink, the costs of cleanup continue to rise by the millions and billions of dollars. Cleanup timelines are extended further and further into the future.

Meanwhile the DOE and the Hanford communities seek new production missions. Keeping the FFTF on hot standby robs \$32 million from Hanford's diminishing cleanup budget each year. The environmental community objects to the addition of any more waste streams which will only increase the threats to the Columbia River.

To date it has been impossible for the public to receive accurate and complete information about the risks and impacts of these new missions; either about potential accidents from refitting the FFTF for a new type of mission or about the transportation of nuclear materials through Oregon to and from Hanford. Once Hanford accepts one or two new missions there will be no end to other production opportunities. Meanwhile the infrastructure (buildings, tanks and basins) continue to age, presenting even greater risks to the region. Any serious accident at Hanford will devastate the Northwest's economy.

We cannot stand by and refuse to fight for the protection of the Columbia River. We need all of the Columbia River interest groups on board: commercial, economic, recreational, tribal and environmental. At the recent 'Governance and the Columbia River Basin' Conference, Hanford Watch stated the necessity of considering Hanford's potential impact on the river's health in all of these discussions. A number of the 400 attendees questioned why these concerns are seldom, if ever brought up in such forums.

We can no longer afford to ignore the risks -- health, environmental and economic -- to our region from Hanford. We must face the reality that Hanford's wastes could someday poison our river beyond recovery. This issue must be on the front burner of these discussions. Oregon's state and federal legislators as well as the Oregon Office of Energy have all affirmed that cleanup should be the number one priority at Hanford. We citizens must unite, bringing our power and reason to bear upon the far-reaching decisions that are being made or not being made today lest we see no cleanup progress and lose the Columbia, the lifeblood of the Pacific Northwest.

Hanford Watch

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## Update on Hanford's FFTF reactor

By Paige Knight, Hanford Watch  
January 21, 1999

In December, Northwest environmental and public interest groups experienced the victory of their hard efforts of the past year to stop the tritium mission being proposed for the Fast Flux Test Facility (a sodium cooled reactor) by the USDOE, and broadly supported by the Hanford communities.

Hearings last January in Portland, Hood River and Seattle drew out nearly 1000 citizens, most of whom protested any new weapons missions for Hanford. Cleanup of the most contaminated piece of land in the Western hemisphere is the only acceptable mission for the Hanford Nuclear Reservation according to the citizens who turned out and the 8000 written comments that were received by the Department of Energy. No new waste streams should be added to those already threatening the Columbia River.

Other missions are still on the burner for the FFTF, although the earliest date of any possible decisions is thought to be April or May of 1999. One possible mission is producing plutonium-238 for space probe batteries. Our present source of Pu-238 is Russia, whose shaky economy "threatens" future supplies which are supposedly "needed" by the year 2004.

The other mission for the FFTF that is being widely supported by the Tri-Cities is the production of medical isotopes that can be used to "cure" cancers and other diseases. This projected mission has polarized the East side of the region from the West side. It is regarded by some as a "worthy" mission and is seen by others as a jobs issue for the Hanford Communities, which have felt the impact of huge job losses over the past 5 or more years. This will continue to be an important issue over the next year.

29,1

**^FFTF**

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From: a.kramer05@chello.nl  
Sent: Monday, September 30, 2002 11:57 AM  
To: FFTF@rl.gov  
Subject: Comments from FFTF Talk to Us

1 Name = a.kramer  
2 Comments = Dont stop!!!

Produce medical isotopes!!!!!!

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**FFTF TRI-PARTY AGREEMENT PUBLIC MEETING  
FORMAL WRITTEN COMMENT**

I did not participate in the conference @ Portland downtown, however I would like to voice my concern about the decision to shut down the Fast Flux Test Facility @ Richland, Wa. Why are we reinventing the wheel. The wheel is there and we need to use it efficiently. Diagnostic and therapeutic isotopes can be produced by this facility for our nation's need and the excess can be given to other countries. At present we are importing lot of these isotopes from outside. Given the current political and economical unrest globally it is foolish to destroy something which can be potentially an asset!!! I strongly recommend to keep the facility open and spend the money to modernize it.

V. Krishnamurthy MD  
Director Nuclear Medicine  
Tuality Community Hospital  
Hillsboro, OR 97123

Written comments may be submitted to:

O. A. (Al) Farabee  
U.S. Department of Energy  
Richland Operations Office  
P. O. Box 550 (N2-36)  
Richland, WA 99352  
Fax: 509-376-0177  
Email: [Oliver\\_A\\_Al\\_Farabee@rl.gov](mailto:Oliver_A_Al_Farabee@rl.gov)

Laura Cusack  
Washington State Department of Ecology  
Nuclear Waste Program  
1315 West 4th Avenue  
Kennewick, WA 99336  
Fax: 509-736-3030  
Email: [lcus461@ecy.wa.gov](mailto:lcus461@ecy.wa.gov)

Name \_\_\_\_\_  
(Please Print)

Address 335 SE 3th Ave  
Hillsboro OR 97123



# Tuality Healthcare Foundation

335 SE 8th Avenue  
Hillsboro, Oregon 97123-4248

**CERTIFIED MAIL**



7000 1530 0004 7793 2547

O.A. Farabee  
U.S. Department of Energy  
Richland Operations Office  
PO Box 550 (N2-36)  
Richland, WA 99352

114A

Notice Left Dates

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233

Piippo, Robert E

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From: Farabee, Oliver A (Al)  
Sent: Thursday, September 19, 2002 7:57 AM  
To: Piippo, Robert E  
Subject: FW: I am opposed to the TPA change package for accelerating destruction of FFTF

-----Original Message-----

From: James Lachut [mailto:jasl@worldnet.att.net]  
Sent: Thursday, September 19, 2002 7:46 AM  
To: Oliver\_A\_Al\_Farabee@RL.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

The Community Plan will not detract from clean-up budgets, will save the taxpayers over \$1 billion, AND will save millions of lives in the war on cancer.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted

234

Piippo, Robert E

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From: John Laferriere [john.laferriere@bms.com]  
Sent: Thursday, September 26, 2002 7:42 AM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: Save Lives- STOP the shutdown of FFTF!!

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

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The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

235

Piippo, Robert E

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From: Valerie Landon [vilandon@urx.com]  
Sent: Wednesday, September 25, 2002 6:18 AM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am TOTALLY opposed to the TPA change package for accelerating destruction of FFTF.

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

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Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

236

Piippo, Robert E

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From: Chuck & Lael Larrabee [Chaslael@webtv.net]  
Sent: Wednesday, October 02, 2002 7:46 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

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The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

237

Piippo, Robert E

From: Chuck & Lael Larrabee [Chaslael@webtv.net]  
Sent: Wednesday, October 02, 2002 7:46 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

The Community Plan will not detract from clean-up budgets, will save the taxpayers over \$1 billion, AND will save millions of lives in the war on cancer.

The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

Piippo, Robert E

238

From: LL Chip Larson.[KidLarson@Charter.net]  
Sent: Saturday, October 05, 2002 6:36 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF.

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

FFTF is too valuable a resource to shutdown. Don't let this marvelous national asset be destroyed.

Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE has transfed FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. NOW, this action WILL take money from the vital and "budget constrained" cleanup.

The Community Plan to save the FFTF will not detract from clean-up budgets, will save the taxpayers over \$1 billion, AND will save millions of lives in the war on cancer.

The Department of Energy refuses to see this as a national health issue. The community plan preserves the FFTF for vital nuclear Research and Development. The FFTF is vital to meet our nations energy needs.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

LL Chip Larson

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**FFTF TPA Draft Change Package**  
Public Comment Period August 28 – October 14, 2002

**Comment Source:** Richland Public Meeting (October 10, 2002)  
**Commenter:** Patricia Leistik

**Comment:** Hi, I'm Patricia Leistik I'm a local pharmacist. In 1997 my husband of 20 years was diagnosed with cancer. I rushed him to UW; I rushed him to Virginia Mason. I had the best doctors that I could find for him. In 1998, eight months after diagnosis, Mike died from chemotherapy. We couldn't get isotopes. We were told he was too sick. Isotopes were too rare a resource. We are the richest country in the world and I got to watch him die. I got to come home to 3 children and explain as a pharmacist I couldn't cure him. Isotopes that he helped produce out in the area weren't available. The DOE, our government let him down. How can you accelerate the closure of a facility and wreck people's lives? How can you stand up and look at yourself in the mirror? It's amazing to me. It's just totally amazing. FFTF doesn't need to be on a fast track to shutdown, it needs to be on a fast track to restarting so we can save lives, so we don't have families that have to go through counseling because they don't understand why their daddy didn't come home, why there are other people dying why research, why scientists aren't being listened to. Don't put it on the fast track to shutdown. Start FFTF again. Start saving lives like you said you're committed to do; let's make our president proud and our nation proud again. Let it live. Let people live with the isotopes that we can produce. Thank you.

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Piippo, Robert E

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From: David L. Lewis [dmilewis509@aol.com]  
Sent: Thursday, October 03, 2002 2:12 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

The Community Plan will not detract from clean-up budgets, will save the taxpayers over \$1 billion, AND will save millions of lives in the war on cancer.

The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

241  
Piippo, Robert E

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From: Margaret A. Lewis [dmlewis509@aol.com]  
Sent: Thursday, October 03, 2002 3:54 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

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The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

Piippo, Robert E

242

From: Roland B. Lewis [roble@onewest.net]  
Sent: Friday, October 04, 2002 12:25 AM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

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The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

243

Piippo, Robert E

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From: Tommy Lewis [tommylewis@hotmail.com]  
Sent: Monday, September 23, 2002 10:21 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

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Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

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**FFTF TRI-PARTY AGREEMENT PUBLIC MEETING  
FORMAL WRITTEN COMMENT**

Recent anthrax dissemination has caused us to  
radiate sensitive mail. When do we get the  
contract to do this work?

Can this be produced at FFTF? Where else  
can it be produced in the U.S.? Can contract be  
be used to radiate food for US consumption?  
For export? We can't use the work  
opportunities in this area.

Written comments may be submitted to:

O. A. (Al) Farabee  
U.S. Department of Energy  
Richland Operations Office  
P. O. Box 550 (N2-36)  
Richland, WA 99352  
Fax: 509-376-0177

Email: [Oliver\\_A\\_Al\\_Farabee@rl.gov](mailto:Oliver_A_Al_Farabee@rl.gov)

Laura Cusack  
Washington State Department of Ecology  
Nuclear Waste Program  
1315 West 4th Avenue  
Kennewick, WA 99336  
Fax: 509-736-3030  
Email: [lcus461@ecy.wa.gov](mailto:lcus461@ecy.wa.gov)

Name J. Hamilton Licht  
(Please Print)

Address 6 Gilbert Dr  
Yakima, WA 98902

245

Piippo, Robert E

---

From: Larry Lockard [Larry\_D\_Lockard@RL.gov]  
Sent: Thursday, September 19, 2002 7:12 AM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

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Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted

246

Piippo, Robert E

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From: dennis lockhart [dlockhar@admin1.umaryland.edu]  
Sent: Tuesday, September 24, 2002 8:18 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

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The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

247

Piippo, Robert E

From: Jeb.S.Lord@aqua.siteprotect.com  
Sent: Saturday, September 28, 2002 8:50 AM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

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Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted: Jeb Lord

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**Piippo, Robert E**

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**From:** Farabee, Oliver A (AI)  
**Sent:** Sunday, September 22, 2002 6:58 PM  
**To:** Piippo, Robert E  
**Subject:** FW: Comments on FFTF Shutdown

-----Original Message-----

**From:** Luke, Jeffrey J  
**Sent:** Thursday, August 29, 2002 4:02 PM  
**To:** 'mbensky'; Farabee, Oliver A (AI); Cusack, Laura J  
**Cc:** Luke, Jeffrey J  
**Subject:** RE: Comments on FFTF Shutdown Schedule

Hello:

Martin's message, below, generally reflects my thoughts. I hope that Martin's "gutless politicians" are actually people doing what they believe is right and that a serious study will carry some weight with them. Thank you for reading this note.

Jeff Luke  
1941 Hetrick  
Richland, WA

-----Original Message-----

**From:** mbensky [mailto:mbensky@msn.com]  
**Sent:** Thursday, August 29, 2002 2:25 PM  
**To:** Oliver\_A\_AI\_Farabee@rl.gov; lcus461@ecy.wa.gov  
**Subject:** Comments on FFTF Shutdown Schedule

It is totally unacceptable that any irreversible FFTF shutdown actions be taken before an authentic, scientific, politically unbiased assessment of FFTF's potential value is conducted. The EIS was a travesty, and the conclusions drawn from the EIS were not even consistent with the technical content of the document.

The possibility that the medical isotopes that could be produced by the FFTF might enable miraculous cures of many cancers and other painful diseases is not some crackpot notion that can be summarily dismissed by government policy-makers. Anecdotal evidence from numerous medical trials makes it abundantly clear that isotope therapy offers a potential that must be explored further. Destruction of this potential national treasure before fully exploring its potential would be unconscionable.

The costs and risks associated with startup and operation of FFTF are not unreasonable even on an absolute basis when viewed in the context of costs and risks for comparably important government research programs, and when viewed in the context of potential human and economic benefits, it is obvious that it is madness not to pursue further exploration of FFTF's capabilities.

It should be noted that irreversible shutdown of FFTF has become an emotional crusade for anti-nuclear activists. Why? Would waste from FFTF really create an untenable burden on our waste management capabilities? Would essential funding really be diverted from Hanford cleanup activities? Is it really obvious that alternative isotope sources are readily available?

10/9/02

None of these possibilities constitute a valid basis for abandoning FFTF and certainly not for anti-FFTF hysteria, so we are left with the conclusion that anti-nuclear activists view FFTF as a nuclear machine and therefore an evil machine, while gutless politicians are unwilling to stand up against the activists and the popular media. There was not a rational basis for the original decision to destroy this national treasure, and there is not a rational basis for this apparent rush to deny ourselves its potential benefits to mankind. My fundamental comment: Throw away the current time-table, and initiate a proper assessment.

Martin Bensky  
2121 Briarwood Ct.  
Richland, WA 99352  
(509) 375-1704  
mbensky@msn.com

Piippo, Robert E

249

From: John Lyman [jlyman@webbworks.com]  
Sent: Monday, September 23, 2002 9:23 AM  
To: Oliver\_A\_Al\_Farabee@RL.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

The Community Plan will not detract from clean-up budgets, will save the taxpayers over \$1 billion, AND will save millions of lives in the war on cancer.

The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

Piippo, Robert E

250

From: Maddox Family [rpkmaddox@connpoint.net]  
Sent: Wednesday, September 25, 2002 8:36 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

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Respectfully submitted:

Piippo, Robert E

251

From: Charles L Mahan [leon528@cox-internet.com]  
Sent: Friday, September 27, 2002 6:04 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF.

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

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Respectfully submitted:

Piippo, Robert E

252

From: carl mansperger [mansperg@3-cities.com]  
Sent: Monday, September 23, 2002 8:35 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov; lcius461@ecy.wa.gov; Clark Brunkow-Mather  
Subject: Shutdown of Fast Flux Test Facility



DOE ltr 09-24-02.doc

The following letter is also attached for those who want it that way.

Carl & Doris Mansperger  
2815 Alder Road, Pasco WA 99301

Tel. (509) 542-1887 Fax (509) 542-1889  
Email: mansperg@3-cities.com

O.A. Farabee  
U.S. department of Energy  
Richland Operations Office  
P.O. Box 550 (N2-36)  
Richland, WA 99352  
09-24-02

Dear Al,

We saw you on TV saying that the reason that DOE was shutting down FFTF was because of economics. There is a lot that I don't understand about the relative value accelerating the shutdown of FFTF versus the value of keeping shutdown on the Tri-Party Agreement schedule.

Please review the numbers I have and let me know if they are wrong:

\$40 million a year to maintain the facility.  
\$250 million for initial shutdown and \$1.2 billion to over \$2 billion for complete deactivation.  
\$40 million/year into \$1.2 billion = 30 years to amortize the full cost of deactivation.  
If we use a discount factor for Present Value of Benefits, the time to amortize would be somewhere near 100 years.

This economic evaluation does not appear to include:

- ? An impact on U.S. Balance of Payments considering that 90% of our medical isotopes are imported.
- ? A factor for increased private sector investments in nuclear medicine if there were an assured ample supply of quality isotopes.
- ? A value for lives that potentially could be saved. If we consider that a 9/11 life was worth \$1.3 million and could save just 100 of the 1500 lives a day who die of cancer, we would save \$130 million a day.
- ? The value of reduced medical costs. If medical isotopes can save \$860 million a year in diagnosing breast cancer alone, what are the total potential cost savings?
- ? A value for the U.S. developing a defense from an anthrax attack. Currently, we aren't we forced to use electron beams in lieu of Cobalt 60 for sanitizing mail because we can't produce or import enough Cobalt 60. I understand that there is a four month backup for mail delivery to our Senators. Could it be that sanitizing is limited to one letter at a time? With Cobalt 60 they could do a cargo pallet load at a time. Our President's UN speech indicated Iraq has stockpiled tens of thousands of liters of anthrax. Can we protect ourselves from an Iraqi anthrax attack?
- ? A value for protecting our food. The National Research Council

released a report on about 12 Sept. disclosing the vulnerability of our food supply to terrorist. Wouldn't Cobalt 60 be a major weapon in sanitizing shipments containing anthrax, mad cow, E.coli and other pathogens that a terrorist may elect to use?

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Please explain.

I am a 30 year USAF retiree who after retiring spent 11 years with Northrop becoming the Engineering Manager of Flight Avionics during development of the B-2 Stealth Bomber. I am now farming in Franklin Co. and have no allegiance to any organization.

I believe that we are making a horrible mistake. If we error, we must error on the side of saving lives.

Sincerely,

Carl Mansperger

Piippo, Robert E

253

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254

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254A

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255

*FFTF TPA Draft Change Package*  
Public Comment Period August 28 – October 14, 2002

**Comment Source:** Portland Public Meeting (October 9, 2002)

**Commenter:** Carl Mansperger (phone)

**Comment:** OK I now farm in Franklin County I wish everyone there and here on the phone, if they do get cancer to have the opportunity that I had to be treated with medical isotopes to have the same successful cure and to have it done with virtually no impact to daily life. Now I have an overhead called Cost to close, it is up?

**Facilitator:** It's up sir

OK, the decision to close included a 250 million dollar cost to close I think that was an old (?) report. This month DOE now says if they are allowed to accelerate, the best they can do is 547 million dollars. That change in itself looks to me like it's doomed for a re-look. Above that, the 547 million dollars is not in the budget. The senate must increase it's budget from 36 million in 03 to 46 million in 03, 113 million in 04 and 142 million in 05. Where is that money coming from? Probably out of cleanup if it comes at all. So therefore you would have to go to the flat funding scenario that I believe came from DOE the 670 million to 1.3 billion. So I'm going to use the average of that for illustration purposes. So the next question really comes up on this chart is. How can DOE proceed with acceleration without waiting for both appropriation and authorization bill to be signed by the President? Go to the next charts. This is to show an illustration of what the cost benefit analysis should include. But the biggest benefit you seem to be asking for is the 40 million dollars a year to run it. If the cost of shutdown is that average of 585 million and we use a 5% discount factor or interest if that would be what you prefer to use that would cost 48 million dollars a year. The cost of closure exceeds the cost to operate. The first year loss is 8 million, the second year loss is 8.5 million, and that keeps growing forever. So but that is a very simple analysis because it doesn't include the time value of money. It doesn't include the fact that you started cost now but you wont get benefit for possibly 10 years. The value of a dollar 10 years from now today is something like .26 cents if you use the present value of analysis method.

**Facilitator:** Sir, you have about a minute and a 1/2 left.

OK, go to the next chart. Consider the restart benefits. They weren't even included in the cost analysis you already heard about the 885 million. If you just save 100 of the 1500 lives lost today to cancer and use the 9-11 value of life at one point 3million, your going to save 130 million a day. If you save 1 life every 10 days you'll exceed the cost of your savings. Now look at cobalt 60, we do not have any supply at all of cobalt 60 in the United States we've been getting it from Canada from a very unreliable facility. And they have other priorities. Yet we need Cobalt 60 to address anthrax, ecoli and other things. So what are we doing? We're trying to sanitize the mail using electron beams which can take care of an envelope. Cobalt 60 can take care of a full pallet load of mail, of meat. President Bush, to the UN, on just Monday, talks about the 10s of thousands of liters of anthrax that Iraq has. Be deployed in 45 minutes. The national research council in the September report said that the terrorist were a real threat to our food supply

Facilitator: Sir, you have 15 seconds to wrap up

OK, go to the next chart. The biggest thing is you've created an atmosphere right now where people will not invest the billions of dollars necessary to develop fully the cures to cancer and what you need to do is slow down and give them an opportunity and I'll use Senator Cantwell's own words to me I would be happy to review details of any such proposal. If we err, we need to err on the side of saving lives.

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**FFTF TPA Draft Change Package**  
Public Comment Period August 28 – October 14, 2002

**Comment Source:** Richland Public Meeting (October 10, 2002)  
**Commenter:** Carl Mansperger

**Comment:** Mike's a hard act to follow. I'm Carl Mansperger. There's a lot of things happening since the decision to decommission. For one thing, we've already talked about the costs going up. There's been dramatic results from the FDA approvals and medical trials that Mike just talked about. We hear many people concerned about rising Medical and Medicare costs. The President's disclosure of Iraq's stockpiles of biological weapons and the capabilities to deploy them. Just in September we had a national research council report on terrorists threats to our food supply and they mentioned anthrax, e-coli, mad cow disease. And without even a terrorist we've had many incidences of e-coli food poisoning and wasted food just in this last summer. In August we found out that there was insufficient fuel for NASA and military radial isotope thermal generators. These also have civilian potentials. In this case they even had to take fuel out of one of the generators in order to support a military mission. And that generator I think was reserved for deep space probe. Of course HHS is just now getting involved. And the last one that I mentioned there, but there are many more examples available in recent developments, but this one will be of interest to the Vice-President because if he'd have had the isotope application to his angioplasty stint his chance of that artery re-renewing would have been reduced from 50% to 20%. Based on these rapidly growing and new requirements and new information, I recommend we hold to the initial schedule. I see no reason to accelerate. Other than to get it closed before somebody can say "hey you can't afford to do it." So we should form a new group of world class experts to include nuclear and including nuclear medicine, scientists, NASA, long range space planners, military planners HHS- type planners. We've got to get Homeland Security requirements specialists in there. I need to add to that the Department of Agriculture and the Food and Drug Administration.

Facilitator You have about 2 minutes sir,

OK, and they should update the current and projected medical Homeland Security, defense and space isotope requirements versus their sources, their capabilities and their reliabilities. With 90% of our isotopes coming from overseas and many from very unreliable reactors, maybe short-lived reactors. Plus their abilities to prioritize may be against us in the case of an anthrax attack. Cobalt 60 provides us an example. Where are we going to get Cobalt 60 to defend against anthrax, e-coli or other attacks in our food could be placed in the mail, in cargo. You've heard the President say how much there're stockpiling that and how fast it can be applied. The National Resource Council September report said it was a definite threat to our food supply. Just a few anthrax letters had major impacts. The Senate mail, for example, is now backed up 4 months. Why? Because they don't have Cobalt 60. Canada's proved a very unreliable source. We're getting some from the UK on emergency basis, some from Argentina/

Facilitator 30 seconds

OK. Cobalt 60 can do a full pallet load of cargo, meat, mail. And we're using electronic beams that do one envelope. One last thing; Give it time for the private sector to come forth.

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**FFTF TRI-PARTY AGREEMENT PUBLIC MEETING  
FORMAL WRITTEN COMMENT**

Quoting from an ad for the Susan G. Komen Breast Cancer Foundation - "Studies are also looking at radiation therapy, placing tiny pellets of radioactive material directly into the breast tissue, as a possible treatment option." As most people have, I have lost family and friends to cancer. We need medical isotopes to help cure cancer. We also need it for keeping arteries open after stent implants and other medical reasons. We have the FFTF that can produce these. Why go to the time and expense of eventually building another facility?

Written comments may be submitted to:

O. A. (Al) Farabee  
U.S. Department of Energy  
Richland Operations Office  
P. O. Box 550 (N2-36)  
Richland, WA 99352  
Fax: 509-376-0177  
Email: [Oliver A Al Farabee@rl.gov](mailto:Oliver A Al Farabee@rl.gov)

Laura Cusack  
Washington State Department of Ecology  
Nuclear Waste Program  
1315 West 4th Avenue  
Kennewick, WA 99336  
Fax: 509-736-3030  
Email: [lcus461@ecy.wa.gov](mailto:lcus461@ecy.wa.gov)

Name Lois Mansperger  
(Please Print)

Address 5811 187<sup>th</sup> Av SE  
Jssaquah, WA 98027

Piippo, Robert E

258

From: Farabee, Oliver A (Al)  
Sent: Wednesday, September 25, 2002 10:55 AM  
To: Piippo, Robert E  
Subject: FW: I am opposed to the TPA change package for accelerating destruction of FFTF

-----Original Message-----

From: Glenn R. Marshall [mailto:gmarshall@knology.net]  
Sent: Tuesday, September 24, 2002 6:07 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

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Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

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The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:  
Glenn Marshall

259

*FFTF TPA Draft Change Package*  
Public Comment Period August 28 – October 14, 2002

**Comment Source:** Richland Public Meeting (October 10, 2002)  
**Commenter:** Craig Mason

**Comment:** Hello I'm Craig Mason a Democratic congressional candidate. I would like to pick up on the economic development issues and say that this community has served the nation very well, for a long time and it deserves to survive the ending of it's nuclear war weapon mission. And that the investment in medical isotopes is a way of both repaying the community for it's long service and of producing the kind of investment that we got when we the country invested in the railroads, when computers were unimaginably expensive, and it was the government investment, investment in computers that ended up making them ya know just cheap at a level people couldn't imagine 40 years ago. I think that that will continue to happen in the nuclear world, the rise of the internet was unimaginable, and I think that government must do the investment in this kind of new technology and I'm urging that the Department of Energy support the partnership. I've seen a very good business plan from a local engineer and business man Bill Stokes who had a package put together previously and I think he could do it again and have the enterprise commercially viable in 6 years, but even if he couldn't I think that this is the kind of thing that government needs to keep doing and that there will be breakthroughs that we can't even being to imagine, new applications and our callers had talked about the other uses of nuclear power that I think we could support the research for here and the thing that it produces is not just the initial project, but I've talked to many businessmen who are attracted here to hire our labor because we have highly skilled labor we get new private enterprises and I think if we initiate this medical isotope project that we will continue to attract private investment develop a critical mass of skilled labor, WSU branch campus will expand, we'll again get additional mass of skilled labor, attract investment from all over the country and have a complete replacement of the mission and basis for growth in the Tri-Cities. So I really advocate that this not be irretrievable shut down and that instead the partnerships and government investment in research continue. Thank you.

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Piippo, Robert E

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From: Farabee, Oliver A (Al)  
Sent: Wednesday, September 18, 2002 2:21 PM  
To: Piippo, Robert E  
Subject: FW: Please don't shut down FFTF

-----Original Message-----

From: Bluford Mauldin [mailto:bpngranny@aol.com]  
Sent: Tuesday, September 17, 2002 3:49 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: Please don't shut down FFTF

Dear Mr. Al Farabee (U.S. Department of Energy)

May I ask that you please NOT shut down the Fast Flux Test Facility in Eastern Washington state.

I think this is a very bad idea and should not be done.

There is too much good that can be done with this facility that will be lost if it is closed.

Thank you very much.

Piippo, Robert E

261

m: Will Maxson [maxson\_72@yahoo.com]  
it: Tuesday, September 24, 2002 2:23 PM  
To: Oliver\_A\_Al\_Farabee@ri.gov  
Subject: I am opposed to the destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

Enclosed you'll find a form letter which I'm sure you've already seen many times. I guess the point is to send a bunch of these so that you'll recant and "save the FFTF". Let me just say that I trust you have the best interest of our nation in mind with your decision to decommission this plant, but it seems to me that it is a valuable resource that will be difficult to replace. If there is room to reconsider the destruction of the FFTF in your decision making process, please do so.

Thank you,  
Will Maxson

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

The Community Plan will not detract from clean-up budgets, will save the taxpayers over \$1 billion, AND will save millions of lives in the war on cancer.

Piippo, Robert E

262

From: Erica McAdoo [neverem@comcast.net]  
Sent: Wednesday, September 25, 2002 12:35 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

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The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

263  
Piippo, Robert E

---

From: Joyce McAdoo [jmcadoo@comcast.net]  
Sent: Wednesday, September 25, 2002 12:35 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

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The Department of Energy refuses to see this as a national health issue:

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

264

^FFTF

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From: grantmccallum141@hotmail.com  
Sent: Monday, September 30, 2002 10:52 AM  
To: FFTF@rl.gov  
Subject: Comments from FFTF Talk to Us

1 Name = Grant J. McCallum  
2 Comments = I would like to know why the government is not commercializing this machine if private companys are interested in commercializing the Reactor?

Grant McCallum

265

^FFTF

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**From:** Mcangel8662@aol.com

**Sent:** Tuesday, October 15, 2002 8:37 PM

**To:** FFTF@rl.gov

**Subject:** COMMENT ON TPA DECOM SCHEDULE FOR

SCHEDULE SHOULD BE EXTENDED TO ALLOW A THOROUGH STUDY OF MEDICAL ISOTOPE PRODUCTION INVOLVING ALL RELEVANT GOVERNMENT AGENCIES. THESE AGENCIES SHOULD THOROUGHLY REVIEW (WITH PUBLIC INVOLVEMENT) ALL ASPECTS OF POTENTIAL USAGE BEFORE SUCH A LARGE GOVERNMENT CAPITAL INVESTMENT IS PUT INTO THE GARBAGE CAN.

FFTF SHOULD BE PUT TO USE TO HELP THE PEOPLE OF THE UNITED STATES AS WELL AS THOSE WORLDWIDE. WHAT BETTER WAY THAN BE INSTRUMENTAL IN CONQUERING CANCER????

SPEND THE MONEY IN THIS WAY AND NOT BY TEARING THE FFTF DOWN.

WE THE PEOPLE KNOW THAT KEEPING FFTF FOR MEDICAL ISOTOPES (CANCER) WILL IN THE LONG RUN PROVIDE MORE INCOME THAN THE COST OF TEARING IT DOWN.

GAYDENE MCCOOL (signed by )

10/24/02

266

Piippo, Robert E

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From: John J McCown JJ [JoeyMon@aol.com]  
Sent: Tuesday, September 24, 2002 9:15 AM  
To: Oliver\_A\_Al\_Farabee@RL.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

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The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

267

Piippo, Robert E

---

From: Billie Jo McDaniel [bjRopha@AOL.com]  
Sent: Tuesday, September 24, 2002 6:58 AM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

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Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

September 24, 2002

268

O.A. Farabee  
US DEPARTMENT OF ENERGY  
Richland Operations Office  
PO Box 550 (N2-36)  
Richland, WA 99352

Laura Cusack  
WASHINGTON STATE  
DEPARTMENT OF ECOLOGY  
1315 West 4<sup>th</sup> Avenue  
Kennewick, WA 99336

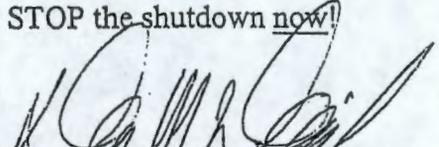
**STOP THE SHUTDOWN OF FFTF**

We are opposed to the accelerated shutdown of the Fast Flux Test Facility. FFTF is a fully functional test reactor with potential beneficial uses to all of us. It is not a hazardous waste area. No dangerous waste is produced.

FFTF can reduce nuclear waste stockpiles in the United States. The waste by-products are burned and turned into low level nuclear waste and beneficial products such as medical isotopes. FFTF has the potential of producing two-to-three times more medical isotopes than other reactors in the nation for treatment of cancer. There is a critical shortage of medical isotopes. Medical isotopes are hope for a new generation of cancer treatment.

FFTF is a national asset and should be used as such. A community Re-Use Agency has been formed by local government. Entergy has expressed interest in operating the reactor. To shut down the facility at this time would be a national tragedy. Costs to shut down and tear down FFTF would be overwhelming. Costs to eventually rebuild a facility that would have the same ability to generate medical isotopes would increase the overwhelming costs.

STOP the shutdown now!

  
DAN & DOROTHY McDANIEL  
217 West 45<sup>th</sup> Avenue  
Kennewick, WA 99337



# PAVEMENT SURFACE CONTROL

A Division of Construction Ahead, Inc.  
CONSTAI083L5

P.O. Box 7204 • Kennewick, WA 99336



US DEPARTMENT OF ENERGY  
RICHLAND OPERATIONS OFFICE  
PO BOX 550 (N2-36)  
RICHLAND WA 99352

99332+0330 01



269

Rick Bond

RECEIVED

OCT - 9 2002

September 24, 2002

Department of Ecology  
NWP-Kennewick

O.A. Farabee  
US DEPARTMENT OF ENERGY  
Richland Operations Office  
PO Box 550 (N2-36)  
Richland, WA 99352

Central Files  
File Name: \_\_\_\_\_  
Cross Reference: \_\_\_\_\_

Laura Cusack  
WASHINGTON STATE  
DEPARTMENT OF ECOLOGY  
1315 West 4<sup>th</sup> Avenue  
Kennewick, WA 99336

STOP THE SHUTDOWN OF FFTF

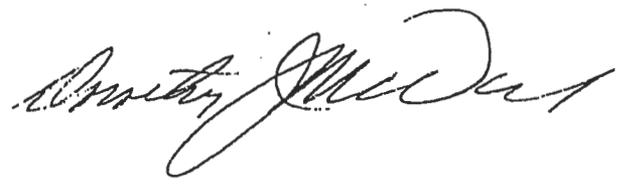
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STOP the shutdown now!

  
DAN & DOROTHY McDANIEL  
217 West 45<sup>th</sup> Avenue  
Kennewick, WA 99337



Piippo, Robert E

270

om: Jim J McDaniel [jim.mcdaniel@compaq.com]  
nt: Tuesday, September 24, 2002 7:05 AM  
To: Oliver\_A\_Al\_Farabee@RL.GOV  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

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The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

271  
Piippo, Robert E

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From: Greg D McFadden [gmcfadde@gonzaga.edu]  
Sent: Tuesday, September 24, 2002 10:41 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

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Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

Piippo, Robert E

272

From: Janet G McFadden [73mcfadden@msn.com]  
Sent: Tuesday, September 24, 2002 10:40 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

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Respectfully submitted:

273

Piippo, Robert E

---

From: Lee A McFadden [73mcfadden@msn.com]  
Sent: Tuesday, September 24, 2002 10:40 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

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The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

274

Piippo, Robert E

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From: Norman R McFadden [73mcfadden@msn.com]  
Sent: Tuesday, September 24, 2002 10:39 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

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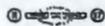
The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:



IAM & AW AFL-CIO



MARK A. BLONDIN  
District President

BRUCE R. SPALDING  
District Sec'y-Treas.

275

# AEROSPACE MACHINISTS INDUSTRIAL DISTRICT LODGE 751

9125 - 15TH PLACE SOUTH  
SEATTLE, WASHINGTON 98108-5100

FAX NUMBER  
EXECUTIVE OFFICE (206) 764-0303  
FINANCIAL OFFICE (206) 764-0358

SEATTLE (206) 763-1300  
RENTON (425) 235-3777  
EVERETT (425) 355-8821  
AUBURN (253) 833-5590  
TACOMA (253) 627-0822

September 26, 2002

My name is Ron McGaha; I am representing the International Association of Machinists and Aerospace Workers, District 751. We have members, who work at the Hanford Site, who will be affected by any decisions made on the FFTF; and for that reason, I would like to offer my testimony.

Our first concern is, of course, maintaining and creating livable wage jobs in Washington State; and to that end, we are in support of restarting the FFTF. We believe it to be in the public's best interest to operate this facility to commercially produce therapeutic radioisotopes that could help save the lives of cancer patients here at home and around the world. It makes no sense to tear down this facility at a cost that could exceed \$2 Billion when it could be operated at a profit to produce high quality medical isotopes, not to mention other potential uses of the FFTF reactor?

FFTF by its very name, Fast Flux Test Facility, is a scientific research tool. It would be foolish to squander this valuable resource when it could be used to develop ways to recycle or reduce existing nuclear waste and totally irresponsible not to use it for the disposal of weapons grade plutonium. The reactor is already built and can be modified to produce much needed electrical power, in a relatively short period of time, at a much less cost than building a new facility. We have already paid for it, why waste this national resource?

The Manhattan Project, during World War II, unlocked the secrets of the atom. The FFTF has the potential of being the center of a "Manhattan-style" project for the treatment of cancer.

In the interest of every cancer patient who can benefit from the research and production of medical isotopes, in the interest of safe, clean energy and the development of nuclear waste disposal technology, and in the interest of creating and preserving living wage jobs in Washington State, we urge the Department of Energy to restart the Fast Flux Test Facility.

Respectfully submitted,

Ronnie D. McGaha  
Administrative Assistant  
to the President  
IAM&AW District Lodge 751

276

**FFTF TPA Draft Change Package**  
Public Comment Period August 28 – October 14, 2002

**Comment Source:** Seattle Public Meeting (September 26, 2002)

**Commenter:** Ron McGaha

**Comment:** My name is Ron McGaha and I represent the International Association of Machinists and Aerospace workers. We oppose the accelerated decommissioning schedule of the FFTF for a number of reasons. One of which is that we have members who work at the Hanford site who will be affected by this shutdown. Currently they are involved in the cleanup over there. They are building equipment and so on that supports that cleanup. But our first concern is and always is maintaining, creating livable wage jobs in the State of Washington. To that end we support the restart of the FFTF not the destruction of it, not this accelerated schedule. We believe it to be in the public interest to operate this facility to commercially produce therapeutic radio isotopes. They can help save lives of cancer patients here at home and the rest of the world if we were to choose to export them. Makes no sense to tear down this facility at a cost that could exceed over 2 billion dollars when it could be operated at a profit to produce high quality medical isotopes. And there are other potential uses of that reactor. By it's very name, FAST Flux TEST facility, it's a scientific research tool. It would be foolish to squander this valuable resource when it could be used to develop ways to recycle and reduce the existing nuclear waste and totally irresponsible not to use it for the disposal of the weapons grade plutonium. The reactor is already built. It can be modified to produce much needed electrical power, in a relatively short time period. At a much less cost than building a new facility. We've already paid for it. Why waste this national resource. The Manhattan project during WW2 unlocked the secrets of the Atom. The FFTF has the potential of being the center of a Manhattan style project for the treatment of cancer, and I believe our government should step up to the plate and wage a war on cancer which they have not done sufficiently in my view. In the interest of every cancer patient that can benefit from the research and production of medical isotopes in the interest of safe clean energy, and the development of nuclear waste disposal technology and in the interest of creating and preserving living wage jobs in Washington state we urge the Department of Energy to restart that Fast Flux Facility and get off of this crazy schedule that you've got to tear it down without any public comment on it. Thank you.

277

Piippo, Robert E

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om: Farabee, Oliver A (Al)  
nt: Monday, September 30, 2002 8:42 AM  
To: Piippo, Robert E  
Subject: FW: I am opposed to the TPA change package for accelerating destruction of FFTF

-----Original Message-----

From: William A. McInteer [mailto:wamcinteer@mcdermott.com]  
Sent: Monday, September 30, 2002 5:19 AM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

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The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

278

***FFTF TPA Draft Change Package***  
Public Comment Period August 28 – October 14, 2002

***Comment Source:*** Portland Public Meeting (October 9, 2002)

***Commenter:*** Jean McKenna

***Comment:*** My name is Jean McKenna from Benton City, Washington. I would like to enter in a question to the record. If the Department of Energy who is responsible for making the medical isotopes for peace time uses is so sure that this is the right decision as far as I know, it's the last reactor of it's type that is in existence that could be used very quickly, if they're that sure I want to know all those isotopes are going to come from. Thank you.

279

**FFTF TPA Draft Change Package**  
Public Comment Period August 28 – October 14, 2002

**Comment Source:** Richland Public Meeting (October 10, 2002)  
**Commenter:** Jean McKenna

**Comment:** My name is Jean McKenna I'm from Benton City Washington. I want to say that I'm opposed to the accelerated shutdown of FFTF. I know from my years of experience at Hanford that FFTF is not what's in need of cleanup at Hanford. There is along list of other things that really ought to come first; and especially accelerated cleanup. It reminds me of some of the management training that I've had in my years here; where we talk constantly about doing things right. And ya know, is it doing things right? Or is it doing the right thing? And I want to say that as an American, right now, I'm appalled at the value systems that we have; and the economic idiocy that I'm seeing. Frankly because when you destroy something that has as many uses as the FFTF without having any other facility that can take it's place, that makes me hang my head. I think we're smarter than that in America. And I think we have bigger hearts and heads than that. Thank you.

280

Piippo, Robert E

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om: Shirley & Homer McMahon [McMahonHS@aol.com]  
nt: Monday, September 23, 2002 6:19 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

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Laura Cusack, Washington Dept of Ecology

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Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

281

Piippo, Robert E

---

From: Shirley & Homer McMahon [McMahonHS@aol.com]  
Sent: Monday, September 23, 2002 6:19 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

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The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

282

Piippo, Robert E

---

om: Douglas A. McNea [damcnea@pacbell.net]  
nt: Saturday, October 05, 2002 3:42 PM  
to: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE has transfed FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. NOW, this action WILL take money from the vital and "budget constrained" cleanup.

The Community Plan to save the FFTF will not detract from clean-up budgets, will save the taxpayers over \$1 billion, AND will save millions of lives in the war on cancer.

The Department of Energy refuses to see this as a national health issue. The community plan preserves the FFTF for vital nuclear Research and Development. The FFTF is vital to meet our nations energy needs.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

283

Piippo, Robert E

---

From: Bill Melvin [grizkati@hotmail.com]  
Sent: Tuesday, September 24, 2002 3:13 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

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Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

284

Piippo, Robert E

---

From: Mike Middleton [concornom@aol.com]  
Sent: Tuesday, September 24, 2002 6:22 AM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: What a horrible waste of taxpayers money. Closing the FFTF.

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

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Respectfully submitted:

285

Piippo, Robert E

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From: Charles Migliore [cmigliore@envirocareutah.com]  
Date: Tuesday, September 24, 2002 3:12 PM  
To: Oliver\_A\_Al\_Farabee@RL.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

The Community Plan will not detract from clean-up budgets, will save the taxpayers over \$1 billion, AND will save millions of lives in the war on cancer.

The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

286

Piippo, Robert E

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From: Darrel Miller [Darrel\_Miller69@hotmail.com]  
Sent: Monday, September 23, 2002 10:19 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

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The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

Piippo, Robert E

287

From: Joyce Miller [darrelsjoy@earthlink.net]  
Sent: Monday, September 23, 2002 10:19 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

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The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

288

***FFTF TPA Draft Change Package***  
Public Comment Period August 28 – October 14, 2002

***Comment Source:*** Richland Public Meeting (October 10, 2002)  
***Commenter:*** Armand Minthorn

***Comment:*** My name is Armand Minthorn. I'm a member of the Confederated Tribes of Umatilla; member Board of Trustee's, our governing body. I'm here this evening to reiterate and restate our position that we took two years ago. Confederated Tribes are here to oppose restarting Fast Flux. We are going to resubmit our resolution that our governing body passed. We will also resubmit Affiliated Tribes Northwest Indians' resolution, which is composed of federally recognized tribes of Oregon, Washington, Idaho and Montana. We will also resubmit the National Congress of American Indians resolution, which is at the national level and is composed of 458 federally recognized tribes. Today we also submit for the record, the written record, a letter from Governor Kitzhaber, Governor of Oregon as we join his voice in reiterating our position in opposing restart of Fast Flux Test Facility. Also, the Oregon Hanford Waste Board, two weeks ago took a position and this Oregon Hanford Waste Board is also opposing restart Fast Flux Test Facility. Thank you.

289

**FFTF TRI-PARTY AGREEMENT PUBLIC MEETING  
FORMAL WRITTEN COMMENT**

- I would like to comment on the practices of some speakers at the Seattle hearing who personally attacked the Raging Grannies and the "Sweet young things" who spoke at the hearing. This was not observing the ground rules of respecting other's opinions and I would encourage the DOE to hire facilitators who will enforce this ground rule.

- Once again, I applaud the U.S. Department of Energy for shutting down the FFTF reactor. The reactor would have added more cancer causing toxins to the environment. In shutting down the FFTF reactor, the DOE is doing one of the most important things anyone can do to fight cancer - that is prevent more cancer-causing agents from getting into the environment.

O. A. (Al) Farabee  
U.S. Department of Energy  
Richland Operations Office  
P. O. Box 550 (N2-36)  
Richland, WA 99352  
Fax: 509-376-0177  
Email: [Oliver.A.Al.Farabee@rl.gov](mailto:Oliver.A.Al.Farabee@rl.gov)

Written comments may be submitted to:

Laura Cusack  
Washington State Department of Ecology  
Nuclear Waste Program  
1315 West 4th Avenue  
Kennewick, WA 99336  
Fax: 509-736-3030  
Email: [lcus461@ecy.wa.gov](mailto:lcus461@ecy.wa.gov)

Name Jennifer L. Moore  
(Please Print)

Address 5403 Ballard NW #202  
Seattle WA 98107

290

*FFTF TPA Draft Change Package*  
Public Comment Period August 28 – October 14, 2002

**Comment Source:** Seattle Public Meeting (September 26, 2002)

**Commenter:** Jennifer Moore

**Comment:** I'd also like to applaud you for shutting down the FFTF reactor I think that it's the right decision. I would like to ask that the milestones are changed to reflect the 1995 agreement and that it be shut down within 6 years and fully deactivated by 2007, so that the remaining I believe 40million at the budget of 10mil. Per year,, so that would save 4 years, so that the remaining 40 million would be able to go back into cleanup where we need it most. Thank you

291

Piippo, Robert E

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From: FS Mueggler [fs\_mueggler@msn.com]  
Sent: Monday, September 23, 2002 11:21 PM  
To: Oliver\_A\_Al\_Farabee@ri.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

The Community Plan will not detract from clean-up budgets, will save the taxpayers over \$1 billion, AND will save millions of lives in the war on cancer.

The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

292

Piippo, Robert E

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om: Lena Muranaka [lmur@hotmail.com]  
nt: Wednesday, October 02, 2002 10:31 PM  
to: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

The Community Plan will not detract from clean-up budgets, will save the taxpayers over \$1 billion, AND will save millions of lives in the war on cancer.

The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

293

Piippo, Robert E

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om: Laurali Mylan [Laurali45@aol.com]  
nt: Monday, September 23, 2002 9:51 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

The Community Plan will not detract from clean-up budgets, will save the taxpayers over \$1 billion, AND will save millions of lives in the war on cancer.

The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:Laurali Mylan

294

Piippo, Robert E

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From: A. Joseph Nardi [nardiaj@msn.com]  
Sent: Tuesday, September 24, 2002 2:39 PM  
To: Oliver\_A\_Al\_Farabee@RL.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

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The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

From all that I have read, FFTF has a valuable use for the production of isotopes that is not available in other US facilities. I do not agree with the termination of another facility that makes us more dependent on other nations for a valuable resource.

Respectfully submitted:

Joseph Nardi

295

Piippo, Robert E

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From: John Nelson [jnelson@forum.utexas.edu]  
Sent: Wednesday, September 25, 2002 9:01 AM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

The Community Plan will not detract from clean-up budgets, will save the taxpayers over \$1 billion, AND will save millions of lives in the war on cancer.

The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

296

Piippo, Robert E

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om: Bond, Rick (ECY) [FBON461@ECY.WA.GOV]  
Sent: Thursday, September 19, 2002 2:52 PM  
To: 'Robert\_E\_Piippo@RL.gov'  
Subject: FW: FFTF shutdown

Please add to FFTF comments.  
Thanks,  
Rick

-----Original Message-----

From: Cusack, Laura  
Sent: Tuesday, September 17, 2002 10:43 AM  
To: Bond, Rick (ECY)  
Subject: FW: FFTF shutdown

Please add to the comment response.  
Thanks

Laura J. Cusack  
Wa State Dept of Ecology  
Project Management Section Manager  
(509) 736-3038  
Lcus461@ecy.wa.gov

-----Original Message-----

From: Rebecca Nelson [mailto:bnel@gorge.net]  
Sent: Tuesday, September 17, 2002 10:47 AM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Cc: Cusack, Laura  
Subject: FFTF shutdown

We do not want to keep paying for the FFTF reactor while we are struggling to get Hanford cleaned up. We oppose dragging out the process of FFTF shutdown. Thank you.

Rebecca Nelson  
David M. Braun

Piippo, Robert E

297

From: Farabee, Oliver A (A)  
Sent: Monday, September 23, 2002 5:56 PM  
To: Piippo, Robert E  
Subject: FW: FFTF shutdown

-----Original Message-----

From: Rebecca Nelson [mailto:bnel@gorge.net]  
Sent: Tuesday, September 17, 2002 10:47 AM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Cc: lcus461@ecy.wa.gov  
Subject: FFTF shutdown

We do not want to keep paying for the FFTF reactor while we are struggling to get Hanford cleaned up. We oppose dragging out the process of FFTF shutdown.  
Thank you.

Rebecca Nelson  
David M. Braun

298

Piippo, Robert E

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From: Scott Nelson [sntin@hotmail.com]  
Sent: Sunday, September 22, 2002 4:24 PM  
To: Oliver\_A\_Al\_Farabee@ri.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

The Community Plan will not detract from clean-up budgets, will save the taxpayers over \$1 billion, AND will save millions of lives in the war on cancer.

The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

299

Piippo, Robert E

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From: Gerald Nicholls [gnicholls2@comcast.net]  
Sent: Wednesday, September 25, 2002 7:36 AM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am strongly opposed to the TPA change package for accelerating the destruction of FFTF

Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

It is my understand that the DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

The Community Plan will not detract from clean-up budgets, will save the taxpayers over \$1 billion, AND will save millions of lives in the war on cancer.

This is a unique facility but the Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

Gerald P. Nicholls, Ph.D.

300

Piippo, Robert E

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From: Cristian S. Nicolau [cnicolau@nbnet.nb.ca]  
Sent: Tuesday, September 24, 2002 1:27 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

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The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

In the light of continuous growth demand for energy, nuclear is an option to be considered. The new reactors design can benefit a lot from the research of materials in FFTF.

Respectfully submitted:

301

Piippo, Robert E

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From: Farabee, Oliver A (A)  
Sent: Wednesday, September 25, 2002 10:51 AM  
To: Piippo, Robert E  
Subject: FW: Save the FFTF

-----Original Message-----

From: Erik Nielsen [mailto:nielsenec@lvcm.com]  
Sent: Wednesday, September 25, 2002 8:34 AM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: Save the FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

Medical Isotopes Save Lives. It's That Simple.

Sell it off. Don't tear it down.

302

Piippo, Robert E

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From: Leslie Nielson [lnielson@owt.com]  
Sent: Monday, September 30, 2002 7:20 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

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The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple. And how smart is it to import our medicine from other countries?

Respectfully submitted:

Piippo, Robert E

203

From: David M. Nieuwsma [dnieuwsma@turbonet.com]  
Sent: Saturday, September 28, 2002 7:40 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: Please restart the FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

Please don't waste our tax-funded national treasure - the Fast Flux Test Facility. This should not be shut down, but should be used for production of medical isotopes. It should also be available for military uses. We have no other facility with the capabilities of the FFTF.

As a former Hanford employee, I was always amazed and proud of the FFTF. Let's restart it and keep it working. The results will save lives.

Urgently submitted,



# Oregon

John A. Kitzhaber, M.D., Governor

304



OREGON OFFICE  
OF ENERGY

625 Marion St. NE, Suite 1  
Salem, OR 97301-3742  
Phone: (503) 378-4040  
Toll Free: 1-800-221-8035  
FAX: (503) 373-7806  
[www.energy.state.or.us](http://www.energy.state.or.us)

October 7, 2002

Mr. O. A. (Al) Farabee  
U. S. Department of Energy  
Richland Operations Office  
P.O. Box 550 (N2-36)  
Richland, WA 99352

Ms. Laura Cusack  
Washington State Department of Ecology  
Nuclear Waste Program  
1315 West 4<sup>th</sup> Avenue  
Kennewick, WA 99336

Subject: Oregon Office of Energy Comments on the "Proposed Schedule for the Shutdown of Hanford's Fast Flux Test Facility," and "Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Change Request for the Fast Flux Test Facility (FFTF)," August 16, 2002.

Dear Mr. Farabee, Ms. Cusack,

The Oregon Office of Energy offers the following comments on the proposed schedule and Tri-Party Agreement Change Request.

We are encouraged that the parties have come to agreement on milestones for the shutdown of FFTF. We believe the work can and should be done more quickly.

We encourage you to accelerate this work. Large annual expenditures for the reactor will continue until the reactor is fully shut down. Early completion will save money and reduce competition with other cleanup work.

As with other site work, we encourage DOE to include incentives in the contract to finish this work early.

Thank you for the opportunity to comment on the proposed FFTF milestone changes. Should you have any questions, please contact Mr. Dirk Dunning of my staff at (503) 378-3187.

Sincerely,

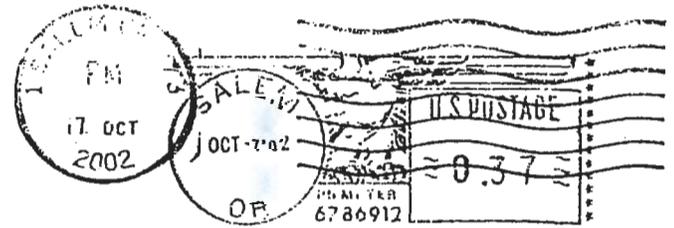
Ken Niles  
Administrator  
Nuclear Safety Division

Cc: Keith Klein, Richland Operations Manager  
Roy Schepens, Office of River Protection  
Mike Wilson, Washington Department of Ecology  
Nicholas Ceto, EPA  
Armand Minthorne, Confederated Tribes of the Umatilla Indian Reservation  
Russell Jim, Yakama Nation  
Pat Sobotta, Nez Perce Tribe  
Todd Martin, Hanford Advisory Board Chair  
Shelley Cimon, Oregon Hanford Waste Board Chair

Oregon

Office of Energy  
625 Marion St. NE, Suite 1  
Salem, OR 97301-3742

FORWARDING SERVICE REQUESTED



Mr. O.A. Farabee  
USDOE, Richland Operations Office  
PO Box 550 (N2-36)  
Richland WA 99352

99352+0550



305

Piippo, Robert E

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From: Charles R. Norris [blcrn123@eoni.com]  
Sent: Saturday, September 28, 2002 12:45 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

The Community Plan will not detract from clean-up budgets, will save the taxpayers over \$1 billion, AND will save millions of lives in the war on cancer.

The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

306

Piippo, Robert E

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rom: Thomas O'Dou [tom.odou@ccmail.nevada.edu]  
ent: Tuesday, September 24, 2002 10:49 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

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The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

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**PUBLIC COMMENT**

by: Gai Oglesbee  
607 Catskill Street  
Richland, Washington 99352

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**US DEPARTMENT OF ENERGY  
PUBLIC DEBATE HEARING**

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**SHOULD THE FAST FLUX TEST  
FACILITY REACTOR FINALLY BE DISMANTLED?**

**- IN REGARD TO PRIVATE CITIZENS' MEDICAL ISOTOPE CONTROVERSY -**

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**Location:  
RED LION MOTOR INN  
October 10, 2002  
7:30 p.m.**

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**DEBATE Contributions by:**

**Greg Wingard  
Gai Oglesbee  
Marc Garland  
Mike <foxyl@owt.com>  
Gerald Pollet  
Marlene Oliver**

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APPENDIX - 1959

July 24, 1959 SRE FUEL ELEMENT FAILURE, SANTA SUSANA, CALIFORNIA

Source: Excerpt from Nuclear Safety, March 1960, Vol. 1 - No. 3, Page 73-75

"SODIUM REACTOR EXPERIMENT INCIDENT"

"On July 24, 1959, the Sodium Reactor Experiment (SRE) was shut down to investigate abnormalities which prevailed in the operations during power run 14. A subsequent preliminary examination revealed that extensive damage had been sustained by several fuel-element clusters during this power run." . . . . .

"On July 13, 1959, a series of negative and positive reactivity excursions was observed; one of these excursions resulted in a 7.5-sec period. The reactor was scrammed manually. It is estimated that the reactor reached a peak power of 24 Mw (t). The cause of the reactivity changes is not known, but investigations are being made in an attempt to explain them.

"The fuel-element failures resulted indirectly from leakage of Tetralin into the primary sodium circuit. The mechanism of failure is thought to have been either the blockage of coolant passages or the fouling of fuel elements by the products of Tetralin decomposition, which caused subsequent overheating of some fuel elements.

"The fuel-element temperatures rose sufficiently to induce eutectic melting between the uranium and the iron in the type 304 stainless-steel fuel cladding.

"Complete melting of the cladding around 10 of the 43 fuel assemblies in the reactor is now known to have occurred. The resultant loss of cladding support led to a complete separation of the top and bottom halves of these 10 assemblies. In every case the zone of fracture was between one-third and two-thirds of the length measured from the top of the elements." . . . . .

"In run 13, which was a high-temperature run with a 1000° F sodium outlet temperature, after an initial scram as a result of an abnormal sodium flow rate, the reactor was returned to normal operating conditions. Several unusual situations then arose: the reactor inlet temperature started a slow rise; the log mean temperature difference across the intermediate heat exchanger started to increase, indicating changes in the heat-transfer characteristics; a thermo-couple in a fuel slug in channel 67 showed an increase from 860 to 945° F; some of the fuel-channel exit temperatures showed slight increases; and the temperature difference across the moderator abruptly jumped 30° F. Later examination indicated that a reactivity increase of about 0.3 per cent occurred over a period of about 6 hr and then increased about 0.1 per cent over the next three days of operation."

From: [goglesbee@att.net](mailto:goglesbee@att.net)  
To: Gaidine Oglesbee <[goglesbee@worldnet.att.net](mailto:goglesbee@worldnet.att.net)>  
Subject: FTF Issues and Hearing Thursday October 10, 2002 (fwd)  
Date: Thu, 10 Oct 2002 22:14:18 +0000

----- Forwarded Message: -----

From: [goglesbee@att.net](mailto:goglesbee@att.net)  
To: Greg Wingard <[gwingard@earthlink.net](mailto:gwingard@earthlink.net)>  
Cc: Gaidine Oglesbee <[goglesbee@worldnet.att.net](mailto:goglesbee@worldnet.att.net)>  
Subject: FTF Issues and Hearing Thursday October 10, 2002  
Date: Thu, 10 Oct 2002 17:57:00 +0000

----- Forwarded Message: -----

From: Greg Wingard <[gwingard@earthlink.net](mailto:gwingard@earthlink.net)>  
To: [goglesbee@att.net](mailto:goglesbee@att.net)  
Subject: Re: FTF - Silkwood issues ....[Hanford] Digest Number 508 (fwd) --  
FTF issue  
Date: Thu, 10 Oct 2002 04:51:35 -0700

I gored the ox. I have been getting numerous emails claiming I am a bastard that wants to cause suffering of cancer victims. I have attended numerous FTF public hearings. Why, oh why God can't it be over?

Who ever "Marc" is he seems to have a lot of government friends. I was just in a march for peace earlier tonight. Shutting down FTF is just part of the overall picture. I don't know how any sane person could advocate starting up an old sodium cooled reactor as a good idea for anything, cancer included.

They cause the problem, then they say you have to accept our solution. . .

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[goglesbee@att.net](mailto:goglesbee@att.net) wrote:

Greg:

Did you know the 100 pro-FTF activists were granted a hearing for this Thursday (Oct. 10) at 7:30 at the Richland, Washington RED LION MOTOR INN on George WA way across from the Federal building? The anti-FTF advocates associates reminded me to attend. This "thing" that keeps going causes dissention, big time, and enemies.

Then Marlene Oliver, National Assoc. of Cancer Patients, NW Chair (and National Cancer Institute, Consumer Advocate for Research and Related Activities) has had plenty of time to produce the evidence to public domain she claims "proves" her position.

Marlen Oliver quote: "Patients abroad with fatal cancers are being cured with medical isotope treatments targeted to their disease that are not available in this country. I have proof."

Afterall, both Olivers have had granted plenty of time and leway to "prove" their claims are accurate, peer reviewed, and adopted as findings of fact and conclusions of law.

I always ask the people I know who are diagnosed with cancer -- those who support the retention of the FTF reactor -- to ask themselves what they believed caused their cancers in the first place. I am very aware that certain cancer victims who could afford isotope therapy are deteriorating, again. Too many are oriented to believe they can survive forever using this method of therapy when their bodies are clearly rejecting the methodology that is a quite lucrative for the medical professionals. My dear friend Kay Sutherland died from complications caused by her double lung cancer disease October 12, 2001, after the Fred Hutchinson Cancer Research Center onocologists refused to treat her. Kay would have had financial

difficulty paying the cost for the treatments.

I doubt if too many of the sickened pro-activists even know that the fuel rods were loaded in the FFTF. This FFTF issue has gone on far too long costing the taxpayer millions of cleanup funding dollars after the legal battles were already weighed. This old, contaminated facility is only about 10 minutes from my home in Richland. The Hanford wild-fire came within a few yards of the reactor.

Who is Marc Garland <[mgarland@wam.umd.edu](mailto:mgarland@wam.umd.edu)> and what is his interest? I'll bet he is an opportunist who receives grants for his study of sick and dying victims.

Who in their right mind would license such a venture, anyway! Claude Oliver is a public servant. There is a Washington State law that may finally cause the Commissioner(s) to be linked to violations of that law. Mr. Oliver must know that if he has held private meetings with the pro-FFTF groups, he must disclose the truth. (See attached letter from Gerry Pollet (Director of Heart of America). Also, activist members of the Richland City Counsel would know they may, also, be in violation of the same law when they choose to formulate their FFTF diversification strategies using their government position as a ways and means to influence the community.

Gai

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From: [Hanford@yahoogroups.com](mailto:Hanford@yahoogroups.com) [ Save address ]  
To: [Hanford@yahoogroups.com](mailto:Hanford@yahoogroups.com)  
Subject: [Hanford] Digest Number 508  
Date: 9 Oct 2002 14:25:05 -0000  
----- Yahoo! Groups Sponsor ----->

There is 1 message in this issue.

Topics in this digest:

Re: Greg Wingard Comments Re: "Fluor Hanford Pitches FFTF Shutdown Plan" (10/5/02 Hanford Digest No. 504)

From: Marc Garland <[mgarland@wam.umd.edu](mailto:mgarland@wam.umd.edu)>

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Message: 1  
Date: Tue, 08 Oct 2002 16:49:32 -0400  
From: Marc Garland <[mgarland@wam.umd.edu](mailto:mgarland@wam.umd.edu)>  
Subject: Re: Greg Wingard Comments Re: "Fluor Hanford Pitches FFTF Shutdown Plan" (10/5/02 Hanford Digest No. 504)

Not to belabor the points already made, but a few other comments may be worthwhile:

As for Silkwood, I recall reading that an analysis of the radionuclides found in her system showed they were inconsistent with what she could have encountered at Kerr McGee, suggesting an intentional contamination by her or those who may have been trying to use her to press a case against Kerr McGee. Also, my father had to testify in the trial regarding fuel manufactured at Kerr McGee for FFTF and as I recall, his testimony was that no Kerr McGee fuel was in the initial fuel load and that all Kerr McGee fuel was subsequently reinspected (radiographing welds, etc.) and qualified by WHC prior to use.

More importantly, the comment "If the pseudo cancer victim group that has been pushing for keeping it open are legitimate, maybe they should look into linear accelerators" is simply pathetic. Come on Greg, if you're against FFTF, just say so - don't make a ridiculous statement that implies you have a technical justification for your position. Just say you are anti-nuclear,

anti-Hanford, or whatever - you're free to have whatever opinion you want, but you're completely wrong when you try to give people the impression that accelerators are adequate substitutes for FFTF.

FFTF supporters should look into accelerators? Who should they ask? How about International Isotopes? Perhaps their experience in flushing millions of dollars down the toilet on an accelerator without ever producing a single isotope would be valuable. How about Los Alamos National Laboratory? Perhaps their experience with upgrading their existing capabilities with the LANSCE accelerator that is years behind schedule and millions of dollars over budget would be valuable. Sorry about the sarcasm (not really), because I really don't want to give the impression that accelerators have no value in medical isotope production - they certainly do have great value.

For the production of the full range of isotopes required for therapeutic and diagnostic nuclear medicine, both reactors and accelerators are necessary. Without going into the physics involved, accelerators are great for producing proton-rich isotopes (such as are used in PET) and reactors are great for producing neutron-rich isotopes (most therapeutic isotopes are neutron-rich). Accelerators can drive high energy reactions that produce some of the neutron-rich isotopes, but reactors are usually much more efficient. Accelerators can also be used to produce neutrons which can then be used to produce neutron-rich isotopes (similar to a nuclear reactor), but there are a few drawbacks to that approach. One is that neutrons from an accelerator are about 1000 times as expensive as neutrons from a reactor. If irradiation costs are 1000 times as high, what happens when the pharmaceuticals are so expensive that Medicare and private insurers refuse reimbursement? The answer is that only the rich will have access to the best health care. Also, the intensity (term is used descriptively rather than scientifically) and energy spectrum of the neutrons produced in an accelerator are not sufficient to produce some isotopes in the required purity (specific activity for the scientists) or at all in some cases; a high flux reactor with high energy neutrons is required. Scaling up accelerators to do the job of reactors is incredibly expensive and poses significant technical challenges - that's what did in International Isotopes and that's why every large accelerator project undertaken by DOE has cost at least twice as much as planned and taken years longer to complete (if it wasn't killed prior to completion as many were).

The fundamental point is that accelerators should be used to produce isotopes when they are superior to reactors and reactors should be used to produce isotopes when they are superior to accelerators. This country has too few accelerators (not counting PET for which reasonably priced cyclotrons are available) and too few reactors to meet the health care needs of our people in the years to come. It is a shame that you people in Washington state (and Oregon) are about to get rid of the most capable reactor in this country.

----- Original Message -----

From: <foxyl@owt.com>  
Sent: Tuesday, October 08, 2002 3:53 PM  
Subject: Re: Greg Wingard Comments Re: "Fluor Hanford Pitches FFTF Shutdown Plan" (10/5/02 Hanford Digest No. 504)

Greg:

I was managing a Pu lab staffed with real people at the time I saw the Silkwood movie. In terms of real-world Pu lab management practices, the movie was so dishonest it made my skin crawl. Further one of my current professional colleagues was involved with the urinalysis from Silkwood. These data are utterly inconsistent with the world of Pu analysis from Pu workers, many of whom lived full and productive lives (see any recent work by G. Voelz). Some very funny stuff was going on with Silkwood. True to form in the twisted world of trial lawyers, it sure put her lawyer Jerry Spence on the map, who was a great addition to the world of legal fiction.

Mike

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On 08 Oct 2002 09:49 PDT you wrote:

-----Original Message-----

From: [Hanford@yahoogroups.com](mailto:Hanford@yahoogroups.com) [mailto:[Hanford@yahoogroups.com](mailto:Hanford@yahoogroups.com)]  
Sent: Saturday, October 05, 2002 8:08 AM  
To: [Hanford@yahoogroups.com](mailto:Hanford@yahoogroups.com)  
Subject: [Hanford] Digest Number 504

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Message: 1

Date: Fri, 04 Oct 2002 00:25:13 -0700  
From: Greg Wingard <[gwingard@earthlink.net](mailto:gwingard@earthlink.net)>  
Subject: Re: Fluor Hanford pitches FFTF shutdown plan

Best news I have heard in years. Drain the sodium in November. If the pseudo cancer victim group that has been pushing for keeping it open are legitimate, maybe they should look into linear accelerators. It is way past time to get this facility off line and shut down.

Some folks seem to have forgotten the sacrifice that Karen Silkwood made in blowing the whistle on the fuel rods that were loaded into this facility.

It is about time that it is taken off line, shut down, and cleaned up.

Regards, Greg

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Gerry Pollet's letter distributed to the Benton County Commissioners and Prosecutor follows.

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Dear Benton County Commissioners and Prosecutor:

Notice of your September 30, 2002 meeting and news coverage of its agenda clearly indicate that the commissioners will be in violation of the Washington Open Public Meetings Act (Chapter 42.30 R.C.W.) if you proceed with the planned executive session discussion relating to opposition to the deactivation of the USDOE's FFTF Nuclear Reactor at Hanford.

The notice for the meeting on September 30 clearly states that the commissioners intend to go into executive session, barring the public and media for the following item (listed as #6): "Executive Session - FFTF - Comnr. Oliver & G. Ballew (9:30)". Newspaper reports published Saturday, September 30th indicate that persons representing various private organizations will be permitted to be present, other than legal counsel for the County or Commissioners.

This meeting is in clear violation of RCW 42.30.030, which mandates that "All meetings of the governing body of a public agency shall be open and public and all persons shall be permitted to attend any meeting of the governing body of a public agency, except as otherwise provided in this chapter."

The notice for the meeting fails to specify any legally permissible exception or legally permissible purpose for an exception to the requirement that the County Commission meet in public.

Each Commissioner is personally subject to a civil penalty for violation of the Open Public Meetings Act. We are providing this notice so that you may choose in advance to avoid this serious breach of public duty and trust.

We must also note that the statutory exception allowing executive sessions for purposes of discussions with legal counsel is not applicable when, as indicated in the published report regarding your planned meeting, outside parties will be present (defeating arguments of legal privilege). Nor is that exception available to you to discuss other parties' possible litigation to prevent the deactivation of the FFTF Nuclear Reactor. Public discussion of potential litigation to accomplish a policy preventing deactivation of the FFTF Reactor is in now way likely to result in an adverse legal or financial consequence to Benton County.

Whatever political purposes and gain individuals seek in perpetuating the fight over the FFTF Reactor can not be worth sacrificing the fundamental principles of open government. Indeed, having an open debate, rather than listening only to like minds, about the wisdom of proceeding with litigation to block the timely deactivation of the FFTF Reactor would be in the best interests of the county's citizens. Delaying FFTF deactivation merely adds to the cost, and delays the date on which the USDOE must meet its obligation to use the savings from shutdown to fund Hanford Clean-Up.

This is not the first time that the County Commissioners have sought to hold an executive session relating to preventing the shutdown of the FFTF Reactor. On a prior occasion, the County Commissioners requested that I leave in order for them to continue to discuss FFTF in executive session with numerous members of the public representing private organizations and other local agencies.

However, upon reflection and advice of your legal counsel, you wisely decided that you would not violate the fundamental tenet of our democracy: that government should operate in the open for all citizens to observe. It can not be said that you have not had ample knowledge that excluding any individual or media will violate our State's Open Public Meetings Act, and that such violation would be willful.

In the public interest,

Gerald Pollet, JD  
General Counsel for  
Heart of America Northwest, and  
Legal Advocates for Washington  
phone:206-382-1014  
email:[office@heartofamericanorthwest.org](mailto:office@heartofamericanorthwest.org)

PS: I have Cc'd members of the news media as guardians of the public's right to have our government operate in the open.

RCW 42.30.120 provides: "Each member of the governing body who attends a meeting of such governing body where action is taken in violation of any provision of this chapter applicable to him...shall be subject to personal liability...." Action includes taking testimony or holding discussions.

[Non-text portions of this message have been removed]

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Greg Wingard comments and response from Martene Oliver, National Assoc. of Cancer Patients, NW Chair (and National Cancer Institute, Consumer Advocate for Research and Related Activities)

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Message: 2  
Date: Tue, 8 Oct 2002 15:41:12 -0700  
From: Greg Wingard <[gwingard@earthlink.net](mailto:gwingard@earthlink.net)>  
Subject: Re: Cancer and FFTF

I was in attendance at the last round of FFTF hearings in Seattle. Top people in the field of Oncology from the University of Washington, and Fred Hutchinson spoke specifically on medical isotopes as it relates to

FFTF. In short they said the supply of isotopes is adequate, that FFTF is not needed for medical isotope production, and that linear accelerators can produce medical isotopes much cheaper than converting and operating FFTF to do so.

Using isotopes in the treatment of cancer is relatively new, unless you want to count the use of radium as a source used to kill tumors, a method still currently in use in Thailand. I was not aware anybody had defined the best treatment isotopes, let alone the best method of delivery for the isotopes. I was under the impression that is still very much an evolving science.

I was involved in reviewing the design of the FFTF prior to construction. I felt then (as now) that the design is not safe, and spoke out against its construction. Finding out that fuel rods with falsified xray welds were shipped there, the same ones that Karen Silkwood died over, did little to inspire confidence. It is time, and past time for the sodium to be drained, the reactor shut down, and the site cleaned up.

If there is such a great need, as you say, for a research reactor to make medical isotopes, there are many to choose from around the country. We could also make a deal with our European, and Canadian neighbors, to get the isotopes we need. What we should not do is use medical isotopes as a pretext for re-opening the FFTF.

I am all for cancer patients getting the best treatment available. That is not the same as being in favor of operation of the FFTF. If you are that concerned about a perceived, or actual shortage in medical isotopes (of the rare variety you mention in your email below), I would suggest your efforts would be better spent in finding an operational reactor that would suit your needs, rather than trying to shove a multi billion dollar boondoggle down the tax payers throats. I can't offhand even count the number of hearings over the last decade on shutting down this failed experimental reactor. It is misguided to try and resurrect it at this late date.

I am interested though, what specific isotopes are needed that only can be produced in reactors, and what specific procedures are they used in?

Regards,

Greg Wingard

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Dear Mr. Wingard et al,

After speaking with doctors of nuclear physics and nuclear engineering from around the world, most of the best treatment isotopes MUST be made in nuclear research reactors. They CANNOT be made in accelerators. The laws of physics are fixed. The technology to produce these isotopes in accelerators DOES NOT EXIST. I have toured both nuclear research reactor AND accelerator facilities that produce isotopes in Europe, and their experts are UNANIMOUS. The Fast Flux Test Facility is UNIQUE in the world in its ability to make medical isotopes with the purity, variety, and quantity needed to treat cancer patients and those with other serious disease (AIDS, coronary artery disease, etc.). As a male, there is about a one in two chance of a physician saying "You have cancer." Patients abroad with fatal cancers are being cured with medical isotope treatments targeted to their disease that are not available in this country. I have proof. Scans "before" and "after" cancer is zapped with medical isotopes tell the truth. US physicians are stunned when they see them. To be against FFTF restart is to doom millions to unnecessary suffering and early death. Short-lived isotopes REQUIRE a domestic supply. This is a national health issue.

I represent nine million American cancer patients.

Marlene Oliver, National Assoc. of Cancer Patients, NW Chair  
(and National Cancer Institute, Consumer Advocate for Research and  
Related Activities)  
A.B. Zoology, Univ. of California at Berkeley  
M.Sc. Terrestrial and Freshwater Ecology, University of Victoria,  
British Columbia

PS The Belgian Green Party Energy Minister supports research  
reactors to make medical isotopes. She knows - she is a cancer  
patient. European governments own the High Flux Reactor. It is  
leased to a private company, NRG. Its primary mission is to produce  
medical isotopes. In Europe, cancer patients come first.

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308A

**FFTF TPA Draft Change Package**  
Public Comment Period August 28 – October 14, 2002

**Comment Source:** Seattle Public Meeting (September 26, 2002)

**Commenter:** Claude Oliver

**Comment:** As the chairman for Citizens for Medical Isotopes I have to oppose the DOE decision to accelerate decommissioning of the FFTF. The decision I've heard all these folks and their concern on Hanford waste and cleanup and we're all in support of that. There's not a person in this room who does not support Hanford waste cleanup. What the issue really is is that it's a national health issue. This is not a nuclear waste issue, it's a national health issue. It has not been dealt with as a national health issue. Mr. Farabee if I were to have conversations with you you know you could not say it has because the DOE is on record time and time again saying they're not going to deal with a national health issue. So our problem is getting a facility that's already built and the taxpayers paid for it, worth billions of dollars over to a health care delivery program. And folks the difficulty folks you've got to understand is the capacity for the researchers, they only need a thimble full of the isotopes to do the research work. When you get FDA approval like you do with Zeblon which just occurred this past February you suddenly need enough isotopes to treat thousands of patients, not 10 or 12 or 50 in a clinical trial program. And which one of you would like to be in the clinical trial and which one of you would like to be, you know your father, your son, your wife, your children treated with medical isotopes, or told no only 12-25 people can go in there, because we've got enough for researchers that is insane. We're not dealing the real issue and that's 100's of 1000's and millions of Americans that need health care treatment. And until this issue is gotten away from the Department of Energy we're not going to get the answers we need, we're can't get the answers here tonight and folks, I understand your frustration. We agree with you. This is not a nuclear waste issue, it is a national health issue. And as such, unfortunately the language in the budget has driven the contractor to they were looking at re-competing the contract out. And so all of concerns about safety procedures for workers all of the concerns for are we doing it right have been thrown out because the contractor has been threatened with the loss of his contract. So now throw the book out and the contractor came back with a real brass tacks guy, ready to get in there and back up the pick up truck and start tearing it down. And they're even saying in this report they are going to do it without procedures pre-approved. I can't imagine anyone would look at a issue at Washington state, the regulators, the governors office and

Facilitator You have 3 minutes

Thank you. I can't imagine that this approach would be taken by our governors office watching a planned start without it being pre-approved and the contractor to have the gall to say that we're going to start doing this and we'll get permission later on. I would love to debate my good friends on any side of the isle on this issue if we're going to turn people loose and start doing things without a pre-approved plan and they're going to get permission later on. This is absolutely heresy in terms of what nuclear safety, worker safety and the environmental safety issues are all about. I have to tell you this much with the plan going down as flawed as it is you have to expect that we're going to do something and we're not going to just say quote it's done because if you don't do it the right way, you know the legacy of the N Reactor and it went down and they didn't have enough money to fund it and then it shifted to the PUREX plant and then it shifted to the K-Basins, we now have instead of a 150M\$ cleanup we have a 1.6Billion\$ Boondoggle. That was because it was done with political expedience and pure garbage without a pre-approved plan. People didn't have the money in their budget to do it so they cut corners, and guess what

the taxpayer paid and paid and paid. I don't want another nuclear boondoggle in my back yard I want this done right or don't do it at all. If we take a look at what's really at stake the lives of our wives and our children and this national health care issue. Get it to another forum. We'll get it to another forum we'll do whatever we have to. We've already been to the White House. And the White house told us if your going to make it a national health care issue they have to come down here and weigh in. We're not going to go get them. So we're going to get them. We're teaming up with our organized labor friends. We're teaming up with our friends that are concerned about what's really going to happen on health care delivery in this country and we're going to bring in people that will listen at this issue and will get it addressed. Thank you very much.

308B

**FFTF TPA Draft Change Package**  
Public Comment Period August 28 – October 14, 2002

**Comment Source:** Portland Public Meeting (October 9, 2002)

**Commenter:** Claude Oliver

**Comment:** Thank you, I oppose the accelerated destruction of the Fast Flux Test Facility and I think your evidencing some of the frustration with the callers that were here earlier ready to testify that in fact are hanging up because they feel that their government has abandoned them for good and open input. This has not been an open process throughout the entire nation to look at the health effects in fact the Department of Energy on July 9, 2001 closed the door so health effects would not be looked at this issue. I don't want any person in this room to think that the Department of Energy looked at health effects, Mr. Farabee, cuz they did not. The health effects were closed effectively in the Mike Collin report, July 9, on the documentation signed off by Max Claussen on a request from Congressman Hastings. Some 20 days later US Secretary Health and Human services, Tommy Thompson responded and requested that health impacts would be reviewed before this reactor would be damaged. And unfortunately that has not ever been factored by the Department of Energy. There are regulatory compliance violations which are sited by Mr. Dobbin. We will put them in the record tomorrow night. And the record is going to reflect the seriousness with regards to violations that need to corrected before this process should be allowed to proceed. That is under the laws of America United States, and Washington State and even Oregon in terms of your regulatory compliance responsibilities to your citizens so we are somewhat concerned our regulators are going to sleep. Why should they go to sleep at this hour when there is not the details defined that need to be given. I'd like to say something about the commercial operation of the plant and facility. The commercial operation by a commercial group would be a for-profit group it could contract with the various government agencies for services that they need. It would not be a government subsidized program in fact it would be very much more cost effective for those services to be contracted through a private commercial group than the government doing it itself. Just to give you one example, the generation 4 new generation reactors the department of energy just now announced 6 directions to go in terms of the prototypes they would like to see tested over the next 30 years. Guess what? All 6 of those prototypes require advanced technology testing that can only be done in the United States at the Fast Flux Test Facility. I hate to give you this kind of news. Unless you like to tell your taxpayers go ahead and spend billions of dollars more and waste your money replacing something that your aligning to be destroyed today. This frankly is a huge waste of taxpayer's money, it's a fraud, it needs to be exposed and we're prepared to do that. To whatever means we have to take to get this exposed, we will do it. The jobs and technology issue: Why should we have people at our advanced educational institutions in America that are being whose careers are being closed down for them. Those jobs and careers I think Oregon's got pretty high unemployment I think Washington's right up there too if I'm not mistaken. Why should a professional career program in the medical industry be closed because of ignorance because of refusal to look at what people need and medical charts shows and expanding industry it's a shame

**Facilitator:** You have about 90 seconds left please

Thank you, it's a shame that our elected officials are turning their backs on a real need for their people in this region and this nation. We have this is a national health issue. We are concerned that our regulators

have gone to sleep and are not listening. There will be a remedy that will be obtained to bring this light forward and it will be looked at. Ya know our approach would save the taxpayers a billion dollars right off the bat. That wouldn't have to be spent destroying this plant and facility. Our approach would save a facility that could save millions of lives of people battling for cancer. I at this point in my public service career absolutely beside myself looking at regulators and I understand that you have a job to do but I think your bosses really have missed the whole point of what their responsibilities are to the American people. And we're going to press it and we're going to bring it forward no matter what venue we have to go to if it's a courtroom or if it's a presidential office, President Bush will have on his desk from Secretary Tommy Thompson 2 criteria that need to be addressed.

Facilitator: 30 seconds please

The 2 criteria on medical isotope focus on the lack of research isotopes that are not available for people in Oregon and throughout this nation that should have tests being performed on research isotopes. The second being our heavy dependence on foreign isotopes with 90% of them imported means this fact: that with FDA approval coming in many of these areas your going to have masses of people that should be getting treated with medical isotopes that cannot be treated. Secretary Thompson has that report on his desk and we're looking for him to sign off on that shortly. So we're prepared to address this issue wherever we have to do it. The accelerated closure of FFTF is irresponsible we have major environmental issues, compliances that are not proper. Thank you

303C

**FFTF TPA Draft Change Package**  
Public Comment Period August 28 – October 14, 2002

**Comment Source:** Richland Public Meeting (October 10, 2002)  
**Commenter:** Claude Oliver

**Comment:** OK, thank you...for inclusion of the record. Ya know, this project is it brings out the best in everybody, because they say FFTF (He's not speaking into the microphone.... Can't here what he's saying too well\_

**Facilitator** Excuse me Mr. Oliver, can we get you to speak into the microphone. Otherwise we can't

Will do. Rick Bender, 100-200,000 strong with the Washington State Labor council has signed in. We had 7500 signatures from our college kids that were gathered from people all over the United States saying Mr. President look what's going on here. On and on and on it goes. And we're going to take presentations down to the Umatilla nation. I respect Armand's opinion, I disagree, but we're going to take them down there. They have people who have cancer and they need to hear about real treatments that are saving lives. And I think if you have some of those who have cancer some of the brave guys up front are going to be pushed to the back of the room for people going to get those cures. I'd like to borrow a phrase from Bill Clinton, ya know he came to be president he said; It's the economy, stupid? Not any indifference to my good friend Mr. Farabee or Ms. Cusack but; It's national health care, stupid. And that's what it really is. Lets get down to brass tacks. The Port of Benton, Benton County and the City of Richland have formed a Community Reuse Agency. And we want to take this property off of the Federal Governments hands. We agree shutdown DOE for this purpose, but turn it over to private hands. Get it into somebody's hands that can do something with the facility, rather than just destroying it. And so, ya know look it here. We're proposing a way that will save a billion dollars to the taxpayer, there are technologies that have yet to be tested in the Generation 4 program and Amber, I don't think you'd want to advocate that people go find billions of dollars more to build new reactors to test Gen 4 that will slow that process down by 10 years and cost the taxpayers billions more. It doesn't make sense! I'm out of my armchair and I'm mad. There is no way we're going to let this issue go down. This issue is going all the way to the President of the United States and we're not stopping until we get his affirmative I see what you mean. We're going to turn it over to commercial operation. We're going to get together and make it work for our nations best interest. So the City, the Port and the County have teamed up on a Community Reuse Agency to ask under Federal Law that the property be surplusd to this community rather than destroy it. Those laws exist, that's what we need to do with the property, It's national health care stupid!

**Facilitator** You have about 2 minutes Sir,

Thank you very much, under this scenario, we have the Fast Flux Test Facility we have other facilities in proximity of several billion dollars in value that would be totally worthless if the sodium was drained and the deactivation was accelerated. This has got to be one of the stupidest acts that would ever occur without ever allowing the public private partnership to happen. Department of Energy has the greatest opportunity to make a success story in its' entire history right here that would transform nuclear medicine for the United States and the world. We're not gonna let that go down. I hope the recording's coming through OK now. As we take a look at the Port of Benton, we look at a financial conversion package. We'll go out and find 250-300 million to convert the necessary facilities for the production of isotopes. We'll go down to our operating group, DOE will have it's decommissioning funded over a 30 year time frame, so the taxpayer won't have to fund it. You will not have the hodge podge game going on in

cleanup or not, and I want to tell you folks right now the acceleration of this is going to jeopardize Hanford Cleanup funding. That contractor does not have the money in his back pocket, Congress has to give it up and nobody is saying what they're really going to fund. Don't buy the lie. You'll be back here 2 years from now saying Oh, you were jeopardizing Hanford cleanup bye... Don't start the process unless you know what's really going to happen. And that's what they are asking you to do is start a process, destroy it, and not even have the money available. Don't go there. The Community Reuse has a better idea that really works.

Facilitator      You have about 30 seconds sir to wrap up.

Thank you. Let me jump on down we've talked about cost effective procedures, saving money, they we go, Ladies and Gentleman, when you start to take a look at a 16 million procedures a year that are occurring with nuclear medicine procedures and right here, FDA approval is coming in that's going to mean millions of people are going to demanding isotope treatments in the United States of America. You have to demand your elected officials do better than walk on this and believe me we're going to the governor, we're going to our Senators, we're going to the President until we get the right answer. Thank you very much this is not an issue that is going away, it's an issue that's coming back again and again. It's National Health Care, stupid.



3315 West Clearwater Avenue  
Kennewick, Washington 99336  
Phone: 509-737-8463/Fax: 509-737-9524  
www.medicalisotopes.org

October 10, 2002

Mr. O.A. (Al) Farabee  
U.S. Department of Energy  
Richland Operations  
P.O. Box 550 MS: N2-36  
Richland, Washington 99352

Ms. Laura Cusack  
Washington State Dept. of Ecology  
Nuclear Waste Program  
1315 West 4<sup>th</sup> Avenue  
Kennewick, Washington 99336

Dear Mr. Farabee and Ms. Cusack:

We are opposed to the accelerated Tri-Party Agreement milestones specifically as they are now being applied to the Fast Flux Test Facility. Some of the legal merits against accepting the accelerated milestones are found below:

**Merits Of A NEPA Lawsuit Against DOE  
For Its Failure To Fully Analyze The Environmental Consequences  
Of Its Decision To Permanently Demolish The Fast Flux Test Facility (FFTF)**

Material Matters Exist That DOE Either Failed To Analyze, Or Inadequately Analyzed, When It Purported To Perform Its NEPA Analyses Prior To The Issuance Of Its ROD In January, 2001. In its 1995 *Environmental Assessment (EA)*, DOE conceptually broke the permanent demolition of the FFTF into three phases: **Phase I – deactivation**, **Phase II – long-term surveillance and monitoring**, and **Phase III – D&D** (decontamination and decommissioning) of the facility. However, in both the 1995 *EA* and the December, 2000 *Programmatic Environmental Impact Statement (PEIS)*, despite the fact that **Phase III – D&D** is arguably the most environmentally-consequential of these three phases, DOE expressly avoided analyzing the environmental impacts/consequences of **Phase III – D&D** of the FFTF. This failure is a violation of the NEPA prohibition against “segmentation” and is not compliant with the NEPA requirement for analyzing “cumulative impacts” of a federal agency undertaking. (See 40 CFR 1508.25(a)(1)(i), (ii), and (iii); 1502.4(a); and 1508.27(b)(7).)

3 Packages  
formally submitted at 10/10 public  
meeting by Claude Oliver

Al Farabee  
10/10/02

308

1. In both its 1995 *EA* and its December, 2000 *PEIS*, DOE failed to analyze, or inadequately analyzed, the matters identified in the January 8 and 10, 2002 Foster Pepper letters.
2. In both its 1995 *EA* and its December, 2000 *PEIS*, DOE failed to coordinate its NEPA analysis with the federal Department of HHS – e.g., to analyze the savings to the federal Medicare & Medicaid programs resulting from the successful use of medical isotopes produced at the FFTF for medical research and treatment.
3. In both its 1995 *EA* and its December, 2000 *PEIS*, DOE failed to coordinate its NEPA analysis with the federal Department of Agriculture – e.g., to analyze the benefits to the meat industry of meat-irradiation isotopes produced at the FFTF to kill harmful/deadly bacteria (such as *e. coli*).
4. In both its 1995 *EA* and its December, 2000 *PEIS*, DOE failed to coordinate its NEPA analysis with the federal NASA administration – e.g., to analyze the need for radioisotopes produced at the FFTF for power systems and heaters to be used in future space missions.
5. In both its 1995 *EA* and its December, 2000 *PEIS*, DOE failed to analyze the potential for – and failed to adequately invite comments about – DOE exercising its authority under the Atomic Energy Act and the Department of Energy Organization Act to sell/lease the FFTF facility to either local government(s) or private entities.

“New Circumstances” Have Occurred/Arisen – Since The Issuance Of DOE’s ROD In January, 2001 -- Which Therefore Require DOE To Perform Supplemental NEPA Analysis

1. On or about September 18, 2002, DOE transferred the FFTF project from DOE’s Office of NE (Nuclear Engineering, Science, and Technology) to its Office of EM (Environmental Management). The Office of EM is where the Hanford cleanup dollars are funded. Thus, the permanent demolition of the FFTF would now compete for the already-scarce Hanford cleanup dollars. In the “Shutdown Plan” submitted by Fluor to DOE on September 30, 2002, Fluor’s low-bid estimate prescribes a need for \$547 Million of Hanford cleanup money to effect the first seven (7) years of demolition of the FFTF.
2. When DOE issued its ROD in January, 2001, the country was sitting atop a fat federal budget surplus; in the meantime, however, we have experienced a severe and sustained stock market slumping, we are fighting a 9/11 war against terrorism, we are on the verge of commencing a war against Iraq, and our federal budget surplus is gone. The country cannot afford to spend hundreds of millions (or billions) of dollars permanently demolishing the FFTF, only to spend new dollars on rebuilding a facility to take its place.
3. The July 27, 2001 *Holland Report* is essentially a treatise on how badly the country needs the FFTF and why the FFTF should not be shut down.

4. As partial justification for selecting its "preferred alternative" in the December, 2000 *PEIS* to permanently demolish the FFTF, DOE wrote therein as follows:

As a potential option for the longer-term future [for production of radioisotopes in the absence of the FFTF], DOE proposes to work over the next 2 years to establish a conceptual design for an Advanced Accelerator Applications (AAA) facility.

However, DOE has since acknowledged that a facility like the FFTF is needed in order to test and bring such a conceptually-designed new facility into operation.

5. In both its 1995 *EA* and its December, 2000 *PEIS*, DOE explains that all the unirradiated fuel from the FFTF will be stored in storage casks at locations at the Plutonium Finishing Plant (PFP). However, there are no facilities or plans available to affect this fuel-storage "intent."

In conclusion, we sincerely hope that legal action can be avoided; however, if necessary, we are prepared to proceed.

Sincerely yours



Claude Oliver, Chairman  
Citizens for Medical Isotopes

- c: White House, Ms. Karen Knutson, Office of Vice President Cheney  
HHS Secretary Tommy Thompson  
Representative Richard "Doc" Hastings  
U.S. Department of Energy, Secretary Spencer Abraham  
U.S. Senator Patty Murray  
U.S. Senator Maria Cantwell  
Washington Congressional Delegation  
Governor Gary Locke  
Dr. William Raub, HHS, Deputy Asst. Secretary for Science Policy  
Sandra Howard, HHS, Office of Asst. Secretary  
City of Richland  
Port of Benton  
Benton County



# FAX COVER SHEET

Page 1 of 6

Date: October 10, 2002

<p><b>FROM:</b> Community Re-Use Agency 3100 George Washington Way Richland, Washington 99352 E-mail: <a href="mailto:cra@portofbenton.com">cra@portofbenton.com</a></p> <p><b>TELEPHONE:</b> 509-375-3060, Ext. 129</p> <p><b>FAX NUMBER:</b> 509-375-5287</p>	<p><b>TO:</b> Ms. Karen Knutson, Deputy Asst. to V.P. Cheney HHS Secretary Tommy Thompson Congressman "Doc" Hastings</p> <p><b>TELEPHONE:</b></p> <p><b>FAX NUMBER:</b> 202-456-6231 202-690-7203 202-225-3251</p>
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## MESSAGE:

Ms. Knutson, Secretary Thompson and Congressman Hastings:

The City, County and Port will be asked on Monday, Tuesday and Wednesday of next week to take legal action against the United States Department of Energy to **STOP DESTRUCTION** of the Fast Flux Test Facility.

This would be a national health tragedy that must be avoided! Could you help so we do not have to sue?

Thank you,

Claude Oliver  
Benton County Commissioner  
Chair – Citizens for Medical Isotopes

- c: Citizens for Medical Isotopes
- City of Richland
- Port of Benton
- U.S. Senator Patty Murray
- U.S. Senator Maria Cantwell
- Governor Gary Locke
- Dr. William Raub, HHS, Deputy Asst. Secretary for Science Policy
- Sandra Howard, HHS, Office of Asst. Secretary



Rick Berglund  
 Robyn Blatter  
 Toby Bouchey  
 Michele Brich  
 Mel Chapman  
 Jim Ciha  
 Frank Cole, MD  
 Mike Contini  
 Carol Darley  
 Clint Didier  
 Ken Dobbins  
 Any Evans  
 Dennis Fitzgerald  
 Moe Frix  
 Kitty Gandee  
 Marc Garland  
 Rick Giever, MD  
 Ken Hagel  
 Suzanne Heaston  
 Floyd Ivey  
 Ron Kathren, Ph.D.  
 Bruce Klos  
 LeRoy Korb, MD  
 Bill Lampson  
 Mike Lawrence  
 Patty Leistriz  
 Rick Locke  
 Jean McKenna  
 Wanda Munn  
 Claude Oliver  
 Jim Paglieri  
 Rick Peenstra  
 Laurel Pijppo  
 Haakon Ragde, MD  
 Ray Robinson, Sc.D.  
 Bob Schenter, Ph.D.  
 Dave Smith  
 Bill Stokes  
 Alan Waller, PH.D.  
 Bernie Waller, CPA  
 Jerry White  
 Marguerite Yoshino

Citizens for Medical Isotopes  
 Benton Franklin Title Building  
 3315 W. Clearwater Ave.  
 Kennewick, WA 99336  
 (509) 737-8463  
 Fax (509) 7379524  
[cmi@owl.com](mailto:cmi@owl.com)  
[www.medicalisotopes.org](http://www.medicalisotopes.org)

**SURPLUS REACTOR "JUST WHAT THE DOCTOR ORDERED"**

**Portland, OR, Oct. 7, 2002...** Many leading cancer researchers and practitioners consider Hanford's Fast Flux Test Facility (FFTF) the best hope of getting highly successful medical isotope treatments to the public in the near term. FFTF is the world's only existing facility with the engineering capability to produce a variety of important medical isotopes in the quantities and purity levels required throughout the world for the next 30 years.

What's at stake are American lives ... 1,500 American men, women and children die from cancer *each day* when *none* of the conventional treatments work for them. This is like September 11 every day—the equivalent of three fully loaded 747's crashing. Medical isotope treatments are achieving remarkable success in treating a variety of cancers—many in patients considered "terminal" after all conventional treatments have failed. The Food and Drug Administration has already approved several treatments, and more are on the way.

As these powerful cancer treatments are being approved, the increasing worldwide shortage of medical isotopes is growing critical. Despite a sound scientific, economic and humanitarian foundation for the commercial operation of FFTF to make medical isotopes, the Department of Energy declared the FFTF surplus, and ordered the state-of-the-art reactor destroyed.

Once the reactor is declared surplus, the Department, by law, is required to consider transfer of the facility to qualified community groups such as the Richland Community Reuse Agency for reuse. The Richland agency includes the Port of Benton, the Benton County Commissioners and the City of Richland. The Community Reuse Agency is *not* asking the Department of Energy for taxpayer dollars to operate the reactor. Operation would be financed with private sector dollars *and* the Agency has attracted the serious interest of leading world nuclear corporations infinitely capable of commercially operating the reactor

The Department of Energy has refused to consider FFTF from a national health issue policy view, but Health and Human Services Secretary, Tommy Thompson, assembled a national medical isotope review team to study FFTF capability. The team has reported back to him, and the Secretary is deciding whether to advise President Bush that national health warrants action.

The Department of Energy is not addressing the Community Reuse Agency's reuse proposal and instead is pulling out the stops in an unprecedented acceleration plan to destroy what is arguably the cleanest facility at Hanford and the most advanced nuclear facility in the world. The Department and its contractors are pushing paperwork and funding to move the date for sodium drain from June 2003 to *next month*. Citizens for Medical Isotopes expects to sue the federal government in the next three weeks to halt accelerated destruction of FFTF.

Once the first hole is drilled to start sodium drain, that's the end of a \$2 billion dollar resource that could revolutionize the way we treat cancer in this country. Worse than that, there is not another existing facility in the world that can do the job until a new one is built. Building a new reactor is estimated to take 8-15 years at a cost of \$7-8 billion and a potential human loss of more than 5 million untimely deaths, which may include you, your friends and your family.

"There is no next year or year after," says Claude Oliver, Chair of the Richland Community Reuse Agency. "We either step into a destiny role or forever wish we had. National health must be considered before a bureaucratic decision is allowed to destroy this \$2 billion dollar resource that could prove instrumental to millions of cancer patients in their battle for life.

The accelerated schedule is being discussed in public meetings held in Portland and Richland.

**The Portland meeting will be Wednesday October 9<sup>th</sup> from 7:00-10:00 p.m. at the Radisson Hotel – Mt. Hood Room. The address is 1441 NE 2<sup>nd</sup> Avenue.**

Doctors, cancer patients, scientists and other FFTF advocates will testify against acceleration.

**FFTF**

**RALLY For LIFE**

Speakers  
Information  
Entertainment  
Food

**5:45pm**

**Thursday, October 10, 2002**

**John Dam Plaza  
(across from Federal Bldg)**

**Richland**

**Prior to the TPA public hearing  
At Red Lion**

**7:00pm**

**Sponsored by: CMI Citizens for Medical Isotopes  
Medical Isotopes Saves Lives – It's That Simple!**

**DOC HASTINGS**  
4TH DISTRICT, WASHINGTON

**ASSISTANT MAJORITY WHIP**

**COMMITTEE ON RULES**

**COMMITTEE ON THE BUDGET**



1323 LONGWORTH HOUSE OFFICE BUILDING  
WASHINGTON, DC 20515  
(202) 225-5810

2715 Sr. ANDREWS LOOP  
PASCO, WA 99301  
(509) 543-8306

302 E. CHESTNUT  
YAKIMA, WA 98901  
(509) 452-3243

# Congress of the United States

## House of Representatives

October 10, 2002

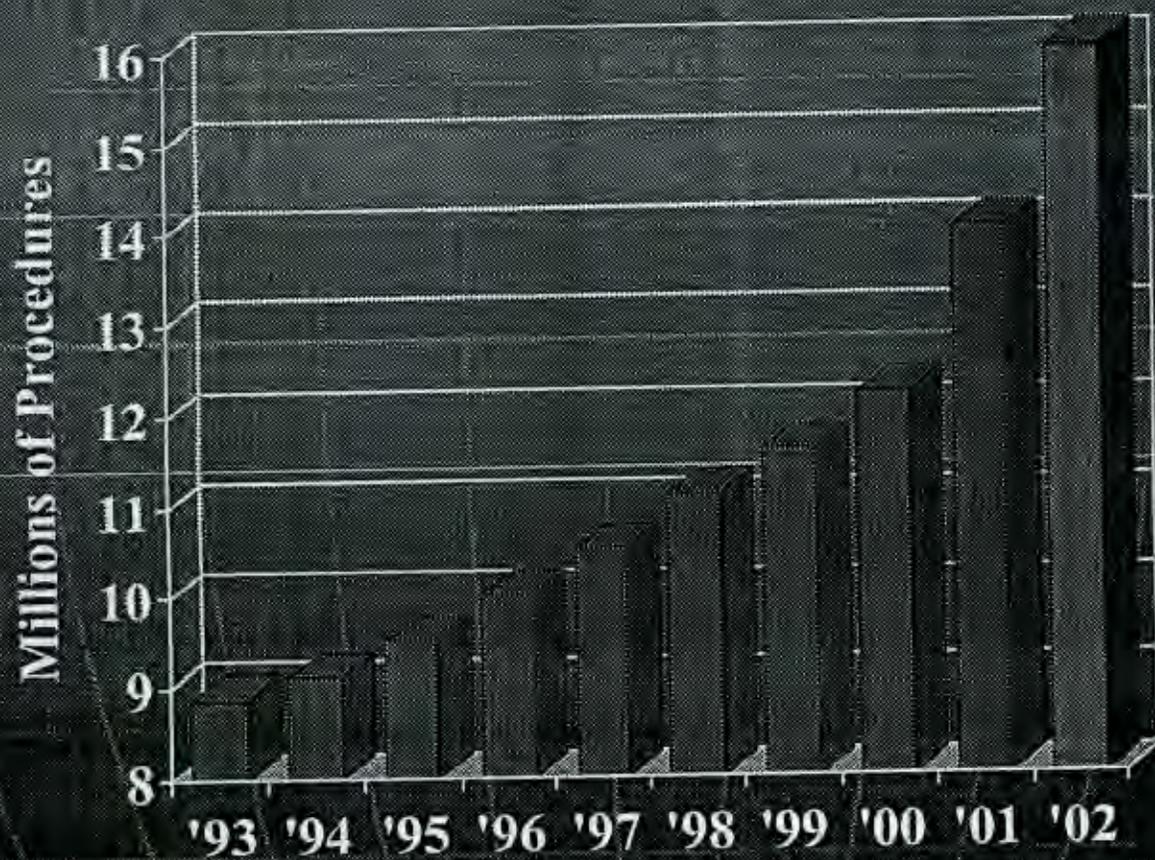
Fellow supporters:

I regret that today's vote authorizing military action against Iraq made it impossible to be with you tonight. However, I want to congratulate you on your continued support for FFTF. An undertaking of this magnitude can only succeed with strong, broad-based support across the community – and you have been there every step of the way.

Make no mistake about it -- the Department's decision to shut down FFTF is a tragedy. Together, we have fought this battle for the past eight years united in our knowledge that FFTF would save lives. Your presence tonight makes a strong case that regardless of the outcome on FFTF we must never give up on making medical isotopes widely available to every cancer patient who needs them.

A handwritten signature in black ink, appearing to be "D. Hastings".

# Growth of Nuclear Medicine Procedures



# **Nuclear Medicine's Future is Bright**

- **Several new radiopharmaceuticals approved in last few years**
- **Several more will be approved in future**
- **There will be significant growth in therapeutic products**
- **There must be an adequate isotope supply to fuel that growth**

# Review of the Decision to Permanently Deactivate the Fast Flux Test Facility



*July 27, 2001*

U.S. DEPARTMENT OF ENERGY



Department of Energy  
National Nuclear Security Administration  
Washington, DC 20585

JUL 09 2001

Mr. Michael Holland, Manager  
Brookhaven Area Office  
53 Bell Avenue, Bldg. 464  
P. O. Box 500  
Upton, NY 11973-5000

FAST FLUX TEST FACILITY COST AND SCHEDULE REVIEW COMMITTEE REPORT

Dear Mr. Holland:

The Fast Flux Test Facility Cost and Schedule Review Committee (The Committee) has completed the work assigned. A review of the estimated cost and schedule to either restart or deactivate the Fast Flux Test Facility (FFTF) has been conducted and substantial relevant background material considered. The Committee has concluded on the basis of this information that the estimates are reasonable and adequate to serve as an attribute in making a decision on the future of the FFTF. The full committee is in agreement with the report as it is attached.

I want to add an observation related to the costs considered. They are as low as they ever will be in the future. The capability to either restart or deactivate the FFTF is slowly deteriorating with time as the staff leaves and as equipment ages. The staff will have to be replaced and trained, and the equipment is likely to become less reliable which will increase the time and cost. The deactivation costs are a legacy that must be addressed in all cases and will be substantially greater if the decision is to restart and then deactivate a restored FFTF.

Thank you for the opportunity to participate in this review.

Very Respectfully,

Max J. Clausen, Director,  
CLWR Tritium Production Project  
Office of Defense Programs  
National Nuclear Security Administration



**Fast Flux Test Facility (FFTF)**  
**Cost and Schedule Review Committee Report**  
**July 9, 2001**

**Executive Summary**

The Cost and Schedule Review Committee met at the Hanford Site with DOE and FFTF operations contractor personnel Tuesday, June 19, through Friday, June 22, 2001. The Review Committee was charged to evaluate the reasonableness of the cost and schedule estimates for startup of the FFTF with upgrades, expedited startup of the FFTF without upgrades, and deactivation of the FFTF; or whether these estimates require additional development and evaluation.

The Review Committee was favorably impressed with the condition and radiological cleanliness of both the FFTF plant and immediate site. The plant has been operated and maintained with a disciplined configuration management program, by a core of a trained, experienced operating staff that remains. Both of these factors will aid in minimizing the cost and effort to perform either restart or deactivation.

- The Review Committee concluded that the cost and schedule estimates for both the FFTF startup and deactivation scenarios were reasonable. The cost and schedule estimate are as follows: for startup with upgrades, \$279.7 million over three years six months; for the expedited startup without upgrades, \$250.3 million over three years one month, and; for deactivation, \$249.7 million over five years eight months. The Review Committee did not identify any significant work items that were not already being planned or deemed to be unnecessary. The expedited startup scenario saves five months and about \$29.4 million; however, the Review Committee considered the risks associated with the expedited startup scenario unwarranted because of their potential for future cost and reliability impacts.

The Review Committee identified concerns regarding the maturity of the scope, schedule, cost, and contingency for the startup and deactivation scenarios. Additional work is needed in developing adequate evaluation of project risks before authorizing any of these scenarios as a project. However, when the Review Committee looked at the history of the cost and schedule reviews conducted in the past, the current estimates fall within a reasonable band. The Review Committee believes the current estimates are sufficient to support a decision among the scenarios.

Congressman Hastings had requested that the Department work with Health and Human Services (HHS) to study potential savings to Medicare and Medicaid from the use of medical isotopes and their production at the FFTF. Such a review was found to be beyond the scope of this Review Committee. \*

↑  
Tom Grant  
HHS -

others are fairly good but may need minor correction in the timing and rate of growth because of slower than expected FDA approvals. New radiopharmaceuticals have not been approved at a rapid rate. The therapeutic applications have had few approvals but two or three new drug applications (NDA'S) should be approved in the next 12 months if there are no problems in the Phase 3 clinicals.

This potential regulatory problem, along with the question of reimbursement by Medicare and third party payors, could seriously delay the market introduction of these new products. Dr. Ellen Feigal, Deputy Director of the National Cancer Institute (NCI) has recently expressed a concern that many of the potential agents (including therapeutic radioisotopes) are not being approved in a reasonable time. There could be even more delays if some of the radioisotope products now under development are delayed from clinical studies because of lack of a reliable supply of the radioisotope. As a result, NCI has not been able to meet its objectives in curing some of the diseases on their priority list. Dr. Feigal's group has sponsored several meetings with developers of new products and appropriate regulatory agencies and third party payors to have all parties better understand potential problems in gaining new drugs approved to market and reimbursement. NCI/NIH support for using the FFTF to supply key radioisotopes for these new products should be determined.

The higher specific activity of radioisotopes (such as Sr-89, Sm-153 for current products, and Ho-166, Sn-117m, Lu-177 and Re-186) will enhance the acceptance and effectiveness of these new therapeutics. However it is difficult to envision that the profit from their production alone will cover the operational costs of the FFTF, at least in the first 5-10 years of operation.

Since the OMB has had objections to DOE spending in areas of commercial radioisotope production and points to the unsuccessful efforts in Mo-99 and I-125 production after DOE spent considerable funds, it would be prudent to hear their concerns about this proposal discussed in 2.1 below. They may be willing to support this effort if it can be shown how other program costs might be reduced by utilizing the FFTF for multiple purposes and by consolidating all the DOE isotope programs under one commercial entity which would be more cost effective.

## 2.1 Advanced Nuclear and Medical Systems (ANMS)

This is the most complete proposal for restarting, operating and eventual shutdown for the FFTF: By taking complete control of the facility the ANMS team assumes responsibility for operating and maintaining the reactor in a cost effective manner, setting priorities, and serving customer needs while satisfying regulatory requirements. However, it is hard to believe that the operation will provide enough income in three years (from startup in 2005 to break-even in 2008) to support the FFTF operating program. Other income producing activities will be necessary as well as a more detailed financial analysis of the overall proposal.

U.S. Department of Energy

Review of the Decision to Permanently Deactivate the Fast Flux Test Facility,

July 27, 2001



THE SECRETARY OF HEALTH AND HUMAN SERVICES  
WASHINGTON, D.C. 20201

JUL 30 2001

The Honorable Doc Hastings  
U.S. House of Representatives  
Washington, D.C. 20515

Dear Mr. Hastings:

Thank you for your letter requesting that a study of potential savings to the Medicare and Medicaid programs that would be realized by medical isotope technology be incorporated in the Department of Energy's 90-day review of the Fast Flux Test Facility.

My staff have had preliminary conversations with the Department of Energy, and we understand that Mr. Michael D. Holland, Manager of the Brookhaven Area Office is leading the 90-day review of the Fast Flux Test Facility. I have asked Dr. William Raub, my science advisor, to work with him and others in the Department to do what we can to ensure that any decision that is ultimately made does not jeopardize the availability of isotopes for medical purposes.

I appreciate your bringing this issue to my attention. Please call me if you have other thoughts or questions.

Sincerely,

Tommy G. Thompson

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# Northwest



Spons  
UW Phy  
Trust in

## Hanford reactor ordered closed

### FFTF restart too costly, Energy Dept. chief says

Thursday, December 20, 2001

By CAROL SMITH  
SEATTLE POST-INTELLIGENCER REPORTER

The U.S. Department of Energy yesterday ordered the permanent shutdown of the Fast Flux Test Facility on the Hanford Nuclear Reservation -- scuttling a five-year campaign aimed at using the experimental reactor to make medical isotopes.

The decision was celebrated by environmentalists and health groups, but it disappointed researchers and economic-development boosters.

"This is like Seattle losing Boeing," said Darrell Fisher, a researcher at Pacific Northwest National Labs in Richland, who uses isotopes in his work. "It's a significant part of the local economy."

But a restart of the FFTF is impractical and could cost the government as much as \$2 billion, Energy Secretary Spencer Abraham concluded.

The decontamination and dismantling of the 23-year-old facility, which employs about 250 people, could take four to six years and cost an estimated \$300 million, according to the DOE.

The 400-megawatt reactor, originally designed to test advanced nuclear fuels, materials and reactor safety designs, was shut down in 1993. Since then, various groups have tried to keep it operating -- as an economic powerhouse and producer of isotopes for treatment of cancer and other diseases.

"It will mean the loss of some jobs," said Sam Volpentest, executive vice president of the Tri-City Development Council, a non-profit community-development organization based in Kennewick. "There are a lot of

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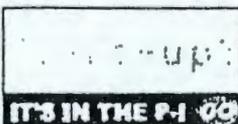
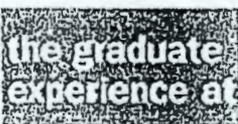
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AFFILIATES



**FAST FLUX TEST FACILITY  
Deactivation and D&D  
Accelerated Closure Team**

**Phase I Report - February, 2002**

**END STATE COST PROFILE CASES - SUMMARY**

DESCRIPTION	TEC	COMPLETION
Current documentation (BEMR) - not credible/reference only	\$ 587M	2045
ACT estimate of current plan	\$2,177M	2043
Early closure to Greenfield	\$1,193M	2018
Early closure to entombment	\$ 810M	2018
Late Na residuals & entombment	\$1,548M	2043
\$36.1M in FY 2003, late Greenfield	\$2,191M	2043
\$36.1M in FY 2003, accelerated deactivation	\$2,166M	2043
Early Na residuals/late entombment	\$1,237M	2043
Remove reflectors/early Greenfield	\$1,288M	2044

## Panel presents shutdown proposal

This story was published Wed, Jul 31, 2002

**By John Stang**  
**Herald staff writer**

The Fast Flux Test Facility can be shut down faster and cheaper than current estimates, an independent panel of experts believes.

Last Friday, the panel submitted recommendations to Fluor Hanford, which oversees the dormant research reactor. Fluor set up the panel to help plan the closure.

"We are currently evaluating the recommendations in the report," said Fluor spokesman Michael Turner.

Fluor is to deliver its own proposal on closing FFTF to the Department of Energy on Sept. 30.

In broad strokes, the panel told Fluor it is possible:

-- To drain FFTF's liquid sodium coolant, wash and remove its fuel, and to take certain safety precautions by 2007 for \$320 million. DOE's current preliminary estimate is that work would take until 2011 and cost \$363 million.

-- To finish sodium draining, fuel removal, safety work, remaining cleanup and "entombment" of the reactor by 2011 at a total cost of \$670 million. Hanford's current estimate is that work would take until 2019 and cost \$810 million.

The panel consisted of experts involved with dismantling reactors in Maine, Oregon and France. One member, Clegg Crawford, vice president of S.A. Robotics, which provides nuclear decommissioning technology, will be the new FFTF manager, Fluor announced Tuesday. Crawford worked at Hanford from 1981-87. He replaces Bruce Klos, who will stay as the project's senior technical director. The change reflects preparations for shutdown, the company said.

Last December, Energy Secretary Spencer Abraham ordered FFTF shut down -- making him the second energy secretary in a year to do so. Some Mid-Columbians are trying persuade DOE to commercialize the reactor to make medical isotopes.

The closure plan is divided into two segments.

Deactivation covers removing 352 irradiated and 24 never-irradiated nuclear fuel assemblies, washing liquid sodium from them and storing them until final disposition is determined. This stage also covers draining 260,000 gallons of super-hot liquid sodium from the coolant pipes. Also, some long-term safety precautions will be taken.

Draining the sodium is considered the point of no return because the longer the sodium is gone, the more likely irreparable flaws will show up in the drastically cooled pipes.

Decommissioning covers demolishing buildings and either tearing apart or entombing the reactor. The panel recommends entombment.

The panel recommends starting shutdown quickly because FFTF workers -- averaging 47 years in age -- will retire in greater numbers as time passes, losing institutional knowledge. The report said the FFTF staff is extremely good. But it added that a sense of urgency needs to be emphasized to make accelerated deadlines.

DOE needs to renegotiate its contract with Fluor so performance fees can be tied to proper shutdown on time, the report said. DOE is in final stages of working out a timetable with the state and the Environmental Protection Agency.

The panel recommends Fluor send the best long-term shutdown plan to DOE, without being constrained by DOE funding plans.

"Fluor Hanford should take the lead in convincing DOE and other stakeholders that (this) plan is the best way to deactivate and decommission the FFTF," the report said.

DOE currently plans to allocate \$36.1 million to FFTF in 2003 and \$46.1 million annually for the next few years, with the total cost reaching \$363 million by 2011. Although the panel's approach would be cheaper through 2019, its proposal averages \$74.4 million annually through 2011.

To speed the work, the panel recommends simultaneous deactivation and decommissioning, eliminating potential bottlenecks, adopting some French technology, going to 24-hour-7-day-a-week operation and lining up more fuel storage casks and spare parts.



3315 West Clearwater Avenue  
 Kennewick, Washington 99336  
 Phone: 509-737-8463/Fax: 509-737-9524  
[www.medicalisotopes.org](http://www.medicalisotopes.org)

REVISION TO OCTOBER 10, 2002  
 FFTF TPA ACCELERATION  
 MILESTONE COMMENTS  
 CMI LETTER FARABEE/CUSACK  
 WITH SUPPLIMENTS ADDED

October 14, 2002

Secretary Spencer Abraham  
 U.S. Department of Energy  
 1000 Independence Ave. SW  
 Washington, DC 20585

TITLE: Intent to Sue the United States Department of Energy for Violations of the National Environmental Policy Act (NEPA) Based Upon Failure to Adequately Collect Information, and Analyze the Environmental Consequences of its Decision to Permanently Demolish the Fast Flux Test Facility, Richland, Washington

Numerous violations and omissions were made in preparing both the 1995 *Environmental Assessment (EA)* and the December, 2000 *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 (PEIS)*. Had these violations not been made, the Secretary could have arrived at a better decision. Some of the legal merits based upon violations of the National Environmental Policy Act (NEPA) are found below which support this declaration of intent to sue.

Material Matters Exist That DOE Either Failed To Analyze, Or Inadequately Analyzed, When It Purported To Perform Its NEPA Analyses Prior To The Issuance Of Its ROD In January, 2001

1. In its 1995 *Environmental Assessment (EA)*, DOE conceptually segmented the permanent demolition of the FFTF into three phases: Phase I – deactivation (shutdown), Phase II long-term surveillance and monitoring, and Phase III – D&D (decontamination and decommissioning) of the facility. Despite the fact that Phase III – D&D is arguably the most environmentally-consequential of these three phases, DOE expressly avoided

- analyzing the environmental impacts/consequences of Phase III – D&D of the FFTF in both the 1995 EA and the December, 2000 PEIS. This failure is a violation of the NEPA prohibition against "segmentation" and is not compliant with the NEPA requirement for analyzing "cumulative impacts" of a federal agency undertaking. (See 40 CFR 1508.25(a)(1)(i), (ii), and (iii); 1502.4(a); and 1508.27(b)(7).
2. In both its 1995 EA and its December, 2000 PEIS, DOE failed to analyze, or inadequately analyzed, the matters identified in the January 8 and 10, 2001, Foster Pepper letters. (Attached hereto)
  3. In both its 1995 EA and its December, 2000 PEIS, DOE failed to coordinate its NEPA analysis with the federal Department of HHS – e.g., to adequately analyze the impact on health care programs resulting from the successful use of medical isotopes produced at the FFTF for medical research, diagnosis, and treatment.
  4. In both its 1995 EA and its December, 2000 PEIS, DOE failed to coordinate its NEPA analysis with the federal Department of Agriculture – e.g., to adequately analyze the benefits to the meat industry of meat-irradiation isotopes produced at the FFTF to kill harmful/deadly bacteria (such as *e. coli*).
  5. In both its 1995 EA and its December, 2000 PEIS, DOE failed to coordinate its NEPA analysis with the federal NASA administration – e.g., to adequately analyze the need for radioisotopes produced at the FFTF for power systems and heaters to be used in future space missions.
  6. In both its 1995 EA and its December, 2000 PEIS, DOE failed to adequately analyze the potential for – and failed to adequately invite comments about – DOE exercising its authority under the Atomic Energy Act and the Department of Energy Organization Act to sell/lease the FFTF facility to either local government(s) or private entities.
  7. In both its 1995 EA and its December, 2000 PEIS, DOE failed to adequately analyze the potential for utilizing the FFTF for developing technologies for transmutation of nuclear waste, which has been demonstrated to reduce the quantity and toxicity (half-life) of spent nuclear fuel and other high level waste streams that need to be permanently geologically stored.
  8. DOE's NEPA regulations, 10 CFR 1021, indicate that the decommissioning of a nuclear research reactor is an action that would normally require an EIS. With respect to the 1995 EA, proper analysis and application of 10 CFR 1508.27 would have compelled a rational decision-maker to decide to prepare an EIS rather than to issue a FONSI. Thus, DOE is in violation of its own regulations.
  9. Both the 1995 EA and the December, 2000 PEIS failed to investigate the reasonable alternatives for operating the FFTF in a multi-departmental capacity or to privatize operation of the facility.

10. Both the 1995 *EA* and the December, 2000 *PEIS* failed to adequately perform consultations with other federal, state, and local governments, agencies, corporations, and other organizations.

"New Circumstances" Have Occurred/Arisen - Since The Issuance Of DOE's ROD In January, 2001 - Which Therefore Require DOE To Perform Supplemental NEPA Documentation

1. On or about September 18, 2002, DOE transferred the FFTF project from DOE's Office of NE (Nuclear Engineering, Science, and Technology) to its Office of EM (Environmental Management). The Office of EM is where the Hanford cleanup dollars are funded. Thus, the permanent demolition of the FFTF would now compete for the already-scarce Hanford cleanup dollars. In the "Shutdown Plan" submitted by Fluor to DOE on September 30, 2002, Fluor's low-bid estimate prescribes a need for \$547 Million of Hanford cleanup money to effect the first seven (7) years of demolition of the FFTF. This is a tremendous impact on cleanup.
2. The July 27, 2001 *Review of the Decision to Permanently Deactivate the Fast Flux Test Facility* [Holland Report], contains new information that was not adequately considered in the NEPA documentation describing the unique characteristics of the FFTF and how it could fulfill missions, objectives, and policies of multi-cabinet departments.
3. Both the 1995 *EA* and the December 2000 *PEIS* failed to be updated by DOE to reflect President George W. Bush's National Energy Policy, recent Presidential International Accords, and new international nuclear research and development initiatives and commitments.
4. As partial justification for selecting its "preferred alternative" in the December, 2000 *PEIS* to permanently demolish the FFTF, DOE wrote therein as follows:

As a potential option for the longer-term future [for production of radioisotopes in the absence of the FFTF], DOE proposes to work over the next 2 years to establish a conceptual design for an Advanced Accelerator Applications (AAA) facility.

In fact, the ANIT subcommittee of NERAC, November 6, 2001, states, "If fast spectrum tests can't be conducted in foreign reactors, the only other option identified by the AAA team is restarting the FFTF." Further, DOE has since acknowledged that a facility like the FFTF is needed in order to test and bring such an AAA facility into operation. More importantly, in the June 6, 2002, Nucleonics Week, it is reported that DOE is moving away from accelerator-driven technologies and toward less costly reactor-based ones (like the FFTF). This constitutes new information and circumstances that requires preparation of supplemental NEPA documentation.

5. In both the 1995 *EA* and the December, 2000 *PEIS*, DOE failed to adequately analyze that the unirradiated fuel from the FFTF will be stored indefinitely in storage casks at locations at the Plutonium Finishing Plant (PFP). However, now there will be no facilities or plans available to affect this fuel-storage "intent".

6. The Generation IV International Forum (GIF) is a 10-nation DOE commitment to develop the next generation of nuclear power reactors. Generation IV is the only foreseeable technology for achieving the goals of energy independence in the U.S. and reducing air pollution and "greenhouse gasses" from fossil fuel plants that contribute to global warming. Many international experts agree that the FFTF is the unique facility required to test the complex behavior of fuels and materials for all potential Generation IV designs. This has been overlooked by DOE. The grave impacts on air pollution and global warming as a result of not moving forward with Generation IV were not evaluated.
7. The current FFTF deactivation plan takes the unirradiated nuclear fuel out of its secure underground containment at the FFTF requiring handling, transportation and above-ground storage elsewhere. Unirradiated FFTF fuel, which has no disposition pathway, must be securely monitored for an indefinite time. Post 9/11, this movement and less-secure storage of the unirradiated fuel raises heightened terrorism concerns that were not analyzed in NEPA analysis.

In conclusion, we sincerely hope that legal action can be avoided; however, if necessary, we are prepared to proceed forward.

Sincerely yours,



Claude Oliver, Chairman  
Citizens for Medical Isotopes

Attached: Foster-Pepper letters

cc: White House, Ms. Karen Knutson, Office of Vice President Cheney  
Health and Human Services, Secretary Tommy Thompson  
U.S. Environmental Protection Agency, Administrator Christie Whitman  
U.S. Senator Patty Murray  
U.S. Senator Maria Cantwell  
Representative Richard "Doc" Hastings  
Washington Congressional Delegation  
Governor Gary Locke  
Washington State Dept. of Ecology, Mr. Tom Fitzsimmons  
U.S. Department of Energy, Richland Operations Office, Mr. Keith Klein  
HHS, Dr. William Raub, Deputy Asst. Secretary for Science Policy  
HHS, Sandra Howard, Office of Asst. Secretary  
City of Richland  
Port of Benton  
Benton County

FOSTER PEPPER & SHEFELMAN PLLC  
ATTORNEYS AT LAW



Memorandum

To: The Individuals Who Assisted in Preparing Benton County's DOE  
Packet and Declarations

From: J. Tayloe Washburn  
Foster Pepper & Shefelman

Date: January 12, 2001

Subject: DOE Packet

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Thank you again for your assistance in contributing to the enclosed packet. Time will tell how effective this is in persuading the outgoing administration or influencing the incoming Bush administration officials. Whatever the outcome, we are very appreciative of your efforts to this point. Please do not hesitate to call if you have any questions or suggestions.

JTW:clp  
Enclosure  
cc: Ryan Brown, Benton County

FOSTER PEPPER & SHEFELMAN, PLLC

ATTORNEYS AT LAW



January 10, 2001

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VIA OVERNIGHT FEDERAL EXPRESS

Secretary William Richardson  
U.S. Department of Energy  
1000 Independence Avenue, SW  
Washington, DC 20585

Colette E. Brown, Document Manager  
Attn: NI PEIS  
NE-50 Office of Nuclear Energy, Science & Technology  
U.S. Department of Energy  
19901 Germantown Road  
Germantown, MD 20874

Re: Additions to the Administrative Record on the DOE Program for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States ("PEIS") and Request for Preparation of a Supplemental Programmatic Environmental Impact Statement

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Dear Secretary Richardson and Ms. Brown:

On January 8<sup>th</sup> of this year, we wrote you on behalf of our client, Benton County, Washington, asking you to order the preparation of a supplemental PEIS based on identified inadequacies and errors in the December 2000 final PEIS. As the 30-day period following issuance of the final PEIS is approaching, DOE has a legal opportunity to issue a final decision. On behalf of Benton County and the many individuals, groups, and organizations in Benton County and across the country who have vital interests at stake in this decision, we respectfully ask you to review the enclosed declarations and exhibits, which specify why the PEIS did not serve as an adequate document for an informed decision by DOE. Further, we ask you to

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Oregon

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Washington

SPOKANE  
Washington

Secretary William Richardson  
Colette E. Brown  
January 10, 2001  
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postpone issuance of a Record of Decision ("ROD") at this time, and instead order preparation of a supplemental EIS that addresses the concerns set forth in the attached Declarations.

Our January 8<sup>th</sup> letter set forth a number of areas in which the PEIS analysis and assumptions are inadequate. This letter summarizes the testimony set forth in the enclosed declarations and exhibits. This factual and expert testimony, which is now in the record before you, should lead you and DOE to conclude that additional NEPA review is warranted before a ROD can be issued.

The concerns with the PEIS inadequacy are addressed in detail in the attached declarations from *Gary Ballew, John Boland, Ken Dobbin, Amy Evans, Dr. Sol Guttenberg, Charles Lindenmeier, Robert E. Schenter, Ph.D., Don Segna, and William Stokes*. Their testimony is summarized as follows:

1. The PEIS Seriously Underestimates the Projected Need for Isotopes and Fails to Include Critical Data Which was Provided in a Timely Manner to DOE.
  - Medical isotopes can result in remarkable recovery in cancer patients. *Boland Declaration*. Lack of an adequate supply of medical isotopes directly harms existing and future cancer patients and their families. *Boland Declaration*.
  - A recent study actually provided to DOE, but not included in the final PEIS, showed a growth rate dramatically larger than that included in the PEIS. *Guttenberg and Dobbin Declarations*.
  - Research on isotopes now underway could prove useful to treat cancer, heart disease or arthritis and will lead to explosive growth in the next few years far in excess of the PEIS projection. *Lindenmeier Declaration*.
  - There are existing shortages of medical isotopes in the United States. These shortages have worsened since DOE closed its Brookhaven facility. *Evans Declaration*. As a result of these shortages, cancer and health research projects have been delayed. *Segna and Evans Declarations*.
  - Researchers have repeatedly had to cut back work on new diagnostic and therapeutic treatments due to inability to get supply of medical isotopes. *Schenter Declaration*.

2. The Assumption in the Final PEIS and Justification for the Preferred Alternative that the Projected Need for Isotopes Can Be Met in the United States Over the Next Few Years is Arbitrary and Capricious. Based on Conflicting Data in the Draft PEIS and the Independent Testimony of Many Qualified Experts.

- The Preferred Alternative in the final PEIS cannot be reconciled with the abundance of evidence DOE included in the draft EIS showing that without FFTF existing DOE reactors at HFT and ATR cannot supply medical isotopes and PU-238 in the years ahead. *Schenter, Dobbin, and Segna Declarations.*
- The PEIS failed to discuss the recent tritium contamination problem discovered at the Oakridge Laboratory. These problems are outlined in an Occurrence Report and *Weapons Complex Monitor* article attached as exhibits to the *Stokes Declaration.*
- Reliance on the two existing facilities is very likely to produce significant shortages. *Segna Declaration.*
- The HFIR and ATR reactors will soon run out of expected capacity for medical isotopes. Moreover, the FFTF can make certain isotopes and obtain higher purities than are possible with HFIR or ATR. *Lindenmeier Declaration.*
- The discussion in the PEIS implying that the private sector in the U.S. could meet any shortages in the supply over the next several years was entirely wrong because fission companies do not operate a fission reactor system. Fission reactors are the only systems that currently and in the future effectively produce most of the therapeutic medical isotopes and all of the bone cancer relief isotopes. *Schenter Declaration.*
- The PEIS was flawed as it failed to analyze the timeline associated with development and implementation of any new technology, such as particle accelerators (Alternative 3). *Lindenmeier Declaration.*
- It is unconscionable to tell a dying cancer patient, "You're back ordered, sorry." *Segna Declaration.*

3. DOE's Failure to Ever Articulate the Form of "Commitment" Which it Expected from the Private Sector in Order to Justify Alternatives 1, 3 and 4 in the PEIS Makes the PEIS Inadequate as a Matter of Law, as 3 out of 4 Alternatives Were Infeasible and Thus in Violation of NEPA.

- DOE has never established criteria for joint public private partnership in the FFTF reactor project or solicited proposals from industry stakeholders. *Segna Declaration and Stokes Declaration.*
- Dozens of companies, small and large, expressed serious interest in participating with DOE facilities in the production of medical isotopes.

*Schenter and Stokes Declarations.* See also, letters from interested parties attached as Exhibit B to the *Segna Declaration*.

- This interest included a proposal by Advanced Nuclear and Medical Systems, which DOE Secretary Pena brushed off as "premature" in a letter to the Washington State Governor Gary Locke. *Stokes Declaration*.
- DOE's Preferred Alternative, dismissed 3/4 Alternatives in the PEIS in part on basis of insufficient private "commitment." DOE failed to earlier articulate any criteria or standard as to what type of "commitment" it might need to pursue Alternatives 1, 3 and 4 in the PEIS. *Guttenberg, Lindenmeier, Stokes, and Segna Declarations*.

4. DOE's Failure to Evaluate in the PEIS Key Issues Associated with the Preferred Alternative Renders the Document Inadequate as a Basis for an Informed Decision.

- Reliance on the Advanced Accelerator Applications Facility ("AAA Facility"), which was not analyzed in the EIS, was flawed, premature and in violation of NEPA. *Guttenberg Declaration*.
- No one has ever built a high-energy accelerator. Undoubtedly there will be significant hurdles to bringing this technology to fruition, including magnetic field controls, vacuum system requirements and the health physics of operating such a facility. None of these issues are addressed in the PEIS. *Lindenmeier Declaration*.
- The PEIS also assumes that the private sector can furnish the nation's future needs for medical isotopes over the next several years if existing DOE facilities are unable to provide an adequate supply. However, the document is devoid of information to demonstrate how the private sector could respond rapidly enough to meet increased demand or the timeline for such private sector participation. *Lindenmeier Declaration*.
- The Atomic Energy act requires DOE to identify and meet the nation's nuclear needs. This responsibility requires DOE to establish a fact-based production schedule for a variety of isotopes. *Lindenmeier Declaration*.

## CONCLUSION

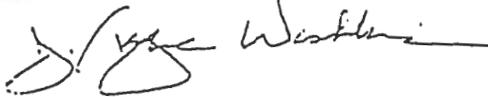
We understand that groups lobbying against reactivation of FFTF may have strong opinions as to what course of action is best for the nation. The factual information presented in the accompanying declarations and exhibits compels setting aside such opinions, however, and recognizing that any final decision on an issue of this immediate and long-term importance must, both legally and morally, be based on an EIS which objectively examines the available evidence and serves as a basis for an informed decision.

Secretary William Richardson  
Colette E. Brown  
January 10, 2001  
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For all the reasons set forth in the enclosed materials, it seems eminently clear that notwithstanding the best efforts of many good people, this PEIS does not meet that standard required under NEPA and applicable law. Proceeding to issue a ROD in the final days of the present administration based on this PEIS would make the decision itself fundamentally flawed and would cause irreparable injury to thousands of patients across the country. Therefore, we respectfully ask you to not issue a Record of Decision at this time and instead require preparation of a supplemental PEIS. Thank you for your consideration of this request.

Sincerely yours,

FOSTER PEPPER & SHEFELMAN



J. Tayloe Washburn  
Special Deputy Prosecuting Attorneys for Benton County

JTW:dp

cc: Colette E. Brown – Dept. of Energy  
Ellen Livingston – Dept. of Energy  
William Magwood – Dept. of Energy  
Eric Fygi – Dept. of Energy General Counsel  
Benton County Commissioners  
Senator Spence Abraham, Secretary-Elect of the Department of Energy

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January 8, 2001

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VIA FACSIMILE, REGULAR,  
AND CERTIFIED MAIL

Secretary William Richardson  
U.S. Department of Energy  
1000 Independence Avenue, SW  
Washington, DC 20585

Re: Programmatic Environmental Impact Statement ("PEIS") for  
Accomplishing Expanded Nuclear Energy Research and Development  
and Isotope Missions in the US, including the Role of the Fast Flux  
Test Facility – Request for Preparation of Supplemental PEIS Before  
a Final DOE Record of Decision is Issued

Dear Secretary Richardson:

This law firm represents Benton County, Washington ("County") in conjunction with the County's NEPA review of the above-mentioned PEIS. For the reasons set forth below, Benton County strongly urges the Department of Energy ("DOE") to: (1) delay issuance of the Record of Decision ("ROD") on the PEIS; and (2) conduct further environmental review and evaluation before issuing a ROD on the future use of the Fast Flux Test Facility ("FFTF") at Hanford and on the DOE program for the nation's future nuclear infrastructure. The PEIS has several fundamental flaws and deficiencies, outlined below, and thus cannot serve as an adequate basis for an informed decision, as required under the National Environmental Policy Act ("NEPA"). A decision by DOE to make a hasty final decision based on an inadequate PEIS would result in irreparable injury to thousands of existing and future cancer patients and others adversely impacted. For the reasons set forth below, we respectfully urge you to order preparation of a supplemental PEIS to cure the deficiencies in the PEIS before issuing a ROD.

As you know, the purpose of the PEIS was to review programmatic alternatives to meet the nation's short and long-term needs in the areas of medical

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and industrial isotopes, production of fuel for spacecraft, and development of research initiatives for civilian nuclear power use. The PEIS was formally published on December 15, 2000. In late November, DOE announced its recommendation to permanently deactivate the FFTF ("DOE recommendation"). The DOE recommendation asserted that the federal government can meet its needs for both nuclear energy research and isotopes with other existing facilities and construction of a conceptual new and advanced nuclear facility ("AAA Facility"). Unfortunately, the DOE recommendation was made before the final PEIS was even issued. Moreover to the extent the recommendation was based on the PEIS, that document is an unsound and incomplete basis for making such a momentous decision. As such, it cannot serve as the basis for an informed final ROD.

Many persons in eastern Washington and in Benton County are alarmed at the potential consequences that could ensue from a DOE decision to deactivate FFTF. Aside from the tremendous lost economic development opportunity, deactivation under the proposed DOE decision could increase the risk that cancer patients in Benton County and throughout the nation may not obtain needed diagnosis and treatment, and could have a severe economic, and ultimately environmental, impact on local economies and urban areas.

The PEIS confirms the vital importance to the nation of medical and industrial isotopes for the diagnosis and treatment of a variety of serious illnesses, including cancer. It further identifies the nation's need for plutonium-238 as a fuel for space travel. Finally, it identifies the vital need to the nation and its citizens for additional research and development initiatives in the field of civilian nuclear energy. While the draft PEIS candidly admitted that existing operational facilities were insufficient to meet the projected need, the DOE Preferred Alternative in the final PEIS reached a different conclusion, one which we do not believe is supported by the evidence.

A. The PEIS Underestimates the Nation's Need for Nuclear Isotopes and Fuel.

The PEIS analyzes in some detail the importance of expanding DOE's existing nuclear infrastructure for: 1) production of medical isotopes needed to diagnose and treat cancer, vascular disease and arthritis; 2) production of plutonium-238 to support NASA space missions; and 3) nuclear energy research and development initiatives to improve nuclear plant reliability, availability and productivity.

Review of the PEIS establishes, however, several serious flaws in the accuracy and completeness of these studies. For example, the studies relied on in the PEIS to estimate future demand for isotopes and the future capacity of facilities other than FFTF may be seriously incomplete. The PEIS projects up to a 16% growth rate for therapeutic and diagnostic applications of isotopes.<sup>1</sup> This projection ignores recent skyrocketing demand in several areas,

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<sup>1</sup> FEIS Summary at p. 5-3.

such as treatment of prostate cancer, for which growth rates have exceeded 30%. Whether DOE knew of this relatively recent information and failed to include it in the final PEIS, or DOE was not aware of this recent independent study data, the information strongly suggests the final PEIS was inadequate in this key area and could not as such provide a basis for an informed decision. This significant new data must be evaluated in a supplemental PEIS before any final DOE ROD is issued. This PEIS understatement of projected isotope may be fundamentally flawed, and thus undermine the assumption in DOE's preliminary decision that projected needs for such isotopes will be met if FFTF is terminated.

**B. The PEIS Failed to Adequately Address the Ability of DOE and its Conceptual AAA Facility to Meet the Nation's Long-term Needs.**

The DOE recommendation to deactivate the FFTF is premised on its claim that it can meet the nation's stated short-term nuclear program need for the next several years at the Idaho National Engineering and Environmental Laboratory near Idaho Falls and/or at a DOE site in Oak Ridge, Tennessee. DOE suggests that private parties can fill in any short-term shortages at these facilities. DOE proposes to meet its long-term needs through the possible future construction of an Advanced Accelerator Application facility ("AAA facility"), a conceptual facility for which the design and function has not yet been identified.

The environmental impacts of the AAA facility were not, however, evaluated in the PEIS. Instead, after a two-year feasibility analysis is commenced in 2001, DOE apparently proposes to determine whether or not to proceed with the AAA at that time and then subject it in the future to NEPA review. If the DOE recommendation is finalized in January 2001, implementation of this decision, through draining of the FFTF's sodium coolant, would preclude FFTF from being restarted in the future.

While the Idaho and Tennessee facilities may be able to meet the nation's short-term needs for the next 4-5 years, the draft PEIS clearly states that existing facilities in operation cannot meet the nation's long-term needs. In this context, the PEIS considers the reactivation of the FFTF and other alternatives as a means to provide long-term assurance that needs in these three areas will be met, as required under the Atomic Energy Act of 1954 ("AEA").

The program preliminarily selected by DOE in the PEIS does not appear to satisfy the stated purpose of the DOE proposal and the standard set in the Atomic Energy Act, namely ensuring the availability of isotopes, and meeting the nuclear material needs of other federal agencies and development activities related to development of nuclear power for civilian use for the both the short and long-term. As stated in the cover sheet to the final PEIS, the current nuclear infrastructure in operation soon may be insufficient to meet the projected demands in these areas. Notwithstanding this fact, DOE has preliminarily selected an alternative to meet the long-term need that involves construction of what, at this time, is only a conceptual AAA

Secretary William Richardson  
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Page 4

facility, which has not been evaluated in any way in the PEIS. Moreover, the only funding for the AAA facility identified in the PEIS is for a two-year feasibility study.

By deferring the evaluation of the feasibility and impacts of this facility to an indefinite point in the future, DOE has arbitrarily compromised its mandate and mission under the AEA. If DOE proceeds to deactivate the Hanford FFTF before it has even conducted NEPA evaluation, or decided on the form, feasibility, and function of a future AAA facility, this decision could seriously impact the nation and, in particular, providers of cancer treatment facilities, cancer patients, and the needs of the nation's nuclear research and development program for civilian energy applications. DOE's action is contrary to the mandate of the AEA, which imposes an affirmative obligation on the federal government 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 activities related to development of nuclear power for civilian use. Because additional NEPA review is needed before an informed decision can be made, we urge you to forego any final decision in a ROD until a supplemental PEIS has been prepared.

C. The PEIS Failed to Analyze Recent New Information Regarding Discovery of Tritium Contamination at the Oak Ridge Nuclear Facility.

Nearly contemporaneous with DOE's publication of the PEIS and the announcement of its preliminary decision to rely on other facilities for the nation's short-term nuclear needs, a potentially significant health problem associated with the Oak Ridge facility became known. Although the extent of the contamination has not yet been fully disclosed by DOE, there appears to have been a release of tritium at the Oak Ridge facility that came to light in the course of a regular inspection. The relevance of this discovery is that the investigation and clean up required for this tritium pool raises serious questions regarding Oak Ridge's future ability to meet the needs identified by DOE. As you know, a similar discovery at the Brookhaven facility in Long Island played a role in the decision to shut down that DOE facility permanently. Information relating to the recent Oak Ridge tritium pool leak was not identified in the PEIS, and to date, DOE has not yet decided to conduct a supplemental PEIS to address this new information. Benton County believes that the recent discovery of a serious contamination problem at one of the two facilities that DOE relies upon heavily in the PEIS to accommodate the nation's short-term nuclear needs is very significant information which, under NEPA, requires further investigation and analysis in a supplemental PEIS before DOE irrevocably issues a final decision and deactivates the FFTF.

**D. The PEIS Fails to Adequately Discuss the Impacts to Human Health and Residents of Benton County from DOE's Decision to Permanently Deactivate the FFTF.**

Benton County has residents who require the diagnosis of and treatment for cancer. There is both a present and future need among County residents for the medical diagnosis and treatment made possible by medical isotopes. The PEIS fails to adequately discuss the health implications that may arise if the nuclear isotope projections in the EIS seriously underestimate the need for isotopes used for medical diagnosis and treatment and overstate the available supply.

County residents and local governments would also be directly affected in a variety of ways, both physically and financially, by a decision to deactivate the FFTF. Such a decision would reduce public revenues and adversely affect the tax base and the urban environment of cities within the County. The PEIS does not address these impacts to the human environment as required by NEPA.

**E. DOE Did Not Set Clear Standards for the Level or Form of Private Sector Commitment for Reactivation of the FFTF, and Thus Comprised the Analysis of Several Alternatives in the PEIS.**

The discussion of the Preferred Alternative in the final PEIS indicates that DOE's willingness to reactivate FFTF or construct a new accelerator or reactor under Alternatives 3 and 4 was conditioned on a level of commitment from the private sector and foreign governments. No clear standards were, to the County's knowledge, identified in the PEIS or by DOE as to the requisite form this private or foreign government "commitment" should take. This is an important question; given that many private organizations presented DOE with substantial offers of private interest in reactivated and/or new reactors. DOE has in effect ignored those offers. Given DOE's refusal to seriously consider the serious offer made by at least one private party, Alternatives 1, 3 and 4 in the PEIS (all of which DOE has suggested failed to gather sufficient support from the private sector) fail to meet the NEPA requirement of "reasonable alternatives," as DOE's own actions make it clear these alternatives were not likely to be seriously considered for implementation. A Supplemental PEIS is required to cure these clear errors.

**F. Conclusion**

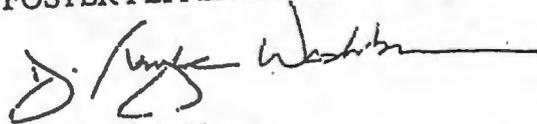
Benton County has identified several areas under NEPA and the AEA where the PEIS fails to support DOE's irrevocable decision to permanently deactivate the FFTF. No one's interest is served by a hasty rush to judgement based on a fundamentally flawed and inadequate PEIS. A final decision based on the current PEIS could directly result in irreparable injury of many types, including adverse impacts on cancer patients across the county. The issues involved in this decision are far too important to warrant anything other than careful review.

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January 8, 2001  
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For the reasons set forth above, Benton County respectfully requests that the DOE delay issuance of the ROD to allow a more thorough evaluation in the form of a supplemental PEIS, which can then provide an informed basis for a subsequent reasoned decision on these issues which will determine the nation's nuclear production capabilities for years to come.

Sincerely yours,

FOSTER PEPPER & SHEFELMAN



J. Tayloe Washburn  
Special Prosecuting Attorneys for Benton County

JTW:pjm

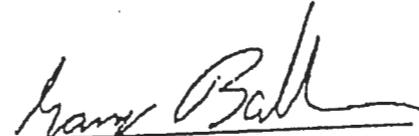
cc: Colette E. Brown – Dept. of Energy  
Ellen Livingston – Dept. of Energy  
William Magwood – Dept. of Energy  
Eric Fygi – Dept. of Energy General Counsel  
Benton County Commissioners  
Senator Spence Abraham

governments and the Department of Energy, could finally be realized.

8. Economic activity generates the revenues that local governments use to provide for the health, safety, and welfare of their citizens. Loss of economic activity results in a decrease tax revenues, which, in turn, results in a decrease in services, including the development and maintenance of basic infrastructure, public education, health and human services, emergency response and law enforcement. This degradation of services causes harm to citizens of these local governments.

I declare under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

Executed at Benton County, Washington, this 11<sup>th</sup> day of January, 2001.

  
GARY BALLEW

## DECLARATION OF GARY BALLEW

I, Gary Ballew, declare:

1. I am the Sustainable Development Manager for Benton County. My duties are to ensure that county activities and resources are effectively and efficiently dedicated to achieve economic development within Benton County.

2. In my capacity as an employee of Benton County, it is my responsibility to review projects and activities to determine economic impact within the County.

3. I have had an opportunity to review the final PEIS. I have one concern regarding the adequacy of the PEIS; this concern leads me to be apprehensive with any decision that might be made based on this PEIS. Given its significant omission, I do not believe the PEIS can serve as the basis for any informed decision by DOE until additional environmental review is conducted. My concerns with the adequacy of the EIS are outlined below.

4. The final PEIS does not address the economic impact on the regional community. This omission results in the final PEIS being flawed by not addressing impacts on the urban environment.

5. Benton County was forced to perform its own an analysis of the economic impacts based on documentation from the *Cost Report Alternatives for the 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, (August 2000)*; the *Hanford, Diversification, and the Tri-Cities Economy FY 1999 Report (DOE/RL-2000-32)*; and the *Scoping Assessment on Medical Isotope Production at the Fast Flux Test Facility (HNF-SD-FF-RPT-010, Revision 0, October 1996)* to determine if a significant impact occurred.

6. This approximate analysis, presented as Exhibit A, indicated a significant economic impact to the regional economy over the next ten years. The regional economic activity generated from direct site activities is \$67 million in a shutdown scenario and \$262 million in a restart scenario. The regional tax base is reduced from \$16 million under restart to \$4 million under shutdown. The indirect economic activity is \$154 million for shutdown and \$603 million for restart. A shutdown scenario depresses the total regional economic activity from \$865 million to \$221 million. Total regional economic activity does not include tax revenue from indirect economic activities, which is difficult to calculate.

7. This analysis did not include influence of a new economic sector being created in the region from the development of a congruent medical isotope/pharmaceutical industry cluster. The impact of this secondary industry could easily surpass the direct and indirect economic impacts from the restart of FFTF. Several reports, including the *Scoping Assessment*, indicated that the isotope industry would generate thousand of jobs in the Tri-Cities and lead to the recruitment of pharmaceutical companies that could provide high paying, sustainable jobs. If this is true, the economic diversification of our community, sought after by both local

DECLARATION OF GARY BALLEW - 1

**Exhibit A - FFTF Local Economic Impacts**

<b>DIRECT</b>										
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
<b>Jobs</b>										
Shutdown	300	400	350	250	0	0	0	0	0	0
Restart	600	750	600	550	550	550	550	550	550	550
<b>Wages (millions)</b>										
Shutdown	\$ 15.6	\$ 20.8	\$ 18.2	\$ 13.0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Restart	\$ 31.2	\$ 39.0	\$ 31.2	\$ 28.6	\$ 28.6	\$ 28.6	\$ 28.6	\$ 28.6	\$ 28.6	\$ 28.6
<b>Budget (millions)</b>										
Shutdown	\$ 60.0	\$ 120.0	\$ 100.0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Restart	\$ 100.0	\$ 200.0	\$ 100.0	\$ 84.0	\$ 84.0	\$ 84.0	\$ 84.0	\$ 84.0	\$ 84.0	\$ 84.0
<b>Local Procurement (millions)</b>										
Shutdown	\$ 9.0	\$ 18.0	\$ 15.0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Restart	\$ 15.0	\$ 30.0	\$ 15.0	\$ 12.6	\$ 12.6	\$ 12.6	\$ 12.6	\$ 12.6	\$ 12.6	\$ 12.6
<b>Taxes (millions)</b>										
Shutdown	\$ 1.02	\$ 1.44	\$ 1.25	\$ 0.75	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Restart	\$ 2.00	\$ 2.65	\$ 2.00	\$ 1.82	\$ 1.82	\$ 1.82	\$ 1.82	\$ 1.82	\$ 1.82	\$ 1.82
<b>Total Direct (millions)</b>										
Shutdown	\$ 16.6	\$ 22.2	\$ 19.5	\$ 13.8	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Restart	\$ 33.2	\$ 41.7	\$ 33.2	\$ 30.4	\$ 30.4	\$ 30.4	\$ 30.4	\$ 30.4	\$ 30.4	\$ 30.4
										<b>Total in 2001 Dollars</b>
										\$ 4.15
										\$ 15.83
										<b>Total in 2001 Dollars</b>
										\$ 66.95
										\$ 261.80
<b>INDIRECT (Services)</b>										
<b>Jobs</b>										
Shutdown	510	680	595	425	0	0	0	0	0	0
Restart	1020	1275	1020	935	935	935	935	935	935	935
<b>Economic Activity (millions)</b>										
Shutdown	\$ 38.3	\$ 51.0	\$ 44.6	\$ 31.9	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Restart	\$ 76.5	\$ 95.6	\$ 76.5	\$ 70.1	\$ 70.1	\$ 70.1	\$ 70.1	\$ 70.1	\$ 70.1	\$ 70.1
										<b>Total in 2001 Dollars</b>
										\$ 153.97
										\$ 603.10
<b>SUM OF DIRECT AND INDIRECT (Does not include development of an isotope industry)</b>										
Shutdown	\$ 54.9	\$ 73.2	\$ 64.1	\$ 45.6	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Restart	\$ 109.7	\$ 137.3	\$ 109.7	\$ 100.5	\$ 100.5	\$ 100.5	\$ 100.5	\$ 100.5	\$ 100.5	\$ 100.5
										<b>Total in 2001 Dollars</b>
										\$ 220.92
										\$ 864.90

Information was generated using FY 99 DOE-RL Economic Analysis and EIS Scoping Report

5% Discount Rate

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Declaration of William Stokes

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3 I, William J. Stokes, declare under penalty of perjury and the laws of the State of Washington that  
4 the following is true and correct to the best of my knowledge:

5 1. In 1974, I received a Bachelor of Science degree in mechanical engineering from Drexel  
6 University, Pennsylvania. For the next 15 years, I was employed in the design, construction, and  
7 operation of commercial nuclear plants around the country. In 1989, I joined ICF Kaiser  
8 Engineers and was a Vice-President responsible for management of the government business  
9 sector for one of the subsidiary companies. My responsibilities in that position included work  
10 with DOE on nuclear defense facility upgrades and site remediation work. In 1992, I became an  
11 independent consultant with principal services to the nuclear power industry and the Department  
12 of Energy nuclear weapons facility clean-up programs. I also participated as a principal on  
13 several on several independent power development projects. A copy of my resume is attached as  
14 Exhibit 1 to this Declaration.

15 2. I currently serve as president of Advanced Nuclear and Medical Systems, Inc. (ANMS). This  
16 company was established in 1995 for the purpose of commercializing FFTF production  
17 operations and product distribution at Hanford, Washington.

18 3. Since that time, I have had numerous contacts with DOE and have provided DOE with several  
19 proposals for the restart of FFTF and product distribution as commercial ventures. A chronology  
20 and accompanying documentation of my principal contacts with DOE and other government  
21 officials is attached as Exhibit 2. In short, DOE has never actively responded or acted in good  
22 faith to any of the proposals for public/private partnerships that ANMS or the ANMS teams have  
23 set forth in the past six years.

24 4. For example, in 1995 the DOE had accelerated its planned dismantlement of the FFTF. In  
25 November of 1995, ANMS developed and presented a conceptual plan for commercial operation  
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1 of FFTF based upon the production of medical isotopes with an interim tritium mission for  
2 national defense. The presentation modeled the conceptual approach on DOE's highly successful  
3 privatization of the nuclear fuels enrichment facilities in Oak Ridge. The business model was  
4 based on standard practices in the independent power industry. The plan demonstrated that the  
5 reactor could be self-supporting as a commercial venture through production of tritium for 10  
6 year to meet national defense needs until medical isotopes market matured sufficiently to support  
7 facility operations. At the time, that proposal was fully consistent with the Vice President's  
8 National Performance Review, DOE's stated policies on private sector initiatives, existing  
9 privatization actions, and ongoing programmatic activities to fulfill defense needs.

- 10 5. DOE never responded to ANMS's 1995 proposal, rather, the Department internalized the  
11 operations plan and proceeded with operations planning and studies as a DOE production facility  
12 under the auspices of a standard DOE operations contractor arrangement.
- 13 6. Following conflicting and misleading statements by senior Energy Department officials to  
14 Congress and independent review panels, ANMS formalized the proposal in a fully FAR-  
15 compliant "unsolicited proposal package" in September 1996. Despite these efforts, DOE still  
16 did not act in good faith on ANMS's proposal. Instead, DOE continued to preclude ANMS'  
17 proposed approach from it's operational planning evaluations. In addition, DOE failed to honor  
18 its commitment (set forth in the December 1996 ROD on the tritium mission) to evaluate  
19 ANMS's proposal for commercialization of the FFTF and comply with FAR requirements  
20 regarding evaluation of unsolicited proposals. The ANMS proposal included a \$450 million  
21 dollar funding source for the commercial restart of FFTF.
- 22 7. In early 1997, DOE created the FFTF Stand-by Office to be managed by the Pacific Northwest  
23 National Laboratory under DOE's Nuclear Energy Office. In a separate action, DOE's Defense  
24 Program's Office began soliciting requests for proposal for tritium production at commercial  
25 light water reactors. The draft solicitation documents also requested alternative or innovative  
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1 proposals. In response, ANMS submitted comments requesting consideration of our FFTF  
2 privatization proposal. DOE responded by changing the draft RFP to preclude alternative or  
3 innovative proposals. The comment responses specifically excluded the FFTF proposal from  
4 consideration in this competitive procurement, even though it met the technical specifications of  
5 the RFP.

6 8. Governor Gary Locke wrote to Energy Secretary Pena in April 1997 stating his belief that  
7 "privatization (of FFTF) could facilitate an expeditious transition to medical isotope production."  
8 And, Governor Locke specifically asked Secretary Pena to meet with ANMS. In a July 9, 1997  
9 response letter from Secretary Pena to Governor Locke, Pena stated "that it would be premature  
10 [for DOE] to consider proposals to privatize the restarting and operation of the FFTF" until after  
11 completing the "necessary analyses and National Environmental Policy Act review." Terry Lash,  
12 the Director of the Nuclear Energy Office, sent a similar letter to ANMS. The statements made  
13 by DOE in these letters are inconsistent with the DOE's stated position in the PEIS and the  
14 statement made by Secretary Richardson regarding the reasons for DOE's decision to deactivate  
15 FFTF.

16 9. In late 1998, ANMS reached an agreement with German authorities regarding the transfer of  
17 surplus nuclear fuels from storage in Europe, which were technically suitable for the operation of  
18 the FFTF. In several letters to DOE officials, ANMS informed DOE of the successful agreement  
19 on the fuel and offered several alternative proposals to utilize the asset value of the fuel to  
20 establish a trust fund to fund medical research and promote the commercial acceptance and  
21 production of FFTF isotope products. DOE declined to discuss any of the proposals and  
22 informed ANMS in a March 1999 letter that DOE would investigate privatization opportunities  
23 with the preparation of an environmental impact statement and include in restart decision-making  
24 for FFTF. DOE failed to comply with this commitment in the development of the NI PEIS o  
25 Cost Report supporting its November 2000 announced decision to demolish the FFTF.

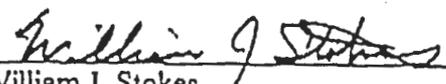
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- 1 10. In July 1999, ANMS secured an expression of interest for \$200 million in private financing to  
2 support the commercial restart of the FFTF. From July 1999 through the initiation of the PEIS,  
3 ANMS drafted several letters and ANMS personnel authored key business management sections  
4 of the NERAC Scoping report which identified the opportunity for private financing and offered  
5 several options for public/private partnerships. The NERAC Scoping report specifically stated  
6 that privatization of FFTF operations and production would be evaluated in the EIS. DOE failed  
7 to comply with this commitment in the development of the NI PEIS or Cost Report supporting its  
8 November 2000 announced decision to demolish the FFTF.
- 9 11. In October 1999, November 1999, and September 2000, ANMS submitted specific comments  
10 regarding the scope of the PEIS and its failure to include consideration of private/public  
11 partnerships in its cost model or operational planning. In response to these comments in the  
12 public forum and in the Final PEIS Vol 3, Book 2, pg 2-1582 (Commenter 1789), DOE rejected  
13 ANMS comments and NERAC commitment for evaluation of private sector investment in FFTF  
14 restart economics stating that the funding source was irrelevant to the EIS.
- 15 12. In October and November 2000, ANMS forwarded several letters to senior DOE officials,  
16 including the Deputy Secretary and the Director of the Contract Reform and Privatization Office  
17 restating the multiple opportunities for public/private partnerships, the opportunities for  
18 commercial product processing and the availability of \$200 million in private sector capital. The  
19 Energy Department has not responded to any proposal offers for public/private partnerships.
- 20 13. One example of an innovative partnership involved Isotope Product Laboratories (IPL) of  
21 Burbank CA. IPL president Len Hendrickson indicated that IPL would initiate a due diligence of  
22 the relocation of its current processing facilities from California to the Tri-Cities under an  
23 ANMS plan to utilize the trust fund fuel assets to secure construction loans against interruption  
24 in the government supplied isotopes and DOE's inability to contractually commit to operations  
25 beyond fiscal year funding.
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- 1 14. ANMS initiated this effort because other sources, such as accelerators, can't produce the broad  
2 spectrum of isotopes that FFTF can produce (no existing facility can match its performance  
3 capabilities). And the current sources of isotopes are inadequate to meet the growing demands  
4 for diagnostic and therapeutic isotopes. The ANMS financial pro forma anticipates that the  
5 FFTF operation will attain a financial breakeven by 2005 under a commercial funding scenario.
- 6 15. DOE has acknowledged in the PEIS that current supplies are not adequate to support research  
7 needs and current facilities will not meet future demand for medical isotopes. The recently  
8 discovered contamination at the Oak Ridge facility reinforces this conclusion. See Occurrence  
9 Report attached as Exhibit 3 and article on the contamination from the December 11, 2000  
10 *Weapons Complex Monitor* attached as Exhibit 4.
- 11 16. The FFTF is the newest, safest, and most efficient of all DOE reactors. Even as a research  
12 facility, the FFTF has a performance record, which is, comparable or superior to most  
13 commercial power reactors. It has the broadest capabilities and operational flexibility in terms of  
14 neutron flux rates, target volume, and energy spectrum of any current facility. No other reactor  
15 or accelerator option investigated by ANMS or presented in the PEIS can match FFTF's  
16 performance for isotope production. Because other DOE facilities are committed to other  
17 missions, FFTF represents over 90% of the available volume for isotope production capacity in  
18 the DOE system.
- 19 17. For a number of years, ANMS co-sponsored the Nuclear Medicine Research Council's  
20 symposiums on nuclear medicine, generally held at WSU at Richland. Many industry and  
21 medical community representatives participated. The general consensus was that the FFTF was  
22 essential to the reliable, long-term supply of radioisotopes and that industry concurred in this  
23 assessment. DOE is well aware of commercial interest in FFTF because of the DOE sponsored  
24 market surveys of industry need, projected demands, and the continued interest from financial  
25 lenders and venture capitalist in a commercial FFTF operation agreement.
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Executed this 10 day of January 2001 in RICHLAND, Washington.

  
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William J. Stokes  
President, Advanced Nuclear & Medical Systems

## WILLIAM J. STOKES

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### PROFILE

Executive level manager experienced in project development, strategic planning, and engineering management for power generation, safety-critical USDOE facilities, and hazardous facility closure.

- Multi-disciplined corporate executive and business unit manager for large scope, technically complex power generation and federal energy related projects.
- Proficient in corporate strategic planning, domestic and international business development, and corporate financial management.
- Experienced in project life cycle performance assessment, cash flow analyses, project development, construction financing, and breakeven analyses.
- Skilled in market expansion, new market penetration, start-up and turnaround business development. Proficient in project planning, proposal preparation, and client presentation.
- Demonstrated ability to interact with clients, regulators, labor leaders, and political leaders at all levels of local, State, and Federal government.
- Projects characterized by high quality products, on-time and on-budget delivery, innovative problem solutions, cohesive teamwork within the staff, and growth through repeat orders.

### EMPLOYMENT

Columbia Basin Consulting Group, LLC, Richland, WA

1997 to Present

#### General Manager/Principal Consultant

Developed the project strategy and managed the baseline planning team (technical, cost and schedule) for the largest hazardous waste cleanup project in the USA. Project involves retrieval and transfer of 34 million gallons of highly radioactive weapons production mixed wastes, stored at Hanford in RCRA non-compliant underground tanks, to compliant facilities for processing.

- Total Cost Estimate exceeds \$5.4 Billion, funding peaks at \$250 Million annually.
- Technical and safety challenges intrinsic in the high hazard and physical properties of the wastes to be transferred, and the aged condition of single shell storage tanks.

Developed business management sections for Pacific Northwest National Laboratory report to National Energy Research Advisory Committee and Department of Energy Secretary Richardson on restart of Fast Flux Test Facility for production of medical and commercial radioisotopes.

Participated in a project engineering team at the Lawrence Livermore National Laboratory, which established the technical and engineering design baseline for the Uranium-Atomic Vapor Laser Isotope Separation (U-AVLIS) commercial nuclear fuel enrichment plant. Specific assignment was Systems Configuration Management for the Laser & Optical Systems Engineering Group for both the AVLIS Demonstration Facility and planned commercial fuel enrichment plant.

Advanced Nuclear & Medical Systems (ANMS) and Informatics Corporation, Richland, WA

**President/CEO - ANMS**

1995 to Present

Created this affiliate firm with Informatics Corp., to commercialize the production of medical and commercial radioisotopes utilizing surplus Hanford facilities. This firm developed an innovative concept to privatize Hanford's surplus Fast Flux Test Facility (FFTF) nuclear reactor.

- Developed a commercially financed privatization proposal to DOE under FAR 15.5.
- Secured support from Governor, US Senators, Representatives, local political leaders, and organized labor at the State and International levels.
- Successful in establishing medical mission by reversing a high profile demolition decision.
- Restart and contracts pending federal environmental impact assessment process.

Invited speaker to DOE's Environmental Management Advisory Board on "Privatization."

**Vice President - Informatics Corporation**

1993 to 1996

Managed regional business development and office base-load contract for this minority start-up business. Base contract was a multi-tasked Basic Ordering Agreement for Program Management and Integration services at DOE's Hanford Site. Marketed and successfully negotiated a position on broad scope A&E team for Site remediation engineering services at DOE's Rocky Flats Site.

- Regional and contract revenues grew in excess of \$10 Million per year by 1996.
- Rocky Flats contracts have evolved to large scope, multi-disciplined projects.
- Key foundation contributor for growth to a 300 person nation-wide company.

Chicago Power Corporation, Walnut Creek, CA

1992 to 1993

**Vice President and Partner**

Co-founder of independent power developer whose principal efforts included a 150MW CCCT for Columbia Falls Aluminum Company (partners: Pacific Generation Development Corp. and Zum/NEPCO); the 47 MW CCCT Hanford Cogeneration Project (partners: NRG Energy Inc, Westinghouse and Enron); and the 800 MW coal-fired Kamataka Power Project (partners: CMS Generation and the Baharat Heavy Electricals Ltd. of India).

- Successfully negotiated partnering and development team agreements.
- Developed conceptual facility design, performance analysis and financial proforma.
- Short-listed for development of Columbia Falls Aluminum Company & Hanford IPPs.
- Shifts in energy costs and customer power acquisition strategies terminated the projects.

ICF Kaiser Engineers, Oakland, CA

1989 to 1992

**Vice President and Business Unit Manager**

Managed the Government Services Business Sector for subsidiary firm Cygna Energy Services. Marketed and managed engineering consulting project services for turnaround business, transitioning from down-turning commercial nuclear projects to broader business base, including federal energy projects. Introduced ICF KE and Cygna to the Rocky Flats Plutonium Production

Plant and formulated teaming arrangements with ICF affiliate firms for project work at Los Alamos National Laboratory, Idaho Engineering National Laboratory, and the Hanford Site.

- Managed business unit, performance projections, P&L, budget and earnings. Elected to the Vice President position with ICF Kaiser Engineers in 1990.
- Assessed market targets, prepared new business proposals and client presentations. Directly supervised engineering projects at Rocky Flats and recruited staff of 60.
- Strategized market niche to infuse commercial nuclear management methodology in the safety assessment and upgrade of aged DOE nuclear weapons complex facilities.
- Developed business unit from a start-up service area to 34% of the corporate business and represented 80% of this period's corporate growth.

NUS Corporation, Walnut Creek, CA

1986 to 1989

#### Western Region Manager for Consulting Services

Developed regional business and consulting services projects for the commercial power industry and industrial clients. Projects included baseline plan for the High Level Waste Repository Program, operational plant readiness assessments, consulting support and testimony development for the Diablo Canyon Rate Case project. Proposed and successfully negotiated a contract to prepare chemical emergency response training programs for the Republic of China.

#### PRIOR EXPERIENCE

Power Projects Engineering & Management Consultant – Business areas included: power plant upgrades and modifications, utility management consulting, and project performance assessments. Also supported prudence investigations and litigation testimony, utility regulatory actions, and license strategy planning. Assisted in training program development at the Institute of Nuclear Power Operations and testified before the Diablo Canyon Atomic Safety and Licensing Board.

Nuclear Power Systems Design Engineer – Designed nuclear plant systems, plant layout and configuration, supported licensing, and procured components. Developed operation enhancements, station waste management programs, and system comparative economic analyses. Developed plant conceptual designs and performed Design Reviews on behalf of the Chief Nuclear Engineer.

Lead Mechanical Construction Engineer - Responsible for mechanical construction engineering programs at Comanche Peak Steam Electric Station (2200 MWe). Responsibilities included technical coordination of Engineering, Quality Assurance, Construction, and coordination of mechanical equipment erection sequences such as steam supply systems and main turbine erection.

#### EDUCATION

B. S., Mechanical Engineering, Drexel University, Philadelphia PA  
Graduate Studies: Thermal and Fluid Systems, Drexel University, Philadelphia PA

Completed CH2M Hill Management Training Program for Project Delivery in 2000  
Numerous Corporate Training Programs in Project Management, Marketing and Sales

CLEARANCE: DOE -"Q" - Inactive 1993  
MEMBER, AMERICAN NUCLEAR SOCIETY

**Exhibits 2 - 4 Not Included To Volume**

**Exhibit B Not Included To Volume**

Exhibit A

**Donald R. Segna**

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**Experience**

- 1995-Present , Richland WA
- General Manager (CEO) of IsoRay I.L.C
  - Co-founder of Advanced Nuclear and medical Systems (ANMS)
  - Co-founder and initial Chairman of Nuclear Medicine Research Council
  - Conducted studies to determine demand of alpha emitting isotopes for cancer treatment.
  - Established concept of joint tritium and medical isotope production for Fast Flux Test Facility at DOE Hanford.
  - Member, National Associations of Cancer Patients
- 1993-1995 MAC Technical Services Company Richland, WA  
Consultant
- General support services to the Department of Energy in research and development programs, technology transfer, contractor appraisals, and nuclear medicine.
  - Developed concept of cost avoidance financing for removing beneficial isotopes from nuclear wastes at Department of Energy sites.
  - Developed concept for use of DOE Cesium waste for food irradiation that would save DOE \$800M at Hanford and Savannah River sites.
  - Prepared concept for teaming with experts in radio-pharmaceuticals for cancer therapy.
- 1979-1993 Department of Energy-Richland Operations Richland, WA  
Program Administrator
- Responsible for oversight of research & development program of the Pacific Northwest National Laboratory in energy research, conservation and renewables, fossil energy, nuclear energy, energy information, environment and health, and energy policy.
  - Co-founder of Nuclear Medicine Research Council, a non-profit organization to accelerate the therapeutic use of radioisotopes.
  - Appointed to a NASA Blue Ribbon committee (Synthesis Group Space Council), new technologies for manned mars and lunar habitat mission.
  - DOE lead for development of space-to-space power beaming for DoD and NASA mission using nuclear space power.
  - Prepared successful agreement with EPRI on Compressed Energy Storage Program
  - Prepared Strategic Plan on Super Conducting Magnetic Storage Program.
- 1962-1979 NASA Johnson Space Center Houston, TX  
Project Management
- Responsible for mission requirements and launch commit criteria for Shuttle, Orbiter approach and landing test, Apollo Soyuz, Apollo Spacecraft for Skylab, and Apollo Lunar Programs.
  - Developed test objectives for the Apollo spacecraft integrated ground tests.
  - Prepared launch criteria, and criteria guidelines for all manned launch operations.

- Apollo Project Office representative to Change Control Board Mission Operations Panel.
- Mission Staff Engineer for Apollo 16 mission. Responsible for all aspects of the mission reporting to the Apollo Program Manager.
- Managed the test logic development for the Shuttle flight test program
- Experiment Test Manager for first set of experiments for the Apollo Soyuz.
- Co-founder of a land development, The Scandian Co. and of a shuttle airline, Consolidated airlines.

1958-1962 General Dynamics Corporation San Diego, CA  
 Group Leader, Flight Test Evaluation and Planning Section

- Atlas F series and silo operations
- Atlas F series and coffin operations
- Atlas A, B and Centaur development missions

1956-1958  
 Education B. S. Aeronautical Engineering

- Professional Memberships
- American Nuclear Society
  - Eagle Alliance
  - Aeronautical and Astronautical Institute of America

- Awards & Honors
- Superior Achievement Award for Apollo 16
  - Thirteen exceptional service awards from NASA
  - NASA Special Award - Shuttle approach and Landing Test Program

- Publications
- "Restart of Fast Flux Test Facility for Production of Tritium and Medical Isotopes," 1997.
  - "Alpha Emitter Demand Study for the Treatment of Cancer and Other Medical Needs," November 2, 1995
  - "Reliability Comparison of Nuclear versus Chemical Propulsion for Manned Mars Missions," 1990
  - "Space to Space Power Beaming Using Nuclear Space Power," 1990.
  - "Reliability comparison of nuclear thermal propulsion with combinations of electric propulsion using space to space power beaming for manned Mars missions," 1991.

Declaration of Don Segna

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3 I, Don Segna, declare under penalty of perjury and the laws of the State of Washington that the  
4 following is true and correct to the best of my knowledge:

- 5 1. I am general manager of a nuclear startup company IsoRay LLC. For 13 years, from 1979 until  
6 1993, I was employed by DOE. As part of my employment duties, I oversaw the nuclear  
7 medical isotope research at PNNL (Pacific NW National Laboratory) in the Tri-Cities. I am also  
8 a founder of the Nuclear Medicine Research Council (NMRC) and I am very familiar with the  
9 various types of medical isotopes, their manufacturing processes and private sector needs. My  
10 resume is attached as Exhibit A.
- 11 2. I have had an opportunity to review the Programmatic Environmental Impact Statement prepared  
12 by the Department of Energy for Accomplishing Expanded Civilian Nuclear Energy Research  
13 and Development and Isotope Production Missions in the United States, Including the Role of  
14 the Fast Flux Test Facility ("NI-PEIS"). Based on this review I have several concerns with the  
15 adequacy of the EIS, described below, and with any future DOE decision that may be based on  
16 the EIS.
- 17 3. Based on my years of experience in the nuclear medicine field, the estimate of the growth rate  
18 for the demand in isotopes contained in the PEIS failed to reflect the current knowledge in the  
19 industry as to growth rates. A recent independent study identified growth rates for certain  
20 isotopes in excess of 30 percent. Once an isotope receives FDA approval, the demand  
21 skyrockets, because the treatment requires treating prevalent patients and new patients. The  
22 Patients will demand their use as the isotope provides a more effective diagnosis and treatment,  
23 and also produces less adverse side effects.
- 24 4. The preferred alternative identified in the final PEIS and now recommended by the Energy  
25 Secretary calls for use of existing sources. Based on my experience in the nuclear medical field,  
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1 reliance on essentially two facilities without the added assistance of FFTF is very likely to  
2 produce significant shortages. Maintenance is regularly scheduled on each reactor, which can  
3 sometimes lead to extended delays. Especially with the production of plutonium 238 ("Pu-238")  
4 it is unlikely the present infrastructure can satisfy a reliable source of medical isotopes resulting  
5 in significant shortages.

6 5. In addition to significant shortages of medical isotopes, there is significant concerns that adding  
7 the medical mission and Pu-238 to the present missions and those planned for ATR and  
8 especially HFIR would be very disruptive for any "hiccup" in the system. These missions are  
9 very important to our Nation's national security and many research projects including basic  
10 research for DOE, Department of Defense, other government agencies and commercial needs.  
11 With this many missions going on using different materials, test conditions and procedures there  
12 will be "hiccups". Consider the outages caused by the brittleness testing and change out of the  
13 reflectors regularly scheduled for HFIR. Just as the Government requires back-up for national  
14 security projects, e.g. tritium production, the Government must provide the same level of  
15 reliability for the production of life threatening as well as national security products. In fact,  
16 even more so in most cases. A week, month or even 3 months delay in most national security  
17 projects is trifle; however, it is unconscionable to tell a dying patient "you're back ordered  
18 sorry".

19 6. FFTF provides the Government with the flexibility and contingency capability to be able to  
20 manage, not only scheduled and unscheduled outages, but the ability to add new missions that  
21 surely will be added in the life time of these reactors, e.g. material testing for accelerators,  
22 fusion, power reactor improvements, new power reactors etc. We will be in space providing  
23 nuclear power and propulsion to do more aggressive unmanned missions and go manned to  
24 Mars. FFTF gives you the ability to shut down HFIR or ATR to retrofit for a new experiment  
25 just as you are doing know for the upgrade at HFIR for medical isotopes, changes to allow  
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1 operations at 100MW, cold neutron work etc. Without HTR you wait until you build because  
2 once you commit to medical isotopes shutting down supplies would be a real black eye to the  
3 Government.

4 7. The final PEIS justifies not activating FFTF or using Alternative 3 or 4 based in part on lack of  
5 private commitment. It is undisputed that dozens of companies expressed substantial interest in  
6 receiving isotopes and the need to reactivate HTR. There are some companies, however, that  
7 are investigating a new isotope that may want to keep it quiet until they submit application to  
8 FDA. I'm one of them as you will see in my company letter to you, under separate cover, and it  
9 will show the need for a medical isotope with cost of reactor irradiation services of \$12M to  
10 \$26M annually by 2005. I would expect about \$8M to \$15M would go to HTR if it were to  
11 restart. The remainder would go to 2 other reactors for reliability. If FFTF is not restarted, some  
12 of this business will have to go abroad and shipped back to the US.

13 8. The DOE must assess the back up need for medical isotopes, e.g. if ATR goes down, can HFIR  
14 pick up some of the demand? The need for alternate sources is not new to DOE-NE as I have  
15 talked to Mr. Owen Lowe of your staff at some length during my effort with the Advanced  
16 Nuclear and Medical Systems Corporation business plan. He agreed that alternate sources of  
17 medical isotopes used for life threatening applications were required. This occurred in 1996 and  
18 just recently we began looking at university alliance of reactors to supply certain isotopes  
19 through Mr. Thomas Majchrowski of SAIC at the University of California at Davis, and NE was  
20 aware of this. For instance, the Tritium supply DOE required of HTR, if it were to be used for a  
21 tritium supply, was the full START 1 level with a 5 year stock pile if one source fails. While  
22 that would be excessive for medical isotopes, I believe a similar criteria must be developed  
23 before any assessment can be made on DOE's reactor infrastructure. Of course, all high priority  
24 missions should be included. I don't see that discussion in the PEIS.

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- 1 9. Reference your statement on Page S-31 of the NI-PEIS, "In view of the lack of commitments  
2 that would justify the restart of FFTF or the construction of new facilities as proposed under  
3 Alternatives 3 and 4, DOE anticipates that its current infrastructure will serve the needs of the  
4 research and isotope communities for the next several years. In particular, DOE will consider  
5 opportunities to enhance its effort to provide medical and research isotopes. If significantly  
6 larger amounts of isotopes are required in the future, the PEIS contemplates that DOE would rely  
7 on the private sector to fulfill these needs."
- 8 10. This tells me that DOE contemplates that the present infrastructure can supply the needs for only  
9 several years. However, the NI-PEIS fails to demonstrate that DOE can supply current demand  
10 or that it has a concrete plan to provide additional capability if necessary. The NI-PEIS does no  
11 more than hint that DOE will "... consider opportunities to enhance its effort to provide medical  
12 and research isotopes." The NI-PEIS provides a speculative and vague discussion regarding the  
13 possible use of accelerators at some undetermined point in the future. But this discussion lacks  
14 sufficient depth in schedule, capability, cost and environmental effects. Without this data a  
15 rationale decision on a preferred alternative can not be made.
- 16 11. Relative to the NI-PEIS's reliance on the private sector supplying "significantly larger amounts"  
17 of isotopes, I see no data in the NI-PEIS that shows the private sector will be able to respond in  
18 time to build a reactor to supply the medical isotopes except for commercialization of FFTF. To  
19 my knowledge, DOE has never established criteria for joint public/private operation of FFTF or  
20 solicited proposals from industry stakeholders.
- 21 12. To the contrary, many companies have expressed fear that DOE would look negatively upon  
22 their participation in FFTF reactor project and the ANMS letter for privatization was not  
23 assessed in the NI-PEIS. In addition, despite my close involvement, repeated contacts with DOE  
24 and interest in this issue, at no time did DOE specify what it meant by "commitment" for  
25 purposes of reactivation of the FFTF. Moreover, DOE did not produce the basic information  
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1 required by any private company before it would be in a position to make a commitment, such as  
2 guaranteed amount and identity of isotopes, cost, and schedule of isotope needs or how it would  
3 interface with DOE's reactors.

4 13. In August 1999, PNNL prepared a program-scoping plan for the FFTF. The purpose of the  
5 scoping plan was to determine whether there was a "compelling rationale" to restart the FFTF.  
6 During that process members of the private sector provided PNNL with a letter expressing  
7 interest in possible private participation in the FFTF. PNNL forwarded the letter to the NERAC  
8 committee, which was established by DOE to provide independent expert advice on the complex  
9 science and technical issues associated with the planning, operation and management of DOE's  
10 civilian nuclear programs. PEIS Summary, p. S-1.

11 14. DOE adopted many of NERAC's conclusions in the PEIS. One of the conclusions expressly  
12 adopted by DOE was for the creation of a program to allow the United States to "develop a  
13 capability to produce large quantities of radionuclides [radioisotopes] to maintain existing  
14 technologies and to stimulate future growth in the biomedical sciences." This same paragraph  
15 did include the requirement for a reliable supply, adequate quantity, quality etc. justifying a need  
16 for alternate source. The Government must assess these requirements for at least the annual  
17 growth of 7 to 16% and include a factor to account for the rapid growth in demand that will  
18 undoubtedly occur when a particular isotope treatment is first approved by FDA for marketing.  
19 The NI-PEIS does not include any such assessment.

20 15. In my opinion, it is disingenuous for DOE to reject alternatives in the PEIS because of an alleged  
21 lack of private commitment, when DOE did nothing to solicit nor define that commitment and  
22 relative to supply, took affirmative steps to discourage interest from the private sector and  
23 ignored information that was provided to it by the private sector. Attached as Exhibit B is a copy  
24 of the August 1999 *Program Scoping Plan for the Fast Flux Test Facility* (the 90-day study).  
25 Appendix A of this study included over 45 letters written in the summer of 1999 from the  
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1 international organizations, government agencies, industry groups, universities, and other  
2 individuals involved in the use and development of medical isotopes. Several of these letters  
3 discuss isotope shortages, the growing need for production of specific isotopes, and the  
4 desirability of using the FFTF for that purpose. These letters flatly contradict DOE's assertion of  
5 a lack of commitment by the medical isotope community.

6 16. I am also personally familiar with medical research facilities that currently cannot obtain reliable  
7 supplies of medical isotopes from DOE. For example, NeoRx is a pharmaceutical company that  
8 is developing an advanced, targeted isotope concept to deliver high amounts of isotopes to  
9 various types of bone and other cancers. NeoRx is examining the use Holmium (Ho-166) as a  
10 potential treatment for the devastating bone cancer multiple myeloma. I became acquainted with  
11 NeoRx while I was working at DOE and have remained in contact with members of the company  
12 since that time.

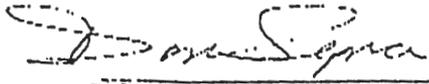
13 17. In 1999, NeoRx chief scientist Alan R. Fritzberg, Ph.D wrote to Dr. Madia at PNNL to express  
14 support for restarting the FFTF and explaining that Ho-166, which it was administering in Curic  
15 amounts in Phase III clinical trials, was not then available from a DOE reactor. Currently, Ho-  
16 166 is available only from University of Missouri. NeoRx is concerned that this is the single  
17 source for this isotope in the nation and that DOE does not have good production reactor and  
18 frequent retrieval system necessary for high-specific activity radioisotopes for medical use.

19 18. In addition, NeoRx is searching for a reliable source of Bismuth Bi-212, which comes from a  
20 series of decays from Radium-224. DOE's Argon National Laboratory in Illinois had been the  
21 source of this material. In 1997, Argon National Laboratory informed Dr. Fritzberg that it would  
22 no longer supply the material, despite the fact that Dr. Fritzberg had a \$750,000 NIH grant to  
23 study this material. Although in 1997, DOE promised to find an alternative source for Bi-212 to  
24 date it has not set up a reliable production for this material. Thus, NeoRx is very skeptical about  
25 DOE's ability to supply medical isotopes.

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1 19. Bismuth 213—an alpha emitting isotope that is currently undergoing human trials in New York's  
2 Sloan Kettering Cancer Research Center. DOE has not been able to produce enough Bismuth-  
3 213 to meet the demand of the medical research community. As a result, research at NeoRx, the  
4 N111 cancer laboratory, and the Universities of Missouri and Alabama have been delayed by the  
5 lack of this material. NeoRx had hoped to obtain this isotope for use in its Seattle based research  
6 but was informed by DOE that a supply was unavailable.

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8 Executed at Richland, Washington, this 10 day of January 2001.

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12 DON SEGNA

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## DECLARATION OF KENNETH D. DOBBIN

I, Kenneth D. Dobbin, declare under penalty of perjury and the laws of the State of Washington that the following information is true and correct to the best of my knowledge, and am over 18 years of age and am competent to testify in the matter.

1. I currently serve as a City Councilmember of the City of West Richland, Washington where I am known as Ken Dobbin. I currently am employed as a Criticality Safety Engineer with Fluor Federal Services in Richland Washington. My current work assignment is at the Plutonium Finishing Plant. My resume is attached as Exhibit A
2. I served as a Nuclear Engineer at the Fast Flux Test Facility (FFTF) from 1974 to 1996. I hold both Masters and Bachelors Degrees in Nuclear Engineering from Oregon State University.
3. I have had an opportunity to review the United States Department of Energy's (DOE) *Final 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* (NI PEIS). Based upon this review I have several concerns with the adequacy of the EIS, described below, and with any future DOE decision that may be based upon the preferred alternative selected in this NI PEIS.
4. I was extremely surprised by the preferred alternative selected on page S-31 that relies upon the presently operating facilities without restart of the FFTF when statements in the NI PEIS show that these facilities are not capable of accomplishing the projected missions. I am including a few of these statements that show existing operating facilities cannot supply the required radioisotopes (page numbers are from the NI PEIS). Selection of a preferred alternative that cannot meet the demand for cancer therapy means loss of life, a human factor that this NI PEIS does not adequately address.

On page 2-286, the following statement is made: "...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."

On page 2-192, the NI PEIS states: "...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." Some of those missions are non-civilian and would take priority over medical needs.

On page 1-9, the document laments: "Unless an assured domestic supply of Pu-238 is established, DOE's ability to provide radioisotope power systems to support future NASA space exploration missions may be lost."

5. The FFTF is erroneously ignored for production of these isotopes when the USDOE admits on page 2-262: "Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure to support the production of radioisotopes for medical applications and research. Again on page 2-300, the DOE states: "Consistent with the mandates under the Atomic Energy Act, DOE seeks to fulfill its responsibility to ensure that there is a reliable supply of isotopes in the US to meet future demand."

6. In Section 2.6.1, starting on page 2-66, the NI EIS clearly demonstrates that DOE has no facility other than the FFTF that can support the expanded nuclear infrastructure missions. When referring to efforts that could enhance the production output of the Advanced Test Reactor (ATR) and the High Flux Isotope Reactor (HFIR) on page 2-68, the document states: "...the enhancement in production capability would not be adequate to meet the future demand for isotope production."

7. It also concerns me that the DOE conclusions are based upon an estimated demand for therapeutic medical isotopes of 7% to 14% per year when the latest Frost and Sullivan report shows a 32% increase this last year! Shortages will occur sooner than assumed when the document states that the FFTF is not needed. The result is a loss of human life from demand exceeding supply of medical isotopes.

8. I am deeply concerned that old facilities such as ATR and HFIR could develop age-related issues that may mean an end of their operating life. Shutdown of these facilities would nullify the assumption of the NI PEIS that present operating facilities can meet the nuclear infrastructure needs, especially medical isotopes. That contingency is not adequately addressed. The Advanced Accelerator Applications (AAA) concept is an attempt to ease the fears of us who understand reactors. However, the AAA concept was not adequately developed, but appears to be related the high energy accelerator, whose development was also not adequately presented in the NI PEIS.

9. The term "tunable" neutron spectrum was attributed to high energy accelerator applications. To build a "tunable" neutron machine that can provide an adequate quantity and quality of medical isotopes, the FFTF would be required to test the fuels, materials, and coolant. The preferred alternative does not state where the testing will be done nor does it recommend restart the FFTF to do this.

10. I am very troubled by the inclusion of tritium in an option of the preferred alternative. On page S-31 the following statement was made regarding the AAA: "Such a facility, which would be used to evaluate spent fuel transmutation, conduct various nuclear research missions, and ensure a viable backup technology for production of tritium for national security purposes." At the Richland WA public hearing I attended August 31, 2000, the DOE officials clearly stated that tritium was not being considered in this NI PEIS. Therefore, tritium production must not be included as an option in the preferred alternative.

11. I am particularly troubled by the NI PEIS statement on page S-31 that the DOE did not receive commitments from the private sector. I know that, in the past, private companies have expressed interest in FFTF radioisotope production and in one case submitted an unsolicited proposal. Given that interest, I want to know why the DOE did not submit a request for proposals from the private sector.

12. The medical community is reporting remarkable success in cell-targeted therapy on cancer patients who did not respond to other treatment. That success may explain the much greater increased in demand the Frost and Sullivan report is showing for therapeutic isotopes than the DOE expected. Any option to meet that increased demand will take time to construct. Construction time for facilities that could match the FFTF capability would take much longer than the three years for an FFTF restart. This NI PEIS is deficient in not determining the number of human lives lost during the period of construction of new facilities when the FFTF could have been producing isotopes for this cancer therapy.

12. I believe that an SEIS must be written prior to issuing a Record of Decision (ROD) and must reconcile discrepancies, listed in the following paragraphs, between the preferred alternative and the supporting data. The SEIS must explain why interest by the private sector in using the FFTF to produce isotopes was not followed by a request for proposals. The SEIS must also answer the questions I raised in my August 31, 2000 testimony, found on page 2-568 of the NI PEIS. Response 400-2 to these questions leads one to believe that Appendix P of the NI PEIS answered the questions. However, Appendix P does not provide an adequate cost analysis that shows the magnitude of medical cost savings from FFTF isotope production. That inadequate economic analysis leads to a faulty conclusion that FFTF operation is too costly. As a result, a preferred alternative to shut down the FFTF is selected that results in a potential loss of human life. The NI PEIS fails to address that human factor!

13. The evidence, above, shows that selecting an FFTF shutdown as a preferred alternative is based upon faulty logic, and therefore is flawed. I am concerned that any DOE decision based upon this preferred alternative will also be flawed. I believe that an SEIS must be written to correct the inadequacies in the NI PEIS prior to any further decision.

I declare under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

Executed at West Richland, Washington, this 10th day of January, 2001.

*Kenneth D. Dobbin*

KENNETH D. DOBBIN

## EXHIBIT A: PROFESSIONAL SUMMARY

Kenneth D. Dobbin

## EDUCATION:

B. S. Nuclear Engineering, Oregon State University, Corvallis, Oregon  
M. S. Nuclear Engineering, Oregon State University, Corvallis, Oregon

## SUMMARY OF EXPERIENCE:

Nuclear Engineer with 26 years of experience in the field of nuclear engineering and physics, including nuclear reactor startup, physics testing, neutronics characterization, core reload design, fuel management, Fast Flux Test Facility (FFTF) reactor operation and nuclear criticality safety. For the last 4 years, Mr. Dobbin holds a title of Criticality Safety Engineer working mostly at the Plutonium Finishing Plant on the Hanford Reservation.

## SIGNIFICANT EXPERIENCE:

## FLUOR FEDERAL SERVICES (1997 - Present)

Criticality Safety Engineer - Prepare nuclear criticality safety evaluations and assure that all operations at the Plutonium Finishing Plant are within criticality safety analyzed bases. Served on criticality safety annual inspections and on the Fluor Daniel Fernald operational readiness review team.

## WESTINGHOUSE HANFORD COMPANY (1993 - 1996)

Senior Principal Nuclear Engineer - Team leader for the physics and fuel management of the FFTF radioisotope mission analysis, shutdown shielding, criticality, and spent fuel management. Lead core management engineer for the defueling of the FFTF. Team co-leader for the first spent fuel characterization shipment from the Hanford K-Basins to the laboratory.

## WESTINGHOUSE HANFORD COMPANY (1986 - 1992)

Principal Nuclear Engineer - Chief FFTF reactor core reload design engineer and fuel management specialist. Responsibilities included assuring the appropriate core loading for each operating cycle that would satisfy reactor safety technical specifications, experiment requirements, and operational efficiency.

## WESTINGHOUSE HANFORD COMPANY (1980 - 1985)

Advanced Nuclear Engineer - Worked on the initial FFTF fuel loading, startup, and physics testing. During this period, nuclear analytical tools were calibrated with operational experience to develop excellence in predicting the behavior of the reactor. Conducted hazards assessment of the physics test apparatus extending from the operating deck, down through an in-reactor thimble into the reactor core.

## WESTINGHOUSE HANFORD COMPANY (1974 - 1979)

Nuclear Engineer - Worked on pre-startup physics analysis, experiment safety analysis, and calculational methods development for the FFTF.

## ASSOCIATIONS:

Member, American Nuclear Society  
Member, West Richland, WA, USA, City Council  
Past Member, International Technical Program Committee for Global '97, International Conference on Future Nuclear Systems  
Past Member, Reactor Physics Division Technical Program Committee for the American Nuclear Society  
Past Member, International Technical Program Committee for Global '95, International Conference on Future Nuclear Systems  
Past Technical Program Committee Assistant Co-chairman for Global '93, International Conference on Future Nuclear Systems

## PUBLICATIONS:

- 2000, "CSER 00-006: Storage of Plutonium Residue Containers in 55 Gallon Drums at the PFP," HNF-6179, Rev. 0.
- 2000, "CSER 00-001: Criticality Safety Evaluation Report for Cementation Operations at the PFP," HNF-5988, Rev. 0.
- 1999, "CSER 99-007: Criticality Safety Evaluation Report for PFP Glovebox HA-211 Muffle Furnace Operation for Plutonium Stabilization," HNF-5450, Rev. 0.
- 1999, "CSER 99-001: PFP Lab Denitrating Calciner," HNF-3908, Rev. 1.
- 1996, "Physics and Fuel Management of Fast Flux Test Facility Tritium Production," WHC-SD-FF-ANAL-006, Rev. 0.
- 1993, "Evaluating the Efficacy of a Minor Actinide Burner," Proceedings of International Conference on Future Nuclear Systems: Emerging Fuel Cycles and Waste Disposal Options (Global '93), Seattle, WA.
- 1993, "The Symbiotic Relationship between Waste Burning and Safety in Liquid Metal Reactors," Proc. Int. Conf. on Future Nuclear Systems: Emerging Fuel Cycles and Waste Disposal Options (Global '93), Seattle WA.
- 1993, "FFTF Core Management Methods," WHC-SD-FF-CMMD-001, Rev. 0-D.
- 1992, "Potential for Sodium Void Mitigation with Nitride Fuel in an Advanced Liquid Metal Reactor," WHC-SP-0696.
- 1992, "FFTF Deferred Reload Design Report for Cycle 13," WHC-SP-069.

- 1991, "Comparative Sodium Void Effects for Different Advanced Liquid Metal Reactor Fuel and Core Designs," Proc. Int. Conf. on Fast Reactors and Related Fuel Cycles, Kyoto, Japan.
- 1991, "Application of Advanced Liquid Metal Reactors to the Destruction of Radioactive Waste," Proc. Int. Conf. on Fast Reactors and Related Fuel Cycles, Kyoto, Japan.
- 1991, "FFTF Reload Design Report for Cycle 12A," WHC-SD-FF-DR-003.
- 1989, "FFTF Core Reload Design Report for Cycle 11B.1," WHC-SP-0547.
- 1988, "FFTF Reload Design Report for Cycle 10C," WHC-SP-0420.
- 1987, "FFTF Reload Design Report for Cycle 9C," HEDL-TC-2978.
- 1987, "FFTF Reload Design Report for Cycle 9B," HEDL-TC-2946.
- 1987, "Analyses of Eigenvalue Bias and Control Rod Worths in FFTF," Proc. Int. Conf. on Fast Breeder reactor Systems: Experience Gained and Path to Economic Power Generation.
- 1987, "Calculation of Three Dimensional to Two Dimensional Biases for Nuclear Analyses of FFTF Core Demonstration Experiment," HEDL-TC-2854.
- 1986, "FFTF Reload Design Report for Cycle 9A," HEDL-TC-2852.
- 1986, "FFTF Neutron Cross Section Set 500A Validation Studies," HEDL-TC-2780.
- 1985, "High Power FFTF Neutron Characterization Report," HEDL-TC-2703.
- 1983, "Summary of Fast Flux Test Facility Traversable Fission Chamber Results," HEDL-TC-1983.
- 1979, "FFTF In-Reactor Thimble Reactor Safety Analysis: Mode 1 Operation," HEDL-TC-1243.
- 1979, "FFTF In-Reactor Thimble Reactor Safety Analysis: Mode 2 Operation," HEDL-TC-1452.
- 1976, "Analysis of Small Sample Worths in the FTR EMC," HEDL-TME-76-87.
- 1976, "Test Loading Effects--Analysis of Experiments in the FTR EMC," HEDL-TME-76-34.
- 1975, "Central Fuel Worth in the FTR EMC," HEDL-TME-75-52.

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## Declaration of Amy Evans

I, Amy Evans, declare under penalty of perjury and the laws of the State of Washington that the following is true and correct to the best of my knowledge:

1. I am over eighteen years of age and competent to testify in this matter.
2. I have become familiar with issues regarding the production and use of medical isotopes as part of my recent employment. Approximately three years ago, I became involved in the Nuclear Medicine Research Council (NMRC). In late 1999, I took a position with Citizens for Medical Isotopes (CMI), which provides public information regarding medical isotope issues.
3. As part of my duties at CMI, I had several contacts with members of the isotope research community. These communications include the following:
  4. On January 9, 2001, I spoke with Thomas Maloney. Mr. Maloney is employed with ISO-TEX Diagnostics, a company that supplies isotopes to the medical community. In our conversation, he explained that he was very unhappy about the current state of isotope production facilities in the United States. He also expressed his concern that ISO-TEX was forced to look outside of the United States to obtain isotopes because foreign, sole-source isotope producers have a virtual monopoly on the market and have used that position to justify charging exorbitant prices.
  5. ISO-TEX had been getting isotopes from Brookhaven, but since that facility has been deactivated, DOE has not provided another domestic source of supply. As a result, ISO-TEX must now purchase Sr-90 from Russia and In-111 from Canada. Mr. Maloney believes that "our research programs are in great jeopardy." and he strongly supports restart of the FFTF.
  6. On January 9, 2001, I spoke with Dr. Miroslav Styblo, a biochemist at the University of North Carolina, Chapel Hill. He was mentioned in a recent *Science* magazine article entitled *Arsenic Researchers Face Isotope Shortage*. This article discussed the current shortage of arsenic-73 (Ar-73), which is being used in research to determine the carcinogenic properties of the chemical.

- 1 7. Dr. Styblo works in one of two dozen research labs that are affected by the current shortage of
- 2 Ar-73. His laboratory is working with the Environmental Protection Agency to establish
- 3 acceptable values for arsenic concentrations in drinking water. He expressed his frustration that
- 4 'DOE supply problems have certainly held up a number of studies' and that several experiments
- 5 have been put on hold since Los Alamos ran out of Ar-73 in July 2000. DOE promised it would
- 6 deliver another batch of Ar-73 in March 2001, which Dr. Styblo believes is being obtained from
- 7 South Africa.
- 8 8. Dr. Styblo's experience further highlights the shortfalls in DOE's ability to domestically meet
- 9 the needs of the medical isotope research community.
- 10 9. I have also had written communications with Dr. David Scheinberg. Dr. Scheinberg is a Chief of
- 11 Leukemia Service at Memorial Sloan-Kettering Cancer Center in New York City. Dr.
- 12 Scheinberg is conducting leukemia research with Bismuth-213 and Iridium-195. Dr. Scheinberg
- 13 has been unable to move into Phase II clinical trials for this research, primarily because of
- 14 problems with the supply of the isotopes. He explained that research with alpha-emitting
- 15 isotopes (which include Bi-213) has been bottlenecked by serious supply problems and that the
- 16 limited supplies and current high costs are hampering the research with these isotopes.

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Signed this 11<sup>th</sup> day of January 2001 at Kennewick Washington.

Amy Evans  
Amy Evans

## DECLARATION OF SOL GUTTENBERG

I, Sol Guttenberg, declare:

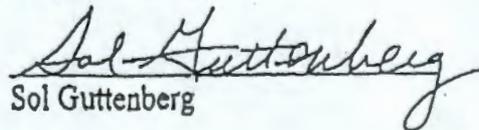
1. I served at the Hanford Fast Flux Test Facility (FFTF) as a Nuclear Engineer from 1971 to June 2000. I have degrees in chemical engineering and a masters in mechanical engineering. Over the course of these 29 years I served in many managerial capacities; my last position was as the Engineering Manager. I have been involved in the nuclear field since 1957 and keep current on developments in this field.
2. My colleagues and I participated actively in the Programmatic Environmental Impact Statement Process for Accomplishing Expanded Nuclear Energy Research and Development and Isotopes Missions in the U.S., Including the Role of the Fast Flux Test Facility ("EIS"). We provided information to the EIS preparer, SAIC, based on their request for data, leading up to the issuance of the draft PEIS in July 2000.
3. I have had an opportunity to review the PEIS prepared by the Department of Energy ("DOE"). Based on this review, I have several concerns with the conclusions reached by DOE and, as such, their basis for the selection of the preferred alternative appears to be flawed.
4. The PEIS correctly concluded that existing operational facilities would be inadequate to meet the projected need for isotope production and civilian nuclear energy research and development with or without adding the plutonium-238 mission (Section 4.4, page 4-110). Further, recent market studies (Frost and Sullivan July 13, 2000 and Bio-Tech Systems December 1998) have shown that the demand for therapeutic isotopes has been much higher than predicted by DOE's Expert Panel in September 1998 and the estimates used in the PEIS. This recent information is indicative of the fact that as isotopes become approved by the Food and Drug Administration ("FDA") and available on the public market, the demand by those afflicted with the condition for which the isotope is used for diagnosis and/or treatment, goes up dramatically. Clearly, if the growth continues at this rate, and ATR/HFIR are used to produce plutonium-238, DOE's existing capability will be fully used within a few years. This information was not included in the Final PEIS and as such is contrary to the corresponding statement made in Chapter 1, in the second paragraph on page 1-3, i.e., "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".
5. The Final PEIS states on page 2-103 that "...the Department did not receive the commitments from the private sector or other governments that would clearly justify the restart of the facility. Lacking such commitment, DOE would permanently deactivate FFTF under the Preferred Alternative." In a scoping plan prepared by PNNL, numerous expressions of interest from private companies, industry groups, government agencies,

international organizations, professional societies, and regional universities were provided to DOE in August 1999. At no time, however, to my knowledge did DOE convey the information which would be required by any private company to make an actual "commitment" nor was such a request made. Therefore, DOE's basis for the preferred alternative, as quoted above, is flawed and unsubstantiated.

6. The Final PEIS states on page 2-103 that "...DOE will consider opportunities to enhance its effort to provide medical and research isotopes. If significantly larger amounts of isotopes are required in the future, DOE would rely on the private sector to fulfill these needs." The purpose of the PEIS was to address the first sentence (i.e., to enhance its infrastructure to support the identified missions). Relative to the second sentence, DOE is abrogating its responsibility mandated by the Atomic Energy Act to ensure the availability of isotopes for medical, industrial and research applications. Further, in my opinion it is highly unlikely that the private sector would undertake this role due to the high costs and risks associated with constructing the necessary facilities. This is why the responsibility was mandated to DOE in the first place. Again, DOE's logic is flawed and contradictory.
7. The Final PEIS states on page 2-103 that "As a potential option for the longer-term future, DOE proposes to work over the next 2 years to establish a conceptual design for an Advanced Accelerator Applications (AAA) facility." The purpose of Alternative 3 in the PEIS was to evaluate accelerator technology for long-term applications. If DOE believed AAA was a viable option then it should have been analyzed in the PEIS. Therefore, for DOE to make irreversible decisions (i.e., the shutdown of FFTF) prior to analyzing the viability of an AAA, it is flawed, premature, and counter to the NEPA process. I see no valid basis for DOE's preferred alternative.

I declare under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

Executed at Kennewick, Washington, this 9th day of January, 2001.

  
Sol Guttenberg

---

## SOL GUTTENBERG

719 W 25<sup>th</sup> Avenue • Kennewick, WA 99337 • Phone: (509) 582-2550

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### SUMMARY

Over twenty-nine years of Liquid Metal Reactor (LMR) experience at the Fast Flux Test Facility (FFTF) with emphasis on system design, construction overview, start-up engineering, operational support and initiation of shutdown activities. Prior background encompasses fourteen years as a systems engineer on Pressurized Water Reactors for naval propulsion and test facility design for nuclear rocket development.

---

### EXPERIENCE

From 1971 to the present, I have held the following management positions at FFTF:

- Manager, FFTF Auxiliary Fluid Systems, directed activities associated with liquid metal, cryogenics and inert gas systems, and start-up of the Maintenance and Storage Facility (MASF).
  - Manager, FFTF Power Addition and Plant Evaluations, directed a multi-disciplinary detailed feasibility evaluation of a privately-owned FFTF electrical-generation facility (\$175 million project) that culminated in an advanced conceptual design and a comprehensive safety analysis document. Also coordinated the development of an FFTF Probabilistic Risk Assessment and the Operational Assurance Program for project upgrades to enhance FFTF reliability.
  - Manager, FFTF Facility Transition, participated in the development of marketing initiatives for the privatization of FFTF with emphasis on a large steam generator test facility and isotope (molybdenum 99) production. Also established the FFTF approach/concept for the dry interim storage of spent fuel and established the Nuclear Energy Legacies Program strategy for disposal of several retired sodium facilities.
  - Manager, FFTF Transition Project Office, established the project office to manage and direct FFTF shutdown planning and activities. Developed the technical strategy for achieving a low cost and safe deactivation state suitable for long-term surveillance and maintenance.
  - Manager, FFTF Engineering, directed FFTF Engineering activities in support of FFTF deactivation/standby and directed technical safety and environmental evaluations for potential new missions including the production of tritium, medical isotopes, and plutonium-238 for space power systems. Retired June 30, 2000.
- 

### EDUCATION

Master of Science in Mechanical Engineering, 1961.  
University of Pittsburgh

Bachelor of Science in Chemical Engineering, 1955.  
Polytechnic Institute of Brooklyn

Declaration of Charles Lindenmeier

1  
2 I, Charles Lindenmeier swear under penalty of perjury and the laws of the state of Washington that  
3 the following is true and correct to the best of my knowledge.

- 4 1. I am over eighteen years of age and competent to testify in this matter.
- 5 2. I hold a doctorate degree in physics from Cornell University, and I worked in nuclear industry at  
6 Hanford from 1960 to 1973. My employment responsibilities there included work on the early  
7 design stages of the FFTF reactor and I'm familiar with the operational capabilities of the  
8 reactor.
- 9 3. I have reviewed the draft PEIS and the summary for the Final PEIS. It is my belief that the PEIS  
10 is flawed because it failed to assign or analyze timelines associated with the developing the  
11 technology that is relied upon for many of the alternatives. The alternatives analysis should have  
12 included timelines to demonstrate that the selected alternative will be able meet the other mission  
13 requirements and to exceed the demand for medical isotopes that is set for in the economic study  
14 that accompanied the PEIS.
- 15 4. For example, PEIS alternative 3 discusses construction of a low energy particle accelerator and a  
16 high-energy particle accelerator to replace the FFTF. To my knowledge, no one has ever built a  
17 400 mega-watt, high-energy accelerator. Undoubtedly, there will be significant technological  
18 hurdles to bringing this technology to fruition. For example, the magnetic field requirements and  
19 controls, vacuum system requirements, and health physics associated with operating the facility  
20 are all unknowns. It is foolish to risk the United States' medical isotope supply (and peoples'  
21 lives) on untried technology when this unnecessary risk can be avoided by reactivating the FFTF  
22 while the technological feasibility of the accelerator is explored.
- 23 5. Most of the isotopes necessary for medical uses have short half-lives, do not occur naturally and,  
24 therefore must be manufactured. The manufacturing process involves irradiating a target isotope  
25 with either protons or neutrons. The proton or neutron enters the nucleus of the atom to generate  
26

- 1 the isotope of interest. Some isotopes are more readily made with either neutrons or protons. It  
2 is unclear from review of the PEIS whether or not the accelerator based neutron source (the high-  
3 energy accelerator) would be available for medical isotopes. It will take several years to site and  
4 construct the accelerator, and the production of isotopes could be further delayed if the facility is  
5 devoted to the primary mission of producing Plutonium-238 as appears to be contemplated in the  
6 PEIS. No schedule is given for the availability of this facility for medical isotope production.  
7 The accelerator options discussed in the PEIS appears to limit for many years the range of  
8 isotopes that can be made to those that are created by proton bombardment.
- 9 6. The FFTF is uniquely qualified to produce high purity medical isotopes. The FFTF is an  
10 excellent source of neutrons. The PEIS proposes using the High Flux Isotope Reactor (HFIR)  
11 and Advanced Test Reactor (ATR), which also provide neutron sources. As evidenced by the  
12 growth rates for medical isotope usage discussed in the PEIS, these facilities will soon run out of  
13 capacity to supply the expected demand. See Draft PEIS Summary, p. S-13 (HFIR and ATR  
14 "cannot fully meet the projected long-term need for medical isotope production and nuclear  
15 research development, with or without the plutonium-238 production mission.").
- 16 7. Because the FFTF is a fast reactor, FFTF can make certain isotopes that cannot be made in the  
17 HFIR and ATR reactors. Also, the speed of the neutrons can be tailored in the FFTF, which  
18 results in the production of certain isotopes that are of higher quality than can be produced in the  
19 HFIR and ATR reactors.
- 20 8. There are a 100 or more isotopes that may prove to be useful to treat cancer, heart disease and  
21 arthritis. Research is just getting under way to determine which isotopes will be optimal for  
22 which diseases. No one can predict if or when a breakthrough may occur. However, it seems  
23 intuitively obvious, that should the current research prove fruitful, this area of nuclear medicine  
24 could be poised for explosive growth in the next few years that could easily far outstrip DOE's  
25 current projections.
- 26

- 1 9. Given this potential for growth in the demand for medical isotopes, and the human suffering that  
2 such isotopes could alleviate, DOE's decision to irreversibility and permanently deactivate the  
3 FFTF is short-sighted and foolhardy.
- 4 10. There is a statement in the PEIS that DOE will leave increased isotope production to the private  
5 sector. However, there is no supporting information that the private sector would or could  
6 respond rapidly enough to meet increasing demand. The PEIS mentions a lack of interest on the  
7 part of the private sector in FFTF. If the private sector is not onboard at this time, what scenarios  
8 and/or inducements would be required for its participation? The PEIS does not address what  
9 interactions the DOE has had with the private sector. Background documentation supporting the  
10 various statements and assumptions regarding private sector participation in isotope production  
11 is not provided making it impossible to judge the validity of such statements and assumptions.  
12 Again no schedules are provided.
- 13 11. DOE's position is inconsistent with its obligation to ensure an adequate supply of medical  
14 isotopes. The Atomic Energy Act tasks DOE with the responsibility to identify and plan to meet  
15 the nation's nuclear needs. Thus AEA requires DOE to set out program to meet realistic  
16 production schedule for all different types of isotopes. FFTF is marvelous insurance for the  
17 uninterrupted supply of medical isotopes. DOE should not shut down this facility without  
18 guaranteeing that it can bring replacement facilities on line in time to meet demand for medical  
19 isotopes and to fulfill its other missions.

20  
21 Dated this 9<sup>th</sup> day of January 2001. Executed in RICHLAND, Washington.

22  
23  
24 Charles Lindenmeier  
25 Charles Lindenmeier  
26 1307 Canyon Avenue  
Richland, WA 99352

## DECLARATION OF ROBERT E. SCHENTER, Ph.D.

I, ROBERT E. SCHENTER, declare:

1. I am a theoretical nuclear physicist and have worked in the nuclear field for 43 years. Specifically, I have been actively involved in fission reactor design, operation, research and isotope production for the past 36 years and have focused on medical isotope production and application for the past 16 years. My expertise in the nuclear data field (e.g., Chairman of the Cross-Section Evaluation Working Group Fission Product, Actinide, and Medical Isotope Subcommittees, 1970-1994) has made me uniquely qualified to perform isotope production calculations for fission reactor systems in the United States and around the world. I have co-authored many publications (e.g., "Production Capabilities in U.S. Nuclear Reactors for Medical Radioisotopes", ORNL/TM-12010, November 1992) mostly related to medical isotope production in the Fast Flux Test Facility at Hanford, Washington (FFTF). As Hanford Isotopes Program Site Manager at the Westinghouse Hanford Company and Deputy Site Manager at the Pacific Northwest National Laboratory, I have been intimately involved with issues associated with medical isotope production and supply. I have testified before Congress in 1993 as to concerns about our adequate supply for future demands and shortages of medical isotopes. A resume outlining my qualifications in the medical isotope production field is included as Attachment A.

2. Recently, in my capacity as an employee of PNNL, I participated in the preparation of two reports describing the capabilities of the FFTF. These reports contained detailed quantitative information on the production capabilities of medical isotopes including comparisons to production in the Oak Ridge HFIR reactor. The first "Medical Isotopes Production at the Fast Flux Test Facility/A Technical and Economic Assessment" (PNNL-SA-29502, November 1997) was prepared in response to the Secretary of Energy's directive. The second "Program Scoping Plan for the Fast Flux Test Facility/A Nuclear Science and Irradiation Services User Facility" (PNNL-12245, Rev. 1, August 1999) was the "90-day" study requested by Secretary Richardson in May 1999 and is the first reference cited in "Final" PEIS Summary (S.8 References). I was responsible and performed all the calculations of isotope production results given in both reports.

3. I have had an opportunity to review the final PEIS. Based on my 43 years in the nuclear field, I note several issues regarding the adequacy of the EIS; these issues lead me to be concerned with any decision that might be made based on this PEIS. Given its significant omissions and errors, I do not believe it can serve as the basis for any informed decision by DOE until additional environmental review is conducted. My concerns with the adequacy of the EIS are outlined below.

4. The final PEIS at p. S-31 of the Summary states that DOE has not opted for Alternatives 1, 3 or 4 in light of the absence of private commitments that would justify the restart of FFTF or Alternatives 3 and 4. Shutting down FFTF primarily based on this argument is absolutely ludicrous. First of all it completely rejects most of the DOE arguments and text given in the PEIS that the existing DOE reactors of HFIR and ATR cannot supply medical isotopes and

PU-238 for even modest expectation in the growth of diagnostic and especially therapeutic medical isotopes. Secondly, cost savings in the Medicare Program related to better cancer, heart disease, arthritis, et al., treatments in the future will far outweigh revenue received from private companies to obtain medical isotopes. Finally, to discount the dozen or so letters to Dr. Madia from all the major pharmaceutical companies showing strong interest in obtaining FTFF produced isotopes is a major misunderstanding, in view of DOE's previously poor performance in delivering promised products. Also DOE made absolutely no effort to approach these companies with any organized plan.

5. The Preferred Alternative in the final PEIS assumes that existing operational facilities can meet the need for isotopes for "the next several years". P. S-31 of final PEIS. This conclusion is not supported by evidence available at the time, but which was not included in the final PEIS. To best illustrate this is to refer to numerous past and current shortages of medical isotopes. An excellent example dealing with this issue is given in the article by Janet Raloff from the October 23, 1999 issue of Science News, entitled "Wanted: Medical Isotopes - Overcoming a critical scarcity of radioactive materials for research" (Attachment B). I agree with her analysis and conclusions, based on my professional training and experience. Especially telling are the shortage problems described about Dr. Martin Brechbiel (NCI) and Dr. Alan R. Fitzberg (NeoRx) trying to get alpha emitting isotopes for their cancer research trials. Also the stopping of the human cancer trials of Drs. Gerald and Sally DeNardo (University of California, Davis School of Medicine) as described in the article by Owen Lowe (Associate Director of Isotope Programs at DOE).

6. The PEIS fails to include quantifiable data regarding the future demand for isotopes, despite the fact that this data was readily available to DOE and the EIS consultants. Critical information from the two reports identified in Item 2 were essentially ignored and any attempt to relate future demands as production capabilities of the FTFF and other facilities were not done in any sort of quantitative manner. Review of additional previous publications was also missing.

7. The final PEIS identifies that if, under the Preferred Alternative, shortages developed in the availability of isotopes, "DOE would rely on the private sector to produce these needs". Final PEIS Summary at p. S-31. This "private sector" approach will be impossible to achieve mainly because private companies do not operate fission reactor systems, let alone capabilities to concentrate and dispose of the nuclear waste generated by those systems. It is a technical fact that fission reactors are the only systems that currently and in the future effectively produce most of the therapeutic medical isotopes and all of the "bone cancer pain relief" isotopes. Accelerator systems used by the "private sector" essentially produce predominately some of the diagnostic medical isotopes with very little expectation to produce therapeutics.

8. Items 1 - 7 in this Declaration provide, I believe, some of the major arguments as to why the decision to shut down FTFF was completely unfounded and without any sense of objectivity. However, even more importantly is the complete lack of consideration for the millions of cancer and heart disease patients and their families requiring current and past better treatments associated with medical isotopes. Even a very small fraction of lives saved, pain reduced and suffering relieved alone would more than offset the operating costs for the FTFF. Perhaps this is best expressed by a copy of a 1998 letter (Attachment C) addressed to Senator John McCain and sent to me from Thea Alexander of Scottsdale, Arizona. Her daughter, Bonnie

Ember Plym was a young woman who died of kidney cancer and Mrs. Alexander writes in her letter "I urge you to generously and immediately support the Department of Energy's Medical Isotope Program to help assure that fewer and fewer mothers and fathers will have to spend the rest of their lives searching for ways to endure the loss of their beloved child."

9. Included as Attachment D is a copy of an article from the May 18, 1992 edition of *Hanford Reach* describing the FFTF's production of medical isotopes.

I declare under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

Executed at Richland, Washington, this 11th day of January, 2001.

Robert E. Schenter  
ROBERT E. SCHENTER, Ph.D.

## BIOGRAPHICAL SKETCH

SCHENTER, Robert E. Staff Scientist/Deputy Site Manager Hanford Isotopes Program

### EDUCATION/TRAINING

California Institute of Technology B.S. 1958 Physics  
University of Colorado Ph.D. 1963 Nuclear Physics

### RESEARCH AND PROFESSIONAL EXPERIENCE:

#### Professional Experience:

1996-present Staff Scientist/Deputy Site Manager Hanford Isotope Program, Pacific Northwest National Laboratory, Richland, Washington  
1993-1996 Isotope Program Office Group Leader, Westinghouse Hanford Company, Richland, Washington  
1980-1993 Fellow Scientist, Westinghouse Hanford Company, Richland, Washington  
1976-1980 Nuclear Analysis Manager, Westinghouse Hanford Company, Richland, Washington  
1970-1976 Fellow Scientist, Westinghouse Hanford Company, Richland, Washington  
1965-1970 Senior Research Scientist/Research Associate, Battelle Northwest, Richland, Washington  
1963-1965 Research Associate, Case Institute of Technology, Cleveland, Ohio

### HONORS:

1998 Public Communications Award, American Nuclear Society  
1994 Engineer of the Year, Washington Society of Professional Engineers  
1993 MDA Personal Achievement Award Nomination, Kadlec Medical Center  
1991, 1981 Engineer of the Year Nomination, American Nuclear Society  
1989, 1988, 1986 George Westinghouse Signature Award of Excellence, Westinghouse Hanford  
1984 President's Quality Achievement Award, Westinghouse Hanford  
1983 Engineering Achievement, Westinghouse Corporation Scientific Committee and Society

### MEMBERSHIP:

1988-present Society of Nuclear Medicine  
1975-present American Nuclear Society  
1965-present American Physical Society  
1980-1993 US Department of Energy, Nuclear Data Committee  
1975-1991 American Nuclear Society, Standards Committee (Chair 1991)  
1970-1994 Cross Section Evaluation Working Group (Chair, Fission Product and Actinide Subcommittee, 1970-1989;  
Chair, Nuclear Medicine Subcommittee, 1989-1994)  
1984-1991 American Nuclear Society, Eastern Washington Public Information Committee (Chair, Nuclear Medicine Subcommittee, 1988-1994)  
1993-1994 American Nuclear Societies, Radiopharmaceutical and Isotope Production Committee (Chair)

ROBERT EARL SCHENTER, Ph.D.

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PRESENT EMPLOYER: Pacific Northwest National Laboratory (PNNL)  
902 Battelle Boulevard, Richland, WA 99352

CURRENT POSITION: Staff Scientist (1996-present)  
Deputy Site Manager of Hanford Isotopes Program

PREVIOUS EMPLOYMENT & EDUCATIONAL BACKGROUND:

- o Westinghouse Hanford Company, Group Leader, Isotope Program Office ( 1993 -1996)
- o Westinghouse Hanford Company, Fellow Scientist (1980-1993)
- o Westinghouse Hanford Company, Manager, Nuclear Analysis (1976-1980)
- o Westinghouse Hanford Company, Fellow Scientist (1970-1976)
- o Battelle Northwest, Senior Research Scientist/Research Associate (1965-1970)
- o Case Institute of Technology, Research Associate (1963-1965)
- o University of Colorado, Ph.D. Physics (1963)
- o California Institute of Technology, BS Physics (1958)

WORK EXPERIENCE:

Dr. Robert E. Schenter is one of the leading United States experts on fission reactor production of isotopes. Based on his twenty-five years as an expert on neutron cross-section and decay data information, he has in the last fifteen years become a world authority on isotope production. As a Fellow Scientist in the Isotope Program Office at PNNL and the Westinghouse Company, he has performed calculations, chaired Committees, and executed the production and sales of isotopes for several areas of Medical, industrial, and scientific applications. For example, in 1991 he was responsible for the relief of a world shortage of Gadolinium-153, which is used in instruments for early detection of the bone crippling disease, Osteoporosis. He defined the project and directed the production in the Fast Flux Test Facility (FFTF), with a sales price of over one million dollars. Provided all the medical isotope and associated impurities production calculations and analyses for the PNNL FFTF studies programs. Performed numerous calculations and analyses related to shielding problems using MCNP and Microshield codes.

RESUME

Robert Earl Schenter

Page 2 .

Wrote several computer codes related to providing nuclear data information( cross sections decay data et al.) In support of reactor physics calculations and analyses.

Initiated isotope production program at Westinghouse Hanford (Co-60, Gd-153, Pu-238, Sr-89, Re-186, Cu-67, Os-191, et. al.)

Wrote computer codes and presented papers on the calculations of isotope production in FFTF and all the US thermal fission reactor systems (CO-60, Gd-153, et. al.)

Designed gas tag fuel failure location system for FFTF and MONJU

Wrote computer codes to create isotopic concentration files as a function of burn-up for use in gas tag identification

Performed extensive calculations of fission product decay heat for fast and thermal reactor systems (ANS 5.1 produced)

Responsible for the evaluation of fission product and actinide cross section and decay data (ENDF/B-III-ENDF/B-VI)

Wrote ETOX computer code which produces multigroup cross sections and shielding factors and was used for the design of FFTF

Performed Doppler coefficient and crystalline binding effect

SOCIETY & COMMITTEE MEMBERSHIPS:

- American Nuclear Society
- American Physical Society
- Society of Nuclear Medicine
- Health Physics Society
- US Department of Energy, Nuclear Data Committee (1980-1993)
- American Nuclear Society, Standards Committee (Decay Heat ANS 5.1) (1975-1991, Chair, 1991)
- Cross-Section Evaluation Working Group (Chair, Fission Product and Actinide Subcommittee, 1970-1989; Chair, Nuclear Medicine Subcommittee, 1989-1994)
- American Nuclear Society, Eastern Washington Public Information Committee (1984-1991; Chair, Nuclear Medicine Subcommittee, 1988-1994)
- American Nuclear Society, Radiopharmaceutical and Isotope Production Committee (Chair, 1993-1994)
- Society of Nuclear Medicine, Committee on Isotope Availability (1993-1994)
- Society of Nuclear Medicine, Therapeutics Council (1995-1999)

RESUME  
Robert Earl Schenter .  
Page 3

American Nuclear Society, Eastern Washington Section (1984-1999, Chair 1998, Board of Directors, 1994-1998)

**PUBLICATIONS & PATENTS:**  
105+ papers -Reactor Physics, Nuclear Physics, Isotope Production

3 patents -Reactor Operations

**HONORS & AWARDS:**  
American Nuclear Society, Public Communications Award (1998)  
Washington Society of Professional Engineers, Engineer of the Year (1994)  
MDA Personal Achievement Award Nomination, Kadlec Medical Center (1993)  
American Nuclear Society, Engineer of the Year Nomination (1989, 1991)  
George Westinghouse Signature Award of Excellence (1986, 1988 & 1989)  
Westinghouse Hanford, President's Quality Achievement Award (1984)  
Westinghouse Corporation, Engineering Achievement (1983)

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VERY IMPORTANT!



**Cover:** Increasingly, medicine has been investigating the use of radioactive drugs, such as those being manufactured here. This new wave of nuclear medicine has kindled interest in a host of relatively uncommon isotopes. Though demand for such materials exceeds supplies, innovative programs are evolving to help bridge the gap. Page 264 (Photo: Mark Green/International Isotopes Inc.)

Visit [SCIENCE NEWS ONLINE](http://www.sciencenews.org) for special features, columns, and references.  
<http://www.sciencenews.org>

## Letters

### Keep plant names rooted

As a newcomer to the study of plant families, a byproduct of my interest in herbal medicine, I see the great need for reclassifying plants based more on their evolutionary relationships and chemical components ("Botanists uproot their old tree of life," SN: 8/7/99, p. 85). But rather than turning the whole system upside-down, why not consider a simple solution? Add a prefix or suffix to the plant names, thus leaving them in their current order for identification purposes but allowing them also to be grouped by their emerging properties. With today's computer technology, searching either way would be a matter of a few simple keystrokes.

*Eleanor K. Sommer  
Gainesville, Fla.*

### Computers on the brain

You might be interested to know that the first brain-to-computer communication actually took place in the mid-to-late 1960s ("Mind over matter," SN: 8/28/99, p. 142). Edmond

Dewan, then at the Data Sciences Laboratory of the Air Force Cambridge Research Laboratories in Bedford, Mass., described the research in *NATURE*. A subject remained motionless while voltages from electrodes placed on the scalp were amplified and filtered, then sent to a computer. The subject attempted to control his alpha waves while listening to computer feedback of both alpha-wave content and the computer's interpretation in Morse code. The first communication transmitted by this method, direct from brain to computer, was the word *cybernetics*. I know about the experiment firsthand, as I was the programmer who developed the program.

*Shel Michaels  
Hollis, N.H.*

The article left the impression that quadriplegics can only write letters by blinking to a human scribe. In fact, there is computer technology out there that can help. First, eye-trackers exist, which can tell roughly where a person's eye is pointing. And second, computer software can throw up lists of letters and words that are sorted by the probability

of use. For example, if *t* has been typed, then *he* is prominent in the subsequent list.

*Don Lindsay  
Sunnyvale, Calif.*

### Several sea sources

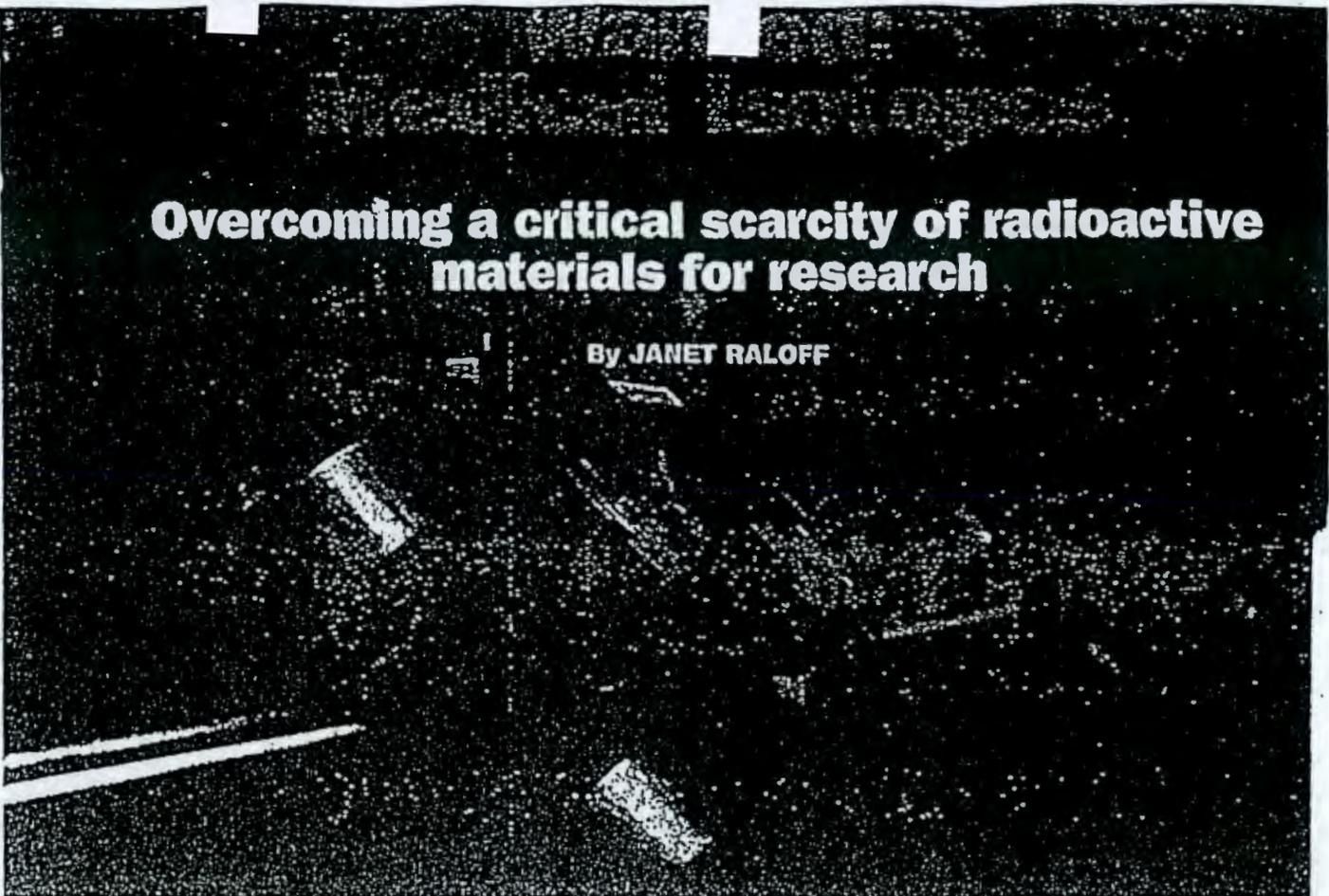
There is little doubt that the tsunami in Papua New Guinea was caused by an under-sea slump ("Seabed slide blamed for deadly tsunami," SN: 8/14/99, p. 100). This is not a new phenomenon. The seawave that destroyed parts of Valdez, Alaska, during the Good Friday Earthquake was very convincingly shown to be caused by a failure of glacial clays and similar sediments.

It has also been shown that tsunamis are often generated by earthquakes—in some cases by fault displacement and, in the biggest earthquakes, by excitation of the fundamental oscillation of Earth generated by the movement of large masses of the crust. The simple truth is that seawaves can be generated by several sources. It does not require a new paradigm to judge each on its merits.

*David Saint-Amand  
Ridgecrest, Calif.*

# Overcoming a critical scarcity of radioactive materials for research

By JANET RALOFF



Mark Green/International Isotopes

**M**artin Brechbiel had promising results indicating that a radioactive isotope called bismuth-212 could destroy cancers in laboratory animals. Yet his work at the National Cancer Institute in Bethesda, Md., stopped short in April 1998 when his radioisotope supply suddenly dried up.

Alan R. Fritzbeg at NeoRx Corp. in Seattle had also been successfully using bismuth-212 to treat cancers in animal experiments. His work, too, was stopped.

The Department of Energy's Argonne (Ill.) National Laboratory had ceased making the generators that hold radium-224, which decays into lead-212. This isotope eventually decays into the therapeutically active bismuth.

After a 17-month hiatus, DOE arranged for the University of Chicago to send a single generator for Brechbiel's experiments. He will need more. Fritzbeg received an extension of his research grant but is still waiting to receive a generator.

Each year, U.S. physicians employ radioisotopes in an estimated 13 million clear-medicine procedures and another 100 million laboratory tests. Most of the activities rely on only a few nuclides, principally iodine-131 and technetium-99m.

During the past 5 years, the goal

nuclear medicine have been expanding. Instead of just diagnosing diseases, the field has begun to target the treatment of disorders. This shift has spurred exploration of dozens of uncommon isotopes.

Some can be directed—via antibodies or other small proteins—to particular organs or types of cancer cells (SN: 7/19/97, p. 47). Others, like the bismuth-212 used by Brechbiel and Fritzbeg, deliver radiation that enables physicians to knock out diseased tissue while avoiding collateral damage either to nearby healthy cells or to the hospital staff.

The majority of these potentially therapeutic isotopes, unfortunately, can't be ordered from a catalog. Some are created in nuclear reactors. Particle accelerators must generate others. A few of the isotopes—including the radium-224 used to produce bismuth-212, decay from wastes created by production of uranium and plutonium for nuclear weapons.

U.S. scientists, mostly in laboratories created by the Atomic Energy Commission (now DOE), pioneered much of the work on extracting these materials, but 70 percent of the medical isotopes used in the United States today come from foreign vendors, primarily in Canada. In the United States, research on therapeutic isotopes

*This linear accelerator, recently salvaged from the ill-fated Superconducting Super Collider project, now makes radioisotopes for medicine and research.*

has burgeoned at a time when federal labs have been retiring the facilities needed to make them. Demand for these costly materials now greatly surpasses DOE's ability to supply them. For some short-lived isotopes, no source remains.

As chair of a DOE advisory panel exploring the isotope-availability problem, Richard C. Reba of the University of Chicago has just finished a tour of major U.S. radioisotope-production facilities. Though Reba told *Science News* that the isotope-availability picture "continues to look grim, at least for the next 2 or 3 years," he sees signs of improvement. Indeed, a host of new programs has been evolving over the past few years—including several outside DOE—to improve research access to unconventional isotopes.

**U**nreliable supplies of special radioisotopes have undermined a variety of medical research programs. Like Brechbiel and Fritzbeg, Gerald and Sally DeNardo at the University of Califor-

(1) 10003 (1)

IMPORTANT

They attached copper-67 to antibodies to ferry it to malignant cells. Their protocol, which required each patient to receive a copper-67 treatment monthly for 4 months, showed promise against non-Hodgkin's lymphomas resistant to conventional therapies.

The only sources of the isotope in the United States were particle accelerators at DOE labs, where copper-67 was occasionally made by piggybacking its production onto some other activity—typically a physics or nuclear-weapons experiment.

"Because of restricted budgets, [the labs] were unable to operate the accelerators year round, so it became a logistics nightmare to get the patients lined up at the same time the accelerators could make copper-67," says Owen Lowe, associate director of isotope programs at DOE.

DOE's inability to produce the isotope reliably led the Davis scientists to abandon their study, Lowe says.

Researchers using two other radioisotopes, platinum-193 and xenon-127, similarly gave up on their projects when supplies of these became erratic or unavailable, says Reba.

Some potential therapies don't even make it off the drawing board. Time and again, researchers request an isotope for drug-development or treatment studies only to learn it's not available, says Carol S. Marcus, a consulting scientist and former director of the nuclear-medicine outpatient clinic at Harbor-UCLA Medical Center in Torrance, Calif.

Last year, DOE convened an expert panel to forecast what future U.S. demand for unconventional medical isotopes might be if research were to pro-

duce isotopes, could grow 1 to 14 percent per year. In 20 years, the fledgling therapeutic nuclear-medicine industry could be valued at as much as \$1.1 billion annually, it found.

These projections warrant beefing up production of unconventional isotopes, the panel argued. DOE has responded with plans to retool a few of its facilities to provide such isotopes for research.

Over the past decade, the United States' decreasing ability to supply radioisotopes and its growing reliance on foreign producers (SN: 8/1/92, p. 66) trace to two conflicting mandates. First, Congress has directed DOE to make its isotope-production activities nearly self-supporting. Second, by law, the department may not compete with private enterprise. So, when a company begins marketing an isotope, DOE must step out of the picture.

What has developed is a classic catch-22 situation, Lowe told SCIENCE NEWS. When any isotope shows promise of having a market large enough to pay back its production costs, some private company begins making it. Not only is DOE left producing only the hard-to-attain, costly isotopes, but it has to generate most of them with aging, make-do facilities.

The agency hopes to improve the situation with several new programs. Chief among them is an \$8-million beam spur that it's adding to an existing accelerator known as the Los Alamos (N.M.) Neutron Science Center.

To produce radioisotopes at this accelerator, the beam must reach the end of a half-mile-long track. When the facility is in operation, however, upstream experiments often siphon off the entire beam. Furthermore, the accelerator doesn't run year-round.

DOE is now putting its isotope-production hardware near the head of the beam. This change should extend the accelerator's production of a wide range of isotopes to roughly 40 weeks a year. The department expects the new beam spur to be on-line by spring 2001.

DOE is also launching an Advanced Nuclear Medicine Initiative. This \$2.5-million program will subsidize the production of isotopes for research, placing special emphasis on alpha-particle-emitting nuclides, such as those used by Brechbiel and Fritzsche. Their highly energetic radiation is promising for cancer treatments because it doesn't travel far, just the length of a few cells or so. Throughout its short trip, however, each alpha particle releases a wallop of energy, giving the kiss of death to any cells it crosses.

Several mothballed DOE reactors may also see new service making unconventional isotopes. One is the Annular Core Research Reactor at Sandia National Lab-

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—Edward O. Wilson  
Professor of Biology, Harvard  
Winner of Pulitzer Prizes

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oratories in Albuquerque, which DOE has now decided to use to produce a broad range of isotopes for research. It had been slated to produce only molybdenum-99, an isotope widely used in diagnostic medicine and available only from Canada.

The future of DOE's \$1-billion Fast Flux Test Facility near Richland, Wash., remains less certain. During its dozen years of operation, ending in 1992, the facility produced 60 isotopes as a sideline to its reactor-physics research. These included some isotopes for medical uses.

The reactor's design allows it to make certain isotopes, such as gadolinium-153, at higher purity than in any other facility in the Western Hemisphere, observes Robert E. Schenter, a nuclear physicist who worked on isotope production at the facility. Moreover, he notes, this reactor "is also unique in being able to make enough [of any desired isotope] to serve all hospitals," not just a few, occasional users.

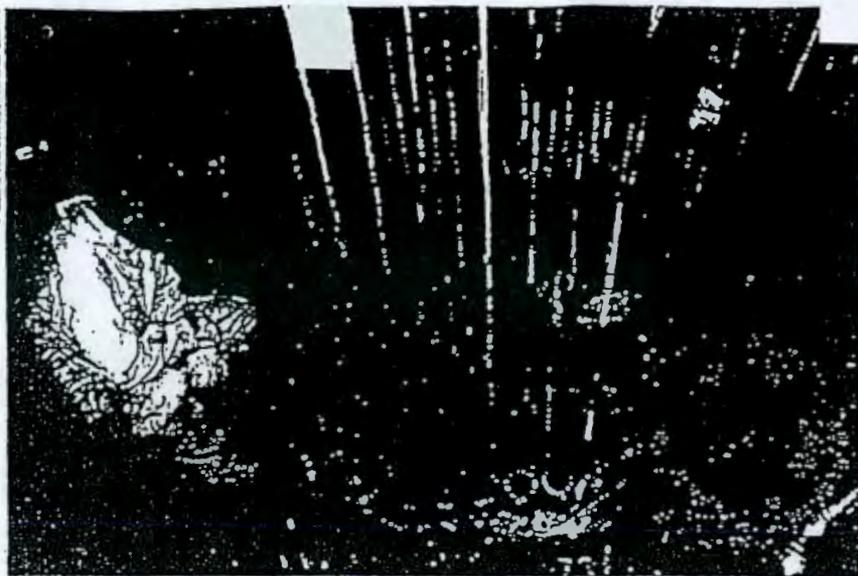
Although this reactor has been out of service for 8 years, its unusual liquid-sodium coolant prevents DOE from shutting down the facility without destroying it. So, DOE has been spending \$40 million a year to reserve the option for the reactor to be put back in operation someday.

In July, DOE commissioned an environmental review for the reactor as a first step in deciding the facility's future. In a report issued in late August, the reactor's caretakers catalogued ways to make the



This metal seed containing radioactive iodine received FDA approval earlier this year as an implant for treating prostate cancer. A novel start-up venture, International Isotopes Inc., produces both the isotope and the seed.

Mark Green/International Isotopes Inc.



Entry platform for fuel rods at the Fast Flux Test Facility during its construction. Now in cold standby, this reactor could find new use making high-quality medical and research isotopes. Inset diagram denotes rods where different isotopes might be made: yellow with black vertical lines, long-lived isotopes; yellow with red honeycomb, short-lived nuclides; green, plutonium for space missions; light blue, cobalt-60; and yellow with horizontal green lines, gaseous isotopes.

reactor pay for itself. High on their list: production of medical isotopes valued at up to \$31 million per year.

**O**utside the government, several novel programs have developed that also promise to make more isotopes available.

At Washington University School of Medicine in St. Louis, for instance, radiochemist Michael J. Welch became fed up with having to schedule his team's studies to coincide with physics experiments at a national lab. So, working with Newton Scientific of Cambridge, Mass., he figured out how to use his university's cyclotron accelerator to generate some of the radionuclides needed. The cyclotron had previously been reserved for conducting positron-emission tomography (PET) scans of hospital patients.

Last month, the National Cancer Institute issued Welch a grant that will subsidize his team's making of copper-64 for itself and other medical researchers around the country. Within a year, Welch hopes to also begin shipping iodine-124, bromine-76, bromine-77, yttrium-86, and gallium-66. None of these research isotopes, he notes, is currently available in the United States.

Because he's working with a tiny accelerator, he would not be able to fill the demand for these nuclides if any of the applications for them became "clinically attractive," Welch notes. He points out, however, that there are about 60 similar PET cyclotrons around the country that could license his techniques to make

these isotopes locally.

A bonanza for isotope-hungry scientists may eventually come from the demise of the \$11-billion Superconducting Super Collider project in Texas (SN: 10/30/93, p. 276). A linear accelerator that I. Lon Morgan of the University of North Texas in Denton bought from the abandoned project has become the centerpiece of a new company. His International Isotopes Inc., also in Denton, now boasts a staff of more than 100.

Since April 1993, the firm has been marketing cobalt-60, iridium-192, strontium-89, barium-133, and nickel-63. In June, FDA approved the company's first medical product, implantable metal seeds containing iodine-125 for treating prostate-cancer patients.

Not only has the 4-year-old company acquired a second accelerator, but it has also signed contracts to make reactor-generated isotopes at facilities owned by DOE and several universities. Ultimately, the firm plans to make dozens of isotopes.

Explains company president Carl W. Sedel, "We're trying to provide a reliable supply of raw materials." He expects universities and companies to come to him for

He hopes they will return for drug-purity radioisotopes—and even commercial products that include them—when the companies are ready to market the products that result. Right now, he notes, no other domestic company offers that range of isotopes and services.

**T**oday, nearly one in three people admitted to a U.S. hospital is given tests or treatments that depend on radioisotopes, notes Richard A. Holmes, director of nuclear medicine and oncology at Mallinckrodt Inc. in St. Louis. Over the next 2 decades, he expects the use of nuclear materials in medicine to grow exponentially.

However, Holmes observes, the availability of these future generations of diagnostic materials and therapeutic drugs will depend on a healthy investment in research isotopes today.

While acknowledging that small start-up companies and clever engineering feats can relieve research-isotope shortfalls, he argues that it's the responsibility of the federal government to ensure that these radioactive materials will be available to medicine. He says he'd like to see DOE build reactors and accelerators dedicated to isotope production rather than just make more time available on physicists' tools at the national labs.

Reba is less certain that DOE should be the primary provider of unconventional radioisotopes. His DOE committee



A hospital cyclotron was retrofitted to produce radioactive copper-64, which is then separated out via an automated process in a shielded cabinet nearby.

will mull over the problem and offer its recommendations in December.

The real obstacle, he and others contend, remains Congress' unwillingness to pay for the production of these materials. Although DOE has accepted the responsibility for seeing that medical researchers have access to novel radioisotopes, the \$21 million that Congress now provides annually for this activity doesn't go far. □

Life is a fantastic game!  
Are you playing, or just sitting it out?

Thea Alexander

8132 East del Barquero Scottsdale, Arizona 85258  
(602)991-7077, FAX (602)991-0766, Email theaa@ibm.net

September 3, 1998

Dear Senator McCain,

You will recognize our beautiful daughter, Bonnie Ember Plym, R.N., pictured below, as the nurse who came to your home and cared for two of your babies upon their return from the hospital - your son, who I think was about 9 months old at the time, in March of 1989, and your daughter, Bridget, in May of 1992.



*Bob!  
This is the letter I  
sent, e-mailed, and  
in the committee to the people  
our senators & rep.  
I welcomed the opportunity  
to assist.  
With  
Thea Alexander  
Conky*

It saddens my heart to inform you that Bonnie died last Christmas Eve of kidney cancer. All else failed. The "smart bullet" (medical isotope) approach was the only thing we had not yet tried. Alas, though it was effectively treating some types of cancer, research had just begun on its use to treat kidney cancer. If the "smart bullet" program had been more adequately funded, research would have been further along, and Bonnie would probably be here to celebrate Christmas with us for many years to come.

I urge you to generously and immediately support the Department of Energy's Medical Isotope Program to help assure that fewer and fewer mothers and fathers will have to spend the rest of their lives searching for ways to endure the loss of their beloved child.

With deepest gratitude for your support,

*Thea Alexander*  
Thea Alexander

Westinghouse Hanford and BCSR employees

# HANFORD Reach

May 18, 1992

## FFTF produces up to 60 medical isotopes

Linda Faulk  
Communications Department

There is growing recognition worldwide that the Fast Flux Test Facility has broad capabilities in a field which is just beginning to open up—nuclear medicine. Since 1987, FFTF has produced isotopes for the medical community. The first isotope successfully produced and sold commercially was gadolinium-153, used in osteoporosis detection diagnosis. Since then, the reactor has distinguished itself as a source of over 60 isotopes, mostly for medical use. These isotopes, nuclear medicine is developing new treatments that will benefit premature babies, pain sufferers, tumor victims and others. Linda Faulk, chief scientist of the FFTF medical isotope production program, is Bob Schenter. "The iso-

topes produced in the reactor will save lives. Only FFTF can produce the quality and quantity that will be needed for many of the future developments in the nuclear medicine field," he says.

### Premature infants

Among the compelling new developments is the use of osmium-191 for adult and infant blood-flow studies. In evaluating heart function, doctors have had to rely on heart catheterization, a procedure with significant risk when used on a premature infant's fragile circulatory system.

Researchers at the Children's Hospital in Boston have found that using a radioisotope of osmium allows non-invasive imaging of the soft tissues of the heart and blood vessels. This can be done at a dramatically lower radiation dose than is possible with currently available radiopharmaceuticals.

Another significant development is the use of rhenium-186, strontium-89 and samarium-153 in the relief of the excruciating and debilitating pain of bone cancer.

According to an article in the January 1992 *Seminars in Nuclear Medicine*, there are nearly one million new cases of cancer each year. Lung, breast and prostate cancer account for about 40 percent, and when advanced, these cancers usually metastasize in the skeleton.

Although external radiation therapy can give pain relief, the amount that the body can be subjected to is limited. Nausea, vomiting or diarrhea often occur. Previously used radiopharmaceuticals were toxic to bone marrow, resulting in anemia. The new applications of radiation therapy result in decreased bone pain and in improved quality

See ISOTOPES, page 3.



Photo courtesy of Bob Schenter.

Bob Schenter accompanies Mildred Young of Pendleton as she undergoes diagnosis for osteoporosis at the Walla Walla Clinic. The clinic's diagnostic machinery uses gadolinium-153 produced in FFTF and processed by a pharmaceutical supplier in England.

# Isotopes

(Continued from page 1)

of life for these cancer victims.  
**'Magic bullets' for cancer**  
 Equally significant is the research being done with isotopes that attach to monoclonal antibodies. Called "magic bullets," these antibodies with the attached isotope seek cancer cells and destroy them without damaging the

surrounding healthy tissue.  
 Radium-223, rhenium-188, rhenium-186, and copper-67 produced in FFTF are on the leading edge of radionuclides for magic-bullet treatments for tumors. According to Christopher Badger of the Fred Hutchinson Cancer Research Center in Seattle, the availability of other

potentially therapeutic isotopes stimulates the development of new ways to improve targeted cancer therapy.

Researchers and practitioners worldwide value the isotopes that can be produced in FFTF for their quality and quantity. The superior quality of the FFTF isotopes lies in the high specific activity per curie or unit of radioactivity. Future treatments using these isotopes will be more effective and will result in lower dose rates.

The high quality is possible because FFTF can tailor the neutron energy spectrum that produces the isotopes, something no thermal reactor can do. In fact, there are therapeutic radioisotopes that can only be produced effectively in a fast reactor such as FFTF.

Tailoring the spectrum also produces the isotopes in a shorter reactor run time than in reactors without that capability, thus increasing the quantity available.

Isotopes are currently used in nuclear medicine more than 30,000 times per day in the United States, and the demand is expected to increase more than tenfold by 1995, according to Market Intelligence Research Co. of Mountain View, Calif. America's treatment and research is 90-percent dependent on foreign supplies.

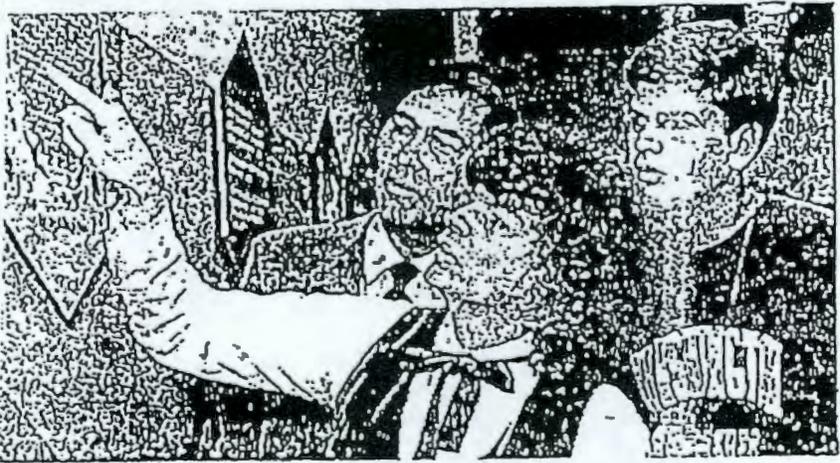
Hundreds of thousands of lives will be impacted yearly by the research and developments that are taking place in nuclear medicine. The quality and quantity of isotopes available will be key factors in the progress that is

## What the isotopes do

Major isotopes that can be produced in FFTF for future diagnosis and treatment of disease are:

Actinium-227	"magic bullet" cancer treatment
Tungsten-180	
Rhenium-188	
Radium-223	
Copper-67	
Rhenium-186	"magic bullet" cancer treatment and bone cancer pain relief
Cadmium-109	heart disease diagnosis
Sulfur-35	
Gadolinium-153	osteoporosis detection and diagnosis
Iodine-125	osteoporosis, detection and diagnosis and prostate cancer treatment
Iridium-192	cancer treatment
Osmium-194	
Iron-55	induced x-ray experiments
Osmium-191	blood flow study
Phosphorus-33	bone cancer pain relief
Strontium-89	
Samarium-153	
Scandium-47	
Palladium-103	prostate cancer treatment
Samarium-145	brain cancer treatment
Thulium-170	power source for portable blood irradiator for leukemia and lymphoma treatment
Xenon-127	brain imaging and study for schizophrenia and dementia treatment
Strontium-85	bone cancer diagnosis
Platinum-195	cancer diagnosis and treatment

# Gadolinium success breeds more isotope production



12-28 Kohl

From a photo in the FFTF Visitors Center, Principal Scientist Becky Bechtold points to the positions of MOTAs and hydride assemblies to Fellow Scientist Bob Schenter and inquiry Into Science student Matt Lawrence.

by Gayle Sarton

If success breeds success, then isotope gadolinium-153 is giving birth to additional isotope research and production at FFTF.

Distributed internationally, FFTF's gadolinium is the irradiation source in advanced dual-photon bone-scanning machines. These are used by doctors to detect the first signs of osteoporosis, a crippling bone-thinning disease found predominantly in elderly women and estimated to affect as many as 20 million Americans a year. The dual-photon machines also monitor the effectiveness of various treatment methods. Increasing numbers of U.S. hospitals, including Our Lady of Lourdes in Pasco, now have these machines.

"The quantity of our gadolinium already sold could provide bone density diagnoses for more than 200,000 patients," says Bob Schenter, lead scientist of the FFTF isotope program. The gadolinium is sold by the Oak Ridge Distribution Office, which handles the commercial sale of many radioactive elements for DOE and its contractors nationwide.

"It's the first time FFTF-produced isotopes have been sold commercially and the first time that Hanford isotopes have been used in nuclear medicine," says Bob. "It's a trend we plan to continue."

The success of the gadolinium has led the way for testing of additional isotopes in the reactor's Materials Open Test Assembly (MOTA).

Examples of these isotopes are: molybdenum-99, a generator for technetium-99m. The technetium is the most important imaging radionuclide used to examine the brain, lungs, liver, bones, thyroid, kidney and heart.

"Using molybdenum-99 as a source to create technetium is not a new thing," says Bob. "We're testing it to see if we make a better quality product."

Europium-155 is being tested as a possible candidate for use also in the dual photon-scanner. Its seen as being a possible replacement for the gadolinium that is now being used in this machine.

One of the most exciting isotopes being tested is thulium-170, Bob says. Exciting because if it tests positively, it could be the radiation source for a portable blood irradiator, a device developed and patented by Frank Hingate at Battelle's Pacific Northwest Laboratory. This irradiator has been studied with animals and has been demonstrated to have application in the treatment of leukemia, lymphoma and autoimmune diseases.

Four factors considered in determining an isotope's production in FFTF are:

- The long range need for the isotope in hospital treatments and nuclear medicine.
- The length of the isotope's half-life. A half-life determines the amount of decay an isotope has in a certain amount of time.

Ideally, an isotope should have a half-life of at least 100 days to make it viable to produce.

- The isotope's market potential. "All isotopes are very expensive," says Bob, "and if there isn't enough demand for them, it isn't economical to produce them."
- The advantages of using an FFTF hydride assembly. The hydride is a special assembly that thermalizes neutrons. "This process creates better production rates for most of the final isotopes being developed."

"Calculating these advantages helps decide if FFTF is more efficient at producing a particular isotope than, say, the reactors at Oak Ridge or Idaho," says Bob.

The list of possible isotopes continues to grow. "Twenty additional isotopes have been identified for future testing in MOTA and the hydride assembly," says Bob. "If successful, these isotopes also will be used in the medical field for pediatric, brain, heart and lung imaging; leukemia, lymphoma and cancer treatment; and in the detection of heart transplant rejection."

And what about the gadolinium? "The next batch will be coming out of MOTA in the fall," says Bob. "We expect it to be the highest curie-per-gram level ever sold."

"To be able to use the reactor and our folks' knowledge and creativity in this manner is so exciting," says Bob. "It's a thrill knowing we have the potential to save thousands of lives every year by our work." ■

Piippo, Robert E

309

From: Clint P. Oliver [ClintOliv@aol.com]  
Sent: Thursday, September 19, 2002 3:26 AM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

The Community Plan will not detract from clean-up budgets, will save the taxpayers over \$1 billion, AND will save millions of lives in the war on cancer.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted

310

Piippo, Robert E

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From: Clint P. Oliver [ClintOliv@aol.com]  
Sent: Thursday, September 19, 2002 3:34 AM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF SAVE LIVES, MONEY, AND TIME. FACILITATE LIFE, HELP MANY

Dear Al Farabee, U.S. Department of Energy

Laura Cusack, Washington Dept of Ecology  
PEOPLE ARE DYING, DO YOU CARE? AND WHAT ABOUT YOUR OWN HEART?  
DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding. HAVE SOME COMPASSION ON SOULS WORLDWIDE.  
Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

The Community Plan will not detract from clean-up budgets, will save the taxpayers over \$1 billion, AND will save millions of lives in the war on cancer.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted

311

**FFTF TPA Draft Change Package**  
Public Comment Period August 28 – October 14, 2002

**Comment Source:** Seattle Public Meeting (September 26, 2002)

**Commenter:** Marlene Oliver

**Comment:** I am the northwest chair of the National Association of Cancer Patients and for the National Cancer Institute. I am a consumer advocate for research and related activities. I am here today representing 9 million cancer patients in this country. It seems to me that people need more education especially on the west side. The highest incidence of cancer deaths in the State of Washington is in King County Washington. In the Hanford area, these are NCI statistics, the incidence of cancer deaths is less than the national average. It seems to me that this should be put in perspective. I totally oppose the accelerated destruction of FFTF and the accelerated TPA milestones. I don't think that the process has been thoroughly thought out. I fully support the statement that we need a domestic supply of medical isotopes. I just came from Europe. I toured their high flux reactor in Holland. European governments own this reactor. It is run by a private company called NRG. The primary mission is directed by European governments is the production of medical isotopes. European governments recognize how effective cost effective these treatments are. Physicians there can treat any patient they wish we are a third world country when it comes to medical isotopes. I just attended 2 weeks ago a health expo for breast cancer patients. The youngest 2 breast cancer patients in that area of the pacific northwest were 13 years old—you ladies need to hear this—and they lost both breasts at age 13. The male that I spoke with who had breast cancer was 34 years old. So you can get cancer 1 in 2 males will get cancer; 1 in 3 females will get cancer that's a fact. I would be more afraid of a doctor telling you you have cancer than the safest nuclear reactor in the world that sits 200 miles from here. People at Hanford get their drinking water downstream from the waste facilities. You would have to drink 800 glasses of Columbia River water right where Hanford gets its drinking water from downstream from all the leaking tanks to equal the same amount of radioactivity in one banana

**Facilitator** Maam, you have about 3 minutes left Please

Thank you. In Europe physicians are now being discouraged from prescribing chemotherapy. Why? Because, it only works in at most 1 in 5 patients. They are far ahead of us like the physician said in the research to treat cancer and other diseases by targeting them with medical isotopes. We need a domestic supply. These isotopes are short lived. Many of the best ones for research last a day or less for treating patient. John Stamford, Seattle Superintendent of Schools, was not treated for his advanced acute myeloid leukemia because the Department of Energy only produced enough isotopes to treat 6 patients a year. Now they have enough to treat 8 patients a year. 30,000 Americans get leukemia every year. Of the patients who were treated over ¾ responded to this treatment after everything else failed. Children get cancer. I was in Europe like I said. They are targeting cancer in Babies as young as 7 months old and curing them. In the last few days I have had calls from around the country for a variety of cancers, esophageal, liver, brain, melanoma, stomach cancer, gallbladder cancer, esophageal cancer. Most of these are fatal without medical isotope treatment. If these patients want to live, I told them they have to go to Europe and I told them where. In the United States we rank #72 out of 191 countries when it comes to Health care efficiencies. That's a fact. The top countries are in Western Europe just like the physician from Arkansas said. I am so tired of telling cancer patients that if they want to live, they cannot stay in this country they have to go to Europe because the isotopes to treat them and to treat them successfully

are not available here. You cannot make them in accelerators. You cannot have short-lived isotopes imported. After 9-11 these isotope supply was disrupted. We cannot rely on foreign sources for this. We also like was mentioned earlier, for plutonium 238 half of the supply was taken for national defense, the department of energy now says well we can get these from Russian reactors. Well, I don't know about you

Facilitator

30 seconds

but I don't feel very comfortable getting isotopes that we need for homeland security from the Russians. Please stop the fast destruction of the FFTF. Consider this is a National health issue. I don't feel comfortable with the studies that have been done that show that accelerated destruction of this national resource is safe. I disagree with the actions of the contractor to go ahead and accelerate destruction of this facility without appropriate studies and safeguards being made. I am still extremely concerned for worker safety within the plant. Thank you.

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^FFTF

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From: bmoliver@televar.com  
Sent: Tuesday, October 01, 2002 2:49 PM  
To: FFTF@ri.gov  
Subject: Comments from FFTF Talk to Us

1 Name = Marlene Oliver

2 Comments = I represent 9 million American cancer patients. Short-lived isotopes REQUIRE a domestic supply, and the best TREATMENT isotopes are made in Fast Reactors. HIFR is TOO SMALL to produce large quantities of a variety of carrier-free isotopes. Per Oak Ridge, TN isotopes office, research isotopes are "not available" - several auger and alpha emitters. Under federal law, since DOE has said it has no use for FFTF, DOE should declare FFTF as surplus, allow local government, the Community Reuse Agency, to proceed with requested privatization and commercialization efforts. STOP DESTROYING FFTF. OBEY THE LAW. The life you save may be your child's, your parent's or your own.

313

*FFTF TPA Draft Change Package*  
Public Comment Period August 28 – October 14, 2002

**Comment Source:** Portland Public Meeting (October 9, 2002)

**Commenter:** Marlene Oliver

**Comment:** Marlene Oliver, West Richland, Washington. I am Northwest chair of the National Association of Cancer Patients and for the National Cancer Institute. I'm consumer advocate for research and related activities I represent 9 million American cancer patients at this meeting. I would like to defer with the Department of Ecology, with Governor Kitzhaber and those who are opposed to allowing FFTF to restart or are in support of an accelerated shutdown. Physicians in this country are largely unaware of the benefits of medical isotopes. I'll give you examples right here in the state of Oregon. Last week I gave a presentation to the Portland Veterans Administration hospital to their tumor board. There were 42 physicians in the room, they deal with cancer patients every day. They presented problem cases first and in every case, medical isotopes could have helped these problem cancer patients. They were stunned to the point that this morning word traveled, I got a call from Oregon Health Sciences University from a Dr. Shelly Winn he has asked me to do a presentation at Oregon Health Sciences University so that they can learn how medical isotopes can help their patients. These Doctors are unaware Officials in Oregon will be hearing from them. Hopefully we will hear from a physician in Oregon who had to stop a clinical trial on bone cancer pain, this is cancer that eats at you from the inside of your bones because the isotope that she used, 10117M which requires a fast reactor for production FFTF is the only one the supply was discontinued. This trial was stopped right here in Hillsboro Oregon. If you've ever had bone cancer pain, or know anyone who has you'll know what I'm talking about. And hopefully she will be on the line to speak up about this. This is a graph of a series of studies of different kinds of cancers. Showing response with and without medical isotopes. You can see that many of these fatal cancers are being cured with isotopes. Patients are responding in Europe, physicians are now being discouraged from prescribing chemotherapy because for most patients it doesn't work. IN favor of targeted medical isotope treatments most of these isotopes are not available in the United States no matter what anyone says. These doctors don't know. A couple of years ago I was asked to look at accelerated production of medical isotopes for the last 2 years I've checked with nuclear medicine, nuclear physics and nuclear engineering professors and members of national laboratories around the world that produce medical isotopes in both reactors and accelerators they are unanimous that FFTF is unique in it's ability to produce medical isotopes many of these isotope cannot be produced with current technology in accelerators, and anybody who tells you that it can be is whistling Dixie.

**Facilitator:** You have 2 minutes remaining

Thank you. Just so you know. This country ranks # 72 out of 191 countries in healthcare efficiency. That's where we are right today this is a world health organization study that was produced last year. When the physicians see this and they understand why we're number 72 they agree with the figures and they're stunned. This is the study that was referred to about breast cancer. Saving 885 Million Dollars a year with an isotope that is 100% imported that was shut off after 9/11 The under secretary of health recognizes that we need domestic supply of these isotopes. This is in a report to secretary Thompson this is a national health issue, researchers in this report are quoted as saying they cannot get the research isotopes they need to do their work. This is breast cancer. There is no breast cancer in the other breast. By avoiding unnecessary biopsies that's where the 885 Million dollars figure came from. These targeted

therapies are curing fatal cancers they go just to the cancer instead of chemotherapy which destroys the immune system, these therapies use the immune system to target cancer without a lot of those bad side effects you hear about, that's why Europe's not doing it like they used to. Or almost anymore

Facilitator: 30 seconds

Thank you. This gives you an idea of the capacity of the Fast Flux Test Facility. These 2 figures, thanks to Dr. Robert Schenter when physicists and nuclear engineers and physicians from around the world see these graphs, they are stunned. I was at Hetton in the Netherlands their high flux reactor produces medical isotopes for Europe it is leased to a private company called NRG, European governments own it. It's primary mission is medical isotopes production I was in the reactor watching them produce isotopes. That are shipped from that plant 2-3 times a day. There is no reason why we can't do that here in the United States to accommodate researchers like Dr. Vriesendorp who need these isotopes to treat desperately ill cancer patients. Thank you

Facilitator: Your time is up. Thank you very much.

Oh, and I'm against shut down, I'm against accelerated shut down, thank you

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**FFTF TPA Draft Change Package**  
Public Comment Period August 28 – October 14, 2002

**Comment Source:** Richland Public Meeting (October 10, 2002)  
**Commenter:** Marlene Oliver

**Comment:** Chair/Moderator, I apologize for repeating some of the statements that I said previously in Seattle and Portland, but I have been asked to repeat a few of them. My name is Marlene Oliver. I'm Northwest Chair of the National Association of Cancer Patients. I'm consumer advocate for research and related activities for the National Cancer Institute. I'm here speaking on behalf of 9 million American cancer patients. First, I would like to address the gentleman from Heart of America who professes to be an expert on medical isotope production. For the last three years at many nuclear medicine meetings and many nuclear technology meetings including meetings on dosimetry and meetings on spallation, I don't even know what that is, I have been asking nuclear physicists, nuclear engineers, professors at universities, Ph.Ds at National Labs from around the world about medical isotope production in accelerators. I have toured accelerator facilities that produce isotopes in Europe. I have toured reactor facilities in Europe that produce 60% of medical isotopes and they all tell me that the technology does not exist to produce many of the best treatment isotopes in accelerators. It simply does not exist. You need a fast reactor to produce many of the best isotopes. These are alpha emitters and other isotopes that Dr. Fox referred to like Copper 67 and <sup>211</sup>M where clinical studies have had to be stopped because of a lack of supply of these isotopes in the United States. Physicians are not able to treat patients in their small study numbers. Like Dr. Fox referred to because of a lack of these isotopes. The National Cancer Institute just did a survey of its grantees, people who get money from the National Cancer Institute, to do clinical trials. And the response came back that there is a shortage of obtaining medical isotopes for their studies. The recommendation was that we need a domestic supply of these isotopes, short-lived isotopes require domestic supply. The 1954 Atomic Energy Act requires the Department of Energy to supply research isotopes. I used to teach. I'd give the Department of Energy a F+ in its effort to supply research isotopes for medicine. That's a failing grade by the way. I don't view this as funny. Today I had calls. I get calls between one and six everyday, seven days a week from cancer patients or their loved ones asking for help. They're desperate. Today I got a call from Tennessee. A young man age 44 is under going brain cancer surgery on Tuesday. What can he do? He knows without isotopes he's going to have a problem. Luckily, this year the FDA approved a dime sized wafer that is placed in the brain that arrests or halts or puts into complete remission brain cancer. He doesn't have a whole lot of time to ask his doctor about this. He's already having seizures. I had another conversation with a gentleman who is in this room about a 42-year old patient with metastatic lung cancer. This cancer cannot be cured in the United States. It can be cured in Europe with targeted medical isotope treatments. One isotope is not available in this country. And I have watched as they have administered these treatments to patients before my eyes. Liver cancer was mentioned. Without medical isotopes treatment, liver cancer is inevitably 100% fatal. In Europe they are curing patients with this disease. There is a new technique that is being imported from Australia with an isotope that is short-lived. By the time it gets here it's already started decaying away. And this Australian company would like to do business in FFTF, as would numerous medical companies in the United States and around the world.

Facilitator      One minute

We have to have a domestic supply. These patients are dying. I'm sick and tired of telling them that if they want to survive they have to go to Europe. It is the Department of Energy's responsibility under the balanced budget act of 1997 to try and save money for other departments. I'm talking Health and Human

Services, as Carl Mansperger referred to. I'm also talking about disregarding, totally disregarding, sound scientific evidence in violation of the Federal Data Quality act of 2001, that states that Government agencies should be held to the highest scientific requirements. This has totally been ignored. The Nurack committee voted 19-2. This is their own nuclear energy advisory committee within the Department of Energy for FFTF restart. The process has been flawed. It should be reopened. Some of the considerations that had been willfully ignored

Facilitator      10 seconds

and I have people in Congress's testimony that will show that Department of Energy employees have willfully ignored the NEPA process in allowing some of these considerations to be included which they should have been in the EIS. Thank you.

**Tuality Healthcare**  
335 SE Eighth Avenue  
Hillsboro, OR 97123  
503-681-1111  
Human Resources:  
232 SE Eighth Avenue  
Hillsboro, OR 97123  
503-681-1158



**Tuality Healthcare**  
Building a healthier community.

315

**Tuality  
Community Hospital**  
335 SE Eighth Avenue  
Hillsboro, OR 97123  
503-681-1111

**Tuality  
Forest Grove Hospital**  
1809 Maple Street  
Forest Grove, OR 97116  
503-357-2173  
EnergiCare:  
503-359-6180  
Center for Geriatric Psychiatry:  
503-359-6969

**Tuality at Aloha  
Urgent Care**  
Tuality at Aloha Medical Plaza  
17175 SW Tualatin Valley Hwy  
Suite A  
Aloha, OR 97006  
503-681-4223

**Tanasbourne Urgent Care**  
Tanasbourne Medical Plaza  
1881 NW 185th Avenue, Suite 101  
Aloha, OR 97006  
503-690-6818

**Tuality Health Alliance**  
335 SE Eighth Avenue  
Hillsboro, OR 97123  
503-681-1817

**Tuality  
Health Education Center**  
334 SE Eighth Avenue  
Hillsboro, OR 97123  
503-681-1700

**Tuality Health Information  
Resource Center**  
334 SE Eighth Avenue  
Hillsboro, OR 97123  
503-681-1702

**Tuality  
Healthcare Foundation**  
335 SE Eighth Avenue  
Hillsboro, OR 97123  
503-681-1170

**Tuality HealthPlace**  
1200 NE 48th Avenue, Suite 700  
Hillsboro, OR 97124  
503-640-6064

**Tuality Home Health**  
1809 Maple Street  
Forest Grove, OR 97116  
503-357-2737

**Tuality Medical  
Equipment & Supply**  
303 SE Seventh Avenue  
Hillsboro, OR 97123  
503-681-1658

October 15, 2002

O.A. Farabee  
U.S. Department of Energy  
Richland Operations Office  
PO Box 550 (N2-36)  
Richland, WA 99352

Dear Mr. Farabee,

Tuality Community Hospital in partnership with Oregon Health & Science University has recently built a state-of-the-art cancer treatment center which is now operational. Out of their concern for the threat of cancer, the citizens of this community have donated \$2.5 million toward the building of this facility.

As an organization involved in the latest cancer treatments, we believe the United States should not rely on obsolete foreign reactors for its badly needed supply of medical isotopes. We support keeping the FFTF in Richland, Washington open in order to give us the option of accessing locally produced isotopes.

Thank you for considering our opinion.

Sincerely,

Richard V. Stenson  
President & CEO  
Tuality Healthcare

Dr. Mark Ono  
Assistant Professor  
of Radiation Oncology,  
OHSU

3/6

Piippo, Robert E

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From: Shirlee Olson [outlaw@bentonrea.com]  
Sent: Wednesday, September 25, 2002 12:05 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

The Community Plan will not detract from clean-up budgets, will save the taxpayers over \$1 billion, AND will save millions of lives in the war on cancer.

The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

317

Piippo, Robert E

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om: Lawrence Page [larry.page@worldnet.att.net]  
nt: Wednesday, September 25, 2002 5:50 AM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

The Community Plan will not detract from clean-up budgets, will save the taxpayers over \$1 billion, AND will save millions of lives in the war on cancer.

The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

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1/2  
Oct. 10, 2002

To: Mr. O. A. (Al) Farabee  
U. S. Department of Energy  
Richland Operations Office  
P.O. Box 550 (N2-36)  
Richland, WA 99352

Ms. Laura Cudack  
Wash. State Dept. of Ecology  
Nuclear Waste Program  
1315 West 4th Ave.  
Kennewick, WA 99336

Dear Al Farabee and Laura Cudack:

Subject: Comments on Proposed Changes to the Tri-Party Agreement Closure Schedule for FFTF.

The following comments are provided by Jim Paglieri, engineer, as a private citizen and taxpayer.

The TPA change package for accelerating destruction of the Fast Flux Test Facility (FFTF) needs significant revision. The schedule needs to provide time for the Department of Energy and the Health and Human Services Department to evaluate and put into place the Community Reuse Agency's request for the private and beneficial use of FFTF. Further physical shutdown efforts must be halted until the Community Reuse Plan is in place. The Community Plan will not take money away from other cleanups budgets, as would shutdown, and will meet national needs that cannot be met by any other existing or currently planned U.S. facility (e.g. production of certain medical isotopes; some materials testing for fusion plants and future reactors; and production in a single facility of large quantities of Pu-238, a material which is needed for the deep space program).

Prior to draining secondary sodium from FFTF, a formal decision by interested agencies and stakeholders needs to be made on a) whether final facility disposition will be entombment or greenfield, and b) if entombment is chosen, whether the containment dome will be removed or left in place and whether irradiated unwashed non-fuel assemblies will be left in the reactor vessel or removed.

In the event that the Community Reuse Agency does not use the Interim Examination and Maintenance Cell (IEM Cell) at FFTF or the adjacent Maintenance and Storage Facility (MASF), the schedule should allow time <sup>to</sup> seek potential users. Current plans are to destroy these two facilities. IEM Cell is the tallest hot cell in the U.S. and has many special capabilities. The precedent for seeking users for a DOE owned hot cell such as IEM Cell and a building such as MASF has been previously established elsewhere.

In summary, the proposed revised TPA schedule needs revising to allow time for evaluation and implementation of the Community Reuse Agency's plan plus allowing time for the other previously discussed concerns.

Truly yours,  
James N. Paglieri  
James N. Paglieri  
1734 Horn Ave.  
Richland, WA 99352

319

**FFTF TPA Draft Change Package**  
Public Comment Period August 28 – October 14, 2002

**Comment Source:** Richland Public Meeting (October 10, 2002)  
**Commenter:** Jim Paglieri

**Comment:** I'd like to thank the officials who made this possible and put in a lot of effort. The comments are provided by myself, Jim Paglieri, engineer, as a private citizen and taxpayer. The TPA change package for accelerating the destruction of the FFTF needs significant revision. The schedule needs to provide time for the DOE and the Health and Human Services Department to evaluate and put into place the community reuse agencies request for the private and beneficial use of FFTF. Further, physical shutdown efforts must be halted until the community reuse plan is in place. The community plan will not take money away from other cleanup budgets as would shutdown, and will meet national need that cannot be met by any other existing or currently planned US facility. For example, production of certain medical isotopes, some materials testing for fusion plants and future reactors and production in a single facility of large quantities of Pu 238, a material which is needed for the deep space program. Prior to draining secondary sodium from FFTF a formal decision by interested agencies and stakeholders needs to be made on A) whether final facility disposition will be entombment or greenfield and B) if entombment is chosen whether the containment dome will be removed or left in place and whether radiated, unwashed non-fuel assemblies will be left in the reactor vessel or removed. In the event that the community reuse agency does not use the interim examination maintenance cell (IM cell) at FFTF or the adjacent maintenance and storage facility (MSF), the schedule should allow time to seek potential users. Current plans are destroy these two facilities. IM Cell is the tallest hot cell in the US and has many special capabilities. The precedent for seeking users for a DOE owned hot cell such as IM cell and a building such as MSF has previously been established elsewhere. In summary, the proposed revised TPA schedule needs revising to allow time for evaluation and implementation of the community reuse agencies plan, plus allowing time for the other previously mentioned concerns. Thank you.

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Oct. 10, 2002

Mr. O. A. Farabee  
U. S. Dept. of Energy  
Richland, WA 99352

Ms. Laura Casack  
Wash. State Dept. of Ecology  
Kennewick, WA 99336

Dear Mr. Farabee and Ms. Casack:

Subject: Proposed Changes to the TPA Schedule for  
Closure of FFTF.

→ These comments are provided by Sheryl Paglieri,  
housewife.

The proposed changes to the schedule for the  
closure of FFTF needs to be revised to allow for  
evaluating and implementing the Community Reuse  
Agency's request to have the facility declared surplus  
and operated for the significant benefit of many.  
If the facility is destroyed soon, money will be  
taken away from other important cleanups work.  
Also, some of the materials from the dismantling of  
FFTF will prematurely add to waste <sup>disposal impacts</sup> on the environ-  
ment. By allowing time in the schedule for the Reuse  
Agency's request, taxpayers will save over a billion  
dollars and many people (including friends, relatives,  
and neighbors) will be spared the suffering and  
potential death from cancer and other diseases.

Yours truly,  
Sheryl J. Paglieri  
Sheryl I. Paglieri  
1734 Horn Ave.  
Richland, WA 99352

321

***FFTF TPA Draft Change Package***  
Public Comment Period August 28 – October 14, 2002

***Comment Source:*** Richland Public Meeting (October 10, 2002)  
***Commenter:*** Sheryl Paglieri

***Comment:*** These comments are provided by Sheryl Paglieri, Housewife. The proposed changes to the schedule for the closure of FFTF needs to be revised to allow for evaluating and implementing the community reuse agency's request to have the facility declared surplus and operative for the significant benefit of many. If the facility is destroyed soon money will be taken away from other more important cleanup work. Also, some of the materials from the dismantling of FFTF will be prematurely added to waste disposal impacts on the environment. By allowing time in the schedule for the reuse agencies request, taxpayers will save over a billion dollars and many people including friends, relatives and neighbors. We had a 24-year old neighbor boy who was very close to our son that died of a brain tumor. We'll be spared the suffering of potential death from cancer and other diseases.

322

Piippo, Robert E

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From: Sonia Pasis [sonyaskter@aol.com]  
Sent: Thursday, September 26, 2002 7:16 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

The Community Plan will not detract from clean-up budgets, will save the taxpayers over \$1 billion, AND will save millions of lives in the war on cancer.

The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

323

Piippo, Robert E

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From: margaret.patchett@aqua.siteprotect.com  
Sent: Sunday, October 06, 2002 9:26 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE has transfed FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. NOW, this action WILL take money from the vital and "budget constrained" cleanup.

The Community Plan to save the FFTF will not detract from clean-up budgets, will save the taxpayers over \$1 billion, AND will save millions of lives in the war on cancer.

The Department of Energy refuses to see this as a national health issue. The community plan preserves the FFTF for vital nuclear Research and Development. The FFTF is vital to meet our nations energy needs.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

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*FFTF TPA Draft Change Package*  
Public Comment Period August 28 – October 14, 2002

*Comment Source:* Richland Public Meeting (October 10, 2002)  
*Commenter:* Peggy Patchett

*Comment:* My name is Peggy Patchett. I'm a physician here in the Tri-Cities. Today is October 10. Today would have been my 9<sup>th</sup> wedding anniversary. Three months ago my husband died and left me with two children under three. He was also a physician here in the Tri-Cities. He was sorely missed. After my husband was diagnosed we had a year of going through chemotherapy. Most cancer patients have 4-6 rounds of chemotherapy. My husband didn't respond. He had 13. In addition, he underwent several surgical procedures. In researching his disease process, we found out about medical isotopes. Of course we knew something about them before from our medical reading. But we did in-depth research. It was disheartening to find out that we had to travel to Switzerland or Italy to get treatment when it was available potentially not only in the United States, but in our own backyard. It was devastating. He subsequently died. We could not save him. It is amazing to me how cancer divides and fractures families. When it happens to your parents, to your spouse, to your children it becomes an all consuming event in your life that you'll try anything to be able to reverse. For those who haven't experienced it, I never hope you do. It's devastating to see the one that you love deteriorate before your eyes and not be able to do a single thing about it. Many people here tonight will talk to you about energy, about the environment, whether we should invade Iraq, whether we should develop nuclear oil or nuclear fuel sources, whether we should tap into Alaska. I'm not here for that. Someone with more knowledge can tell you about that. I'm here because of my husband. When the comments are tallied. I hope that someone can answer what do I tell my children? Why this didn't happen? The road to cancer and the road of cancer is something and a sorrow that all of us in the family have and that we share with many other people in the United States, and yet each road is individual and has to be trodden alone. Tell me, how do I explain to them what happened?

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*FFTF TPA Draft Change Package*  
Public Comment Period August 28 – October 14, 2002

**Comment Source:** Richland Public Meeting (October 10, 2002)  
**Commenter:** Richard Patchett

**Comment:** I'd like to remind everyone of the history of the Tri Cities. Before Hanford there was essentially nothing here. The whole reason the Tri Cities exists is because of the proposition that radioactive material is useful. If Hanford wouldn't have been built here, the Tri Cities would be Dixie, Touchet, Loudon. Walla Walla used to be the big city. This area was founded because nuclear materials are useful and I think we really need to remember that in all of our discussions. Because the Fast Flux has a lot of uses, including medical, especially medical. And I'd also like to point out that as a taxpayer I'm rather unhappy that the plant has been sitting idle there taking money and not generating anything useful; and that it's going to cost even more money to get rid of it after the initial expenditure to create it. And as taxpayers all of you should be unhappy about that. We're in an economic recession and going forward they would like to ask for more money to take down something that is potentially useful. When I'm rather unhappy about that. And I think I'd like to close my statements there. Thank you

326

Piippo, Robert E

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From: Farabee, Oliver A (AI)  
ent: Sunday, September 29, 2002 3:36 PM  
o: Piippo, Robert E  
Subject: FW: Opposition to TPA change package for accelerating destruction of FFTF

-----Original Message-----

From: Debra J. Pennington MD [mailto:penningtondmd@ausrad.com]  
Sent: Wednesday, September 25, 2002 1:32 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: Opposition to TPA change package for accelerating destruction  
of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

The Community Plan will not detract from clean-up budgets, will save the taxpayers over \$1 billion, AND will save millions of lives in the war on cancer.

In the medical arena, we are already limited by the limited sources from which we can obtain radiopharmaceuticals. The dependence often on only 1 and often foreign manufacturers has put the health of our patients at risk, while DOE refuses to see this as a national health issue. Let's not forget that all of our patients are someone's mother, father, daughter, son, or other family member. The public is not educated enough about these issues to understand or respond appropriately. Please accept the pleas from those in the radiological community as concerned and very serious!

Respectfully submitted:

327

**FFTF TPA Draft Change Package**  
Public Comment Period August 28 – October 14, 2002

**Comment Source:** Seattle Public Meeting (September 26, 2002)

**Commenter:** John Perreault

**Comment:** Good evening, I want to thank you and Mr. Farabee for having this, I want to thank the Dept. of Energy, the Dept of Ecology, and the EPA for their decision to shut this reactor down, I believe it was the right one. The Tri-Cities are experiencing a boom right now like never before. The construction of roads, homes, schools, all for the increased money being put towards cleanup at Hanford, the construction of the vitrification plant, so much so, it's beginning to cause traffic problems. That's a lot of jobs, and that's a lot of money. And I want to thank you for recognizing that the health benefits that are gained from the entire Hanford facility, and FFTF among it, are more important than fat wallets on some people. I want to thank you for recognizing that the Department of Energy and the United States as a whole has other sites to make medical isotopes. And I want to thank you for constructing the site down in the southwest to create the isotope whose name I can't remember, but we now have that available in the United States as well. I want to thank you for making this decision to shut this reactor down I want to thank you for doing it as quickly as possible, and if I could make only 1 suggestion that if you could find the money, please do it faster. Thank you.

328

Piippo, Robert E

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From: Daren Perrero [perrero@idns.state.il.us]  
Date: Tuesday, September 24, 2002 2:21 PM  
To: Oliver\_A\_Al\_Farabee@RL.gov  
Subject: Opposition to the elimination of the FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup. The FFTF should not be 'lumped in' with the necessary clean up actions taken at the Hanford site.

The Community Plan will not detract from clean-up budgets, will save the taxpayers over \$1 billion, AND will save millions of lives in the war on cancer.

The Department of Energy refuses to see this as a national health issue. This is a short sighted and dangerous stance by the DoE.

Medical Isotopes Save Lives. It's That Simple. The U.S. is in a position to maintain domestic production of most of its medical radionuclides rather than rely on foreign sources.

Respectfully submitted: Daren Perrero

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Piippo, Robert E

From: Farabee, Oliver A (AI)  
Sent: Monday, September 30, 2002 4:35 PM  
To: Piippo, Robert E  
Subject: FW: I am opposed to the TPA change package for accelerating destruction of FFTF

-----Original Message-----

From: Harvard Perron [mailto:hperron@earthlink.net]  
Sent: Monday, September 30, 2002 12:23 PM  
To: Oliver\_A\_AI\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

The Community Plan will not detract from clean-up budgets, will save the taxpayers over \$1 billion, AND will save millions of lives in the war on cancer.

The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

330

Piippo, Robert E

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From: Michael Perrone [mperrone@cse.ucsc.edu]  
Sent: Tuesday, September 24, 2002 10:18 AM  
To: Oliver\_A\_Al\_Farabee@RL.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

There was a time when I would have been in favor of the decommissioning of the FFTF. Then I became truly educated in areas where hyperbole and paranoia once held sway.

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

The Community Plan will not detract from clean-up budgets, will save the taxpayers over \$1 billion, AND will save millions of lives in the war on cancer.

The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

RECEIVED

OCT 15 2002

Department of Ecology  
NWP-Kennewick

331

Oct 12, 2002

Ms. L. Cusack  
Wash. St. Dept of Ecology  
Nuclear Waste Program  
1315 W. 4th Ave  
Kennewick, WA 99336

Dear Ms. Cusack

The TPA milestones for the FFTF should not be accelerated. FFTF should be restarted for medical isotope production.

The NEPA (National Environmental Policy Act) process is not being followed correctly with this shutdown.

The nation needs to put FFTF to good use before it is shutdown.

Sincerely,  
M. Petrowsky  
West Richland, WA

October 12, 2002

332

Mr. O.A. Farabee  
US Dept. of Energy  
Richland Operations Office  
PO BOX 550 (N2-36)  
Richland, WA 99352

Subject: Shutdown Schedule Change for FFTF

Dear Mr. Farabee:

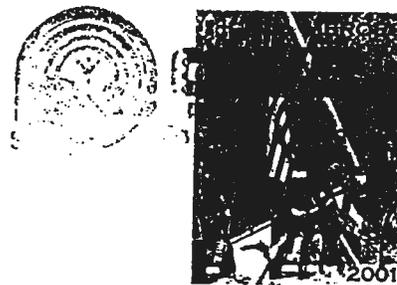
TPA milestones for FFTF shutdown should not be accelerated. FFTF should be restarted for medical isotope production.

DOE should let the private sector be given an opportunity to run the reactor. NEPA (National Environmental Policy Act) is not being followed correctly with this shutdown.

Let the nation get good use of this facility before shutting it down.

Sincerely,  
M. Petromay  
West Richland, WA

N. Petrowicz  
5303 Blue Heron  
W. Richland, WA 99353



Mr. O. A. Farabee  
US DOE  
Richland Operations Office  
PO Box 550 (N2-36)  
Richland, WA 99352

99352+0380



333

**Piippo, Robert E**

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**From:** LaurelPiippo@cs.com  
**Sent:** Friday, August 30, 2002 8:47  
**To:** Oliver\_A\_Al\_Farabee@RL.gov  
**Subject:** Opposed to FFTF Shutdown

I am totally opposed to any destructive, shut down, demolition of FFTF. To shut down FFTF is an insult to every taxpayer and to everyone who has ever had cancer or known anyone who has had cancer. Laurel Piippo



Richland, WA 99352  
October 21, 2002

Dear Mr. Farabee,

As nearly as I can recall my comments at the Yakima hearing on September 24 included the following:

time-line DOE set up for destroying FFTF should be stopped entirely. The department of Energy should be sued for criminal negligence and depraved indifference to the health needs of the American people. FFTF can and should be activated to produce medical isotopes to be used for diagnoses and cures of cancer and other diseases. The department of Energy knows this, but for some perverse and malicious reason is accelerating destruction. Apparently this has something to do with a contract Fluor Daniel has to destroy this billion-dollar facility, which the taxpayers already paid for.

Destroying FFTF will create more waste that must be cleaned up. More clean-up funds to clean up DOE-created junk are not in the budget.

On September 18, 2002, three important events occurred in my life: my 75<sup>th</sup> birthday, a DOE decision to turn FFTF to an environmental agency for speedy destruction, and my being told that I have yet another side-effect from conventional cancer treatments as opposed to the kinder, gentler, faster, and more economical treatments provided by medical isotopes.

This is not to say that medical isotopes would have been appropriate in treating my three experiences with life-threatening cancer, but it is to emphasize the negative side effects caused by slash/burn/poison – surgery, radiation, and chemotherapy. From April through September 18 various tests of my heart function contributed to bankrupting Medicare: insertion of a pacemaker in April, a Chest X-ray and CAT scan in June, a double angiogram in July, ECHO exam, and a TEE exam in September. These various tests were interpreted with numerous exciting possibilities: “you have a mass on your lung.” Update my obituary and prepare for another attack of lung cancer. False alarm. You have an aneurysm on your pulmonary artery, but two doctors didn't know what that meant because they had never seen one. You don't have an aneurysm, but you have an enlarged pulmonary artery, which is probably caused by a leaking mitral valve. This should be corrected with open-heart surgery. Jeez.

I gathered up all these tests, which cost thousands of dollars, and took them to Seattle on my birthday, September 18, 2002, and showed them to Dr. Christopher Davis, the surgeon who performed open-heart surgery on my husband. He evaluated all the data and said, “You have an aneurysm on your pulmonary artery **“PROBABLY CAUSED BY 35**

**ADIATION TREATMENTS.”** As another physician once said to me, “Ah, yes, radiation, the gift that keeps on giving.” At previous hearings I have described the side effects of external radiation, chemotherapy, but have not said much about numerous surgeries. Not all cancers can be treated with targeted medical isotopes, I realize, but medical isotopes offer an alternative to slash/burn/poison in many cases.

In November 2001 I joined other cancer fighters on the Cancer Train through Oregon and California to inform people and learn from physicians and other experts regarding medical isotopes. We met with Dr. Sally De Nardo, professor of medicine and radiology at UC Davis, and Dr. Gerald de Nardo, director of radiodiagnosis and therapy, professor emeritus of medicine, radiology, and pathology at the UC Davis division of hematology/oncology, Sacramento, California. We also met with Dr. Andrew Raubitschek at the City of Hope Hospital in Duarte, California. These world-class experts, who use medical isotopes in their practices, may not be quoted in any publication without their permission.

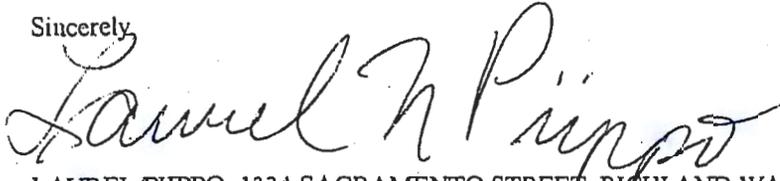
I learned from these physicians that the US went from being a world leader to the level of a Third World country in availability and cost of medical isotopes. There is lack of support and practical understanding of the breadth of isotopes by many government agencies. The great misfortune is insufficient recognition in Congress and the Department of Energy and other branches of government. Medical isotopes are critically needed by cancer patients who are undergoing treatments that impair the quality of life. Different isotopes are required for different diseases and must be readily available. These are not research items any more, but the result of 20 years of research. One study involving the use of medical isotopes for failed patients resulted in a response rate of 50 to 75 percent improvement. There was a 90 percent positive response in patients just starting therapy early in the disease. Medical isotopes do not produce the side effects of conventional therapy that damage quality of life.

The United States imports 90 percent of its medical isotopes from Canada where the supply is not always available. One physician says that Copper 67 will be a preferred isotope for lots of studies, which is "quite a reasonable isotope if someone will produce it. Copper 64 and 124 are being used," and he is trying to find it. He says, "Commercial production is needed; it has a half-life of four

" Another physician said, "We need a mandate from society and Congress and the Department of Energy to make available any all isotopes for treatment, therapy, and diagnosis." Instead, the Department of Energy is doing harm by not allowing cancer cures to be produced at FFTF.

Having suffered breast cancer twice and lung cancer once, I strongly object to the Department of Energy's determination and timetable for the destruction of FFTF, which can produce medical isotopes that would avoid the brutal and barbaric treatments of cancer currently prevalent in the United States. Thank you for giving me the opportunity to express my views again - and again and again.

Sincerely,

A handwritten signature in cursive script that reads "Laurel Pippo". The signature is written in dark ink and is positioned above the typed name.

LAUREL PIPPO, 1334 SACRAMENTO STREET, RICHLAND WA 99352

UNITED STATES DEPARTMENT OF ENERGY  
Richland Operations Office  
P.O. Box 55C  
Richland, Washington 99352-0550

OFFICIAL BUSINESS



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Mr. O. A. Farabee, Director  
Fast Flux Test Facility Division  
P.O. Box 550, MSIN N2-36  
Richland, WA

99352

99352+0550 01



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**FFTF TPA Draft Change Package**  
Public Comment Period August 28 – October 14, 2002

**Comment Source:** Seattle Public Meeting (September 26, 2002)

**Commenter:** Laurel Piippo

**Comment:** My name is Laurel Piippo and I'm from Richland and Mr. Farabee I hope your receiving hardship pay tonight. After you sat through the cute little vaudeville show by the raging grandmothers I thought it wouldn't bother you too much if I sat next to you to put on my bandages for a chronic ailment caused by the conventional treatment of cancer. I've had cancer 3 times my impression is that the Raging Grandmas – you ain't seen nothing of a raging Grandma til you've heard me get really wound up on this subject –they must be carefully insulated from any experience with cancer in themselves, their families, their relatives, or anybody else, as well as, carefully insulated from information about the facts regarding FFTF and Hanford clean-up. Hanford cleanup is a regional issue. That waste dump out there isn't creating cancer for anybody. Of course, if you worked at Hanford under unsafe conditions you would be in some danger. But when you live miles away from it you're not affected. You have a better chance of getting cancer here in King County or you have a better chance of getting cancer in Hood River County Oregon, than you would in Benton County, Washington. I am completely opposed to the timetable for the shutdown of FFTF. I know FFTF has cures for cancer in it. It operated safely for 10 years it can be used to create Medical isotopes according to the scientists who know more than some of the sweet young things who have been speaking here. I am going to read you some of the things, I guess you don't know about a lot of the side effects of 35 radiation treatments. I have on my shirt - stop slash burn poison. Slash being surgery; burn being the radiation treatments; and poison being the chemotherapy. All of which I have had. The side effect of 35 radiation treatments the incidental and immediate ones are blistering, burning, and bleeding; so they had to interrupt the treatments for 10 days while my skin could heal enough to be burned again. This is external radiation which damages the cells of the entire portion of the body, weakens the bones so that I had fractured ribs two times, and, then I found out last week has also caused heart damage. This compared with Medical Isotopes where you can be treated with 1 seed that will effect the tumor only, not the surrounding flesh. And chemotherapy with the well-known side effects of hair loss, nausea, and some other long term. I'm going to read to you some of the information that I gleaned on a cancer train trip through Oregon and California last November. We met with Dr. Sally Denardo, Professor of Medicine Radiology at UC Davis. Dr. Gerald Denardo, Director of Radio diagnosis and Therapy, Professor Emeritus of Medicine Radiology and Pathology at the University of Cal. Davis Division of Hematology and Oncology. We met with Dr. Andrew Robecheck of City of Hope Hospital in Duarte, California. These are world-class experts who use Medical isotopes when they can get them in their practice. I think these people are a little more knowledgeable about what is a health crisis and what isn't. We have a national health crisis with 500K people per year involved in cancer treatment and many many of the dying. What these doctors said.... The US went from being a world leader to the level of a third world country in availability and cost of medical isotopes. There is lack of support and practical understanding of the breadth of isotopes by many government agencies.

Facilitator: 60 seconds

The great misfortune is insufficient recognition in Congress and the Dept. of Energy and other branches of government. My personal opinion is that the DOE ought to be sued for depraved and indifference and criminal neglect of the health and well being of the American public. Medical isotopes are critically needed by cancer treatment patients who are undergoing treatments that impair the quality of life. The greatest breakthrough today in the use of medical isotopes is the ability to understand cancer better for treatments and prevention. Medical Isotopes deposit radiation selectively, as opposed to external radiation that damages healthy tissue around the tumor.

Facilitator: 10 seconds

The United States imports 90 percent of its medical isotopes from Canada where the supply is not always available. One physician said commercial production is needed. Medical isotopes have a half-life of 4 days. This is something called copper 64 and 124 used in the treatment of breast lung and colon cancer I've had 2 out of 3. Three Cancers, so don't come hear and sing cute little tunes to me.

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**FFTF TPA Draft Change Package**  
Public Comment Period August 28 – October 14, 2002

**Comment Source:** Richland Public Meeting (October 10, 2002)  
**Commenter:** Laurel Piippo

**Comment:** While I was winding up all this bandage, and it's about I don't know it's about 50 feet that I have to wash and hang up nice and straight and then wind up with a little contraption and then I've had to have instruction on how to wrap my arm because I have a side effect from cancer. It's called lymphadema and the side effect is caused by the conventional treatment of cancer. Between 1998 and 1993 I had cancer four times. Three of them life threatening. Breast cancer twice and lung cancer and I'm sure you heard this to the boring degree cuz I keep telling it at all these hearings but you talk about the human factor, think about the cancer patient, who is treated with the conventional treatment of on the back of my shirt is burn slash poison multiple surgeries for the mastectomy, the reconstruction; and surgery for the lung cancer; and then surgery for the breast cancer again and six months of chemotherapy which poisons your entire body and then the radiation which covers ½ your upper body and has side effects that no one tells you about or you would never agree to the treatment. But lymphadema is a chronic condition that I'll have to deal with this ugliness, inconvenience and expense for the rest of my life. And I just found out on September 18<sup>th</sup> on my 75<sup>th</sup> birthday that their going to shut down FFTF so that you won't be able to get any medical isotopes as a more humane and gentle treatment of cancer. But then I also found out on that day from a cardiac surgeon at Swedish Hospital that the reason I'd had to practically bankrupt Medicare with one test after another for my heart, you see after having cancer three times I got bored and decided I'd go for a new disease and so I had angiograms and TEEs and all that stuff and the doctors said you have an aneurysm on your pulmonary artery you don't have any leaking mitrovalves, this is probably caused by radiation treatments. So here we are again. The conventional same thing they've been doing for year, after year, after year, the same old treatments and it really burns me up to think that medical isotopes could treat many of the kinds of cancers that I had. They aren't appropriate for every cancer; they are not a magic wand. But I find it absolutely criminal and unbelievably stupid that you wreck a perfectly good facility you cry and bellyache about the expense and bother of cleaning up Hanford waste so your going to wreck FFTF and create a whole lot more waste. It doesn't make any sense to me. Do I have some more time?

Facilitator You have about 2 minutes

OK/ I went on the cancer train last November through Oregon and California. We met with Dr. Sally Denardo, a professor of medicine and radiology at University California Davis and a Dr. Gerald Denardo, Director of Radial Diagnosis and therapy; a professor emeritus of medicine and radiology and pathology, division of hematology and oncology. Now that ought to impress you. We also met with Dr. Andrew Robecheck at the City of Hope in Duarte California, on the subject of medical isotopes. And I took lots of pretty good notes. I learned that after WWII the U.S. was the world leader in medicine and that we have sunk to the level of a 3<sup>rd</sup> world country in the availability and cost of medical isotopes. There is lack of support and practical understanding of the breadth of isotopes by many government agencies. The great misfortune is insufficient recognition in Congress and the Department of Energy and other branches of government. Medical isotopes are critically needed by cancer-treatment patients who are undergoing treatments that impair the quality of life. Well believe me, there's nothing like chemotherapy to impair the quality of your life. I'd rather be dead than go through it again.

Facilitator You have 30 seconds maam

Well, I think you should all come to the Richland City Council meetings, to the Benton county meeting of Commissioners Monday morning and to whatever that 3<sup>rd</sup> government agency is, the Port of Benton. Any way, be there, because these are the only 3 government agencies who are willing to step up to the plate and sue the Department of Energy for their criminal negligence and depraved indifference to the health of the American people.

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Piippo, Robert E

From: Farabee, Oliver A (Al)  
Sent: Monday, September 23, 2002 4:32 PM  
To: Piippo, Robert E  
Subject: FW: Please honor the 1995 commitment to use the funds saved from shutdown of FFTF for "higher priority" environmental management work at Hanford. In order to honor this commitment, it is essential that the currently enforceable TPA deadline for draining o

-----Original Message-----

From: Gerald Pollet [mailto:gerry-pollet@msn.com]  
Sent: Sunday, September 22, 2002 12:41 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: Please honor the 1995 commitment to use the funds saved from shutdown of FFTF for "higher priority" environmental management work at Hanford. In order to honor this commitment, it is essential that the currently enforceable TPA deadline for draining of So

At all public hearings, we urge that you explain that USDOE repeatedly committed to have the deactivation of FFTF paid for by the Office of Nuclear Energy, rather than Environmental Management. Towards these ends, it is not acceptable to drag out the shutdown through 2010. To do so is to waste tens of millions of dollars, if not well over a hundred million.

I appreciate your consie and clear history of the decisions to shut, then place on standby, and then the shutdwon and review decisions - as you presented to the tour group from the ANA this week. This was very concise and clear, and I hope will be part of the presentation at hearings on the tpa package so that people recruited to attend based on medical isotope production interest will understand that decisions on medical isotope production were made in the PEIS process (and DOE committed to use other facilites). Please enter this into the official comments.

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

The Community Plan will not detract from clean-up budgets, will save the taxpayers over \$1 billion, AND will save millions of lives in the war on cancer.

The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

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Piippo, Robert E

om: Farabee, Oliver A (AI)  
nt: Monday, September 23, 2002 4:34 PM  
io: Piippo, Robert E  
Subject: FW: Please honor the 1995 commitment to use the funds saved from shutdown of FFTF for "higher priority" environmental management work at Hanford. In order to honor this commitment, it is essential that the currently enforceable TPA deadline for draining o

-----Original Message-----

From: gerry-pollet [mailto:gerry-pollet@msn.com]  
Sent: Sunday, September 22, 2002 10:38 PM  
To: Oliver\_A\_Al\_Farabee@RL.gov; Cusack, Laura  
Cc: hoa; amber@heartofamericanorthwest.org; Tom Carpenter  
Subject: Re: Please honor the 1995 commitment to use the funds saved from shutdown of FFTF for "higher priority" environmental management work at Hanford. In order to honor this commitment, it is essential that the currently enforceable TPA deadline for draining o

Al:

I did not write the portion underneath "Please enter this into the official comments." Nor did it show up on the comment form that I was electronically filling out. Therefore, not only do I not want anything below that to be in the comment with my name.

As you are no doubt aware, this was submitted via the email comment form linked to the Citizens for Medical Isotopes page. It would seem that such language in all similar electronic submissions should be treated as a form letter that was not disclosed in full to the persons submitting.

It was my intent to include in the official record my request for a clear presentation of the history of FFTF decisions, and the repeated commitments from USDOE that cleanup funds would not be used for deactivation (after using EM funds to maintain the reactor on standby for several years). After years of claiming otherwise, it is now ironic to see the proponents noting that the failure to deactivate FFTF under the original TPA milestones has detracted from our limited cleanup funding.

I also would like my compliment on your presentation to the tour group to be in the official record. I mean that very sincerely.

Sincerely,  
Gerry Pollet

----- Original Message -----

From: <Oliver\_A\_Al\_Farabee@RL.gov>  
To: <gerry-pollet@msn.com>  
Sent: Sunday, September 22, 2002 6:30 PM  
Subject: RE: Please honor the 1995 commitment to use the funds saved from shutdown of FFTF for "higher priority" environmental management work at Hanford. In order to honor this commitment, it is essential that the currently enforceable TPA deadline for draining o

> Gerry,

>

> I request that you consider this a personal response and not an official,  
> just communication. Your comment will be added to the others and  
> responded

> to in the Response to Comments Document.

>

> Para 1 It is not my intent to raise this issue but will respond to a  
> pragmatic question on this issue.

>  
> Para 2 My presentation will have the chronology and I will verbally  
> address the highlights.

> About your email. Do you want the whole thing entered into the record  
> just what is below the "Dear Laura and Dear Al" part?

> See you Thursday.

> Al

> -----Original Message-----

> From: Gerald Pollet [mailto:gerry-pollet@msn.com]

> Sent: Sunday, September 22, 2002 12:41 PM

> To: Oliver\_A\_Al\_Farabee@rl.gov

> Subject: Please honor the 1995 commitment to use the funds saved from  
> shutdown of FFTF for "higher priority" environmental management work at  
> Hanford. In order to honor this commitment, it is essential that the  
> currently enforceable TPA deadline for draining of So

> At all public hearings, we urge that you explain that USDOE repeatedly  
> committed to have the deactivation of FFTF paid for by the Office of  
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> of millions of dollars, if not well over a hundred million.

> I appreciate your concise and clear history of the decisions to shut, then  
> place on standby, and then the shutdown and review decisions - as you  
> presented to the tour group from the ANA this week. This was very concise  
> and clear, and I hope will be part of the presentation at hearings on the  
> TPA package so that people recruited to attend based on medical isotope  
> production interest will understand that decisions on medical isotope  
> production were made in the PEIS process (and DOE committed to use other  
> facilities).

> Please enter this into the official comments.  
> Dear Al Farabee, U.S. Department of Energy  
> Laura Cusack, Washington Dept of Ecology

> DOE promised and Tri-Party signed an agreement that maintains the budget  
for  
> FFTF in "NE." This was an assurance from DOE that FFTF would "not"  
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> from "Clean-up" funding.

> Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF.  
DOE  
> will transfer FFTF to the cleanup budget in violation of the Tri-Party  
> Agreement. There is no budget for acceleration. AND, FFTF WILL take  
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> The Community Plan will not detract from clean-up budgets, will save the  
> taxpayers over \$1 billion, AND will save millions of lives in the war on  
> cancer.

> The Department of Energy refuses to see this as a national health issue.

> Medical Isotopes Save Lives. It's That Simple.

> Respectfully submitted:

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**FFTF TPA Draft Change Package**  
Public Comment Period August 28 – October 14, 2002

**Comment Source:** Seattle Public Meeting (September 26, 2002)  
**Commenter:** Gerry Pollet

**Comment:** I will be speaking now for Heart of America Northwest as apposed to previously when I was speaking on behalf of the public interest community. And let me add to those comments. Number 1 unfortunately many of the people who came here tonight have already left but it's sad that they have been somewhat misled into thinking that there haven't been national hearings on the question of medical isotopes. And DOE's infrastructure. Because there have been 2 rounds of national hearings and 2 PEIS's plus meetings all around the nation held by the Nuclear Energy Research Advisory Committee, plus the Holland report, all of which were available to people around the nation. I do want to say at this point that I have a very strong objection to the fact that we our groups were not told that we could have call in lines and I think that this is a dismal failure having people who were at hearings in other locations use those lines to displace the time of people who came here tonight and I do not think it was very successful at all. The national hearings and Programmatic EIS process revealed several things: 1) 50% of the capacity of DOE's own reactors and accelerators for medical isotope production are not being used; 2) the cost of producing medical isotopes at INEEL with new facilities for the actual processing of the isotopes instead of using contaminated buildings in Hanford's 300 Area, was approx. \$50M, the cost of FFTF use 435M and I don't trust DOE's cost estimates for restart any more than Mr. Oliver trusts deactivation cost estimates.

**Facilitator:** You have about 3 minutes left

It is important to remember that private companies in the United States do produce medical isotopes . There is a company in Texas that bought the accelerator from the Super conductor super collider, it has contracts with I believe 6 different reactors and it's a shame that people are so xenophobic if you understand the word that they don't want to rely on Canadian import of Medical Isotopes, but they are available and that is the state of North American commerce. We'd like to thank Ecology for maintaining the June 2005 deadline for draining the sodium from the reactors primary and secondary loops. January last of this year Ecology director Tom Fitzsimmons made a commitment that we the public would be able to rely on that date at the January public meeting around the region and Ecology has allowed us to rely on that date and has proposed to keep it. It is the date that is currently enforceable and in effect. And that should be noted. If DOE decides they are going to attempt to delay deactivation, and this milestone change package was not signed, we can enforce that deadline anyway

**Facilitator:** 90 seconds

Because it is in effect. The schedule unfortunately that is proposed is entirely budget constrained. There is no reason why interim storage casks were not purchased beginning this year. Four years can be shaved off this deadline except for one thing. The nuclear energy office refuses to pay the bill. Nuclear energy said that they had 435 mil \$ available in just the next 4 years to restart FFTF but they will only provide 36 mil a year for deactivating FFTF and want the cleanup budget to be robbed again. That's wrong. Ecology and EPA need to put DOE's feet to the fire and say you made repeated public commitments, we've got them on the record, Nuclear energy will have to pay and increase the cleanup budget. It's fine

to have FFTF under the office of environmental management as long as nuclear energy transfers the money and then it stays and then you have to put into the TPA

Facilitator: 10 seconds

Language saying that the funds saved when this state is achieved, deactivation, remain available for cleanup use afterwards. Thank you.

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**FFTF TPA Draft Change Package**  
Public Comment Period August 28 – October 14, 2002

**Comment Source:** Portland Public Meeting (October 9, 2002)

**Commenter:** Gerry Pollet

**Comment:** I'm testifying tonight on behalf of Heart of America Northwest and let me start with a reminder, it was mentioned earlier this evening that the Department of Energy's business is not to be in the commercial production of isotopes and it's sole mission, relative to isotopes, was for research purposes. The commission shared by the chair of the University of Chicago radiation department and DOE's blue ribbon panel concluded that FFTF and I quote is not a long-term viable source of research isotopes. And the reason is that it is essentially like using a canon to try to shoot a flea. When it comes to producing research isotopes. There is no rapid isotope retrieval system in that reactor today, nor is it known if it could be designed or licensed to do so. The cost of retrofitting it would be in the 100's of millions of dollars. But we're beyond this point. Go lobby the Department of Energy to make available the 50% of its reactor and accelerator capacity that sits today for medical isotopes. Because that is what that panel found. 50% of the capacity is available and not utilized. And there are numerous reasons why it is not utilized. Including cost effectiveness. However using FFTF as DOE's own schematics show would produce more liquid high level nuclear waste to add into Hanford's high level nuclear waste tanks 67 of which have already leaked over a million gallons into the soil which will poison our groundwater and threatens the Columbia River. And which we are a lifetime away from retrieving and solidifying. The importance of discussing funding and the timeline for shutdown is that it has always been recognized that DOE maintained FFTF on standby, let me point out for the good doctors in the audience and on the phone that it was on standby to produce tritium for nuclear weapons, don't be fooled into thinking that it was on standby for medical isotope production consideration. And we used cleanup funds to do that. In 1995 we won a very hard fought commitment that when deactivation is achieved after sodium drain it is expected that the funds will be available for higher priority environmental management activities. We need to make sure that the language of the TPA affirms that this commitment will be honored and that the funds remain available for cleanup because we need them desperately. Over way over 100 million dollars in cleanup funds were robbed to maintain FFTF for the tritium and then plutonium production missions.

**Facilitator:** Sir you have 90 seconds left

This is a slide from a few years back talking about repaying it. We advised Ecology several times over the last year that indeed the reactor could be deactivated completely within 5 fiscal years from whenever you start the clock easily and for far less money than was being suggested at the beginning of these negotiations. These from page 7 of the report that was noted earlier and the external advisory group said in summary we believe that by shortening the fuel removal by at least 2 years, in shortening the deactivation of the balance of plant systems by up to 2 years, you will provide a realistic deactivation end date of December 2007. In addition, this state, which will save 4 years in deactivation process appears similar to another plan.

**Facilitator:** You have 30 seconds left

So the point is the timeline for deactivation needs to be adjusted to reflect what can be done, what should be done, the contract incentive measures that need to be implemented and the TPA needs to say, finalize deactivation by December 2007. It can be done, we need the funding made available for cleanup and it must be done.

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Page 7 External Expert Review of FFTF Deactivation  
Schedule July 2002

In summary, we believe that shortening the fuel removal by at least 2 years and shortening the deactivation of the balance of plant systems by up to two years will provide a realistic deactivation end date of December 2007. In addition this date, which will save 4 years in the deactivation process, appears to be similar to the schedule presented in the Fast Flux Test Facility Project Management Plan (HNF-SD-FF-SSP-004, Rev. 4) dated May 24, 2001.

Submitted by Heart of America Northwest  
per presentation at hearings  
in support of maintaining  
June 2005 Sodium Drum Completion  
Date in TPA; and, urging  
that the deactivation  
completion date be accelerated  
to December, 2007, with  
DOE required to use funds saved  
for Hanford EM.

10/9/2002

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Piippo, Robert E

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From: Lexie Pollick [lexiesp@aol.com]  
Sent: Wednesday, September 25, 2002 10:18 AM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF. I am the mother of a cancer survivor. Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

The Community Plan will not detract from clean-up budgets, will save the taxpayers over \$1 billion, AND will save millions of lives in the war on cancer.

The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

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Piippo, Robert E

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om: Barbara Poulson [barbarap@3-cities.com]  
nt: Saturday, October 05, 2002 2:25 PM  
o: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF Why destroy radioisotopes that can be used for medical and industrial application?

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE has transfed FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. NOW, this action WILL take money from the vital and "budget constrained" cleanup.

The Community Plan to save the FFTF will not detract from clean-up budgets, will save the taxpayers over \$1 billion, AND will save millions of lives in the war on cancer. It will be a shame if U.S. citizens have to resort to traveling to another country to in order to receive reatment with medicl isotopes. In fact, it would be a disgrace. The Department of Energy refuses to see this as a national health issue. The community plan preserves the FFTF for vital nuclear Research and Development. The FFTF is vital to meet our nations energy needs.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

343

Public Comment from the Yakima Public Meeting (September 24, 2002). Re-submitted by phone on October 28, 2002

The following comments are offered for inclusion in the Public Record. These comments were officially presented during the public meeting on September 24, 2002 at Yakima, Washington regarding the TPA suggested changes for closure of the Fast Flux Test Facility.

**(PUBLIC RECORD)**

For the record, my name is Gordon Allen Pross. I reside in Ellensburg, Washington.

I am strongly opposed to the suggested revisions to the TPA target dates. I am strongly opposed to any advancement of the target dates which would deny a full and thorough hearing, detailed evaluation and pragmatic mission realignment of the FFTF. I am definitely opposed to the subtle, sneaky efforts of the Department of Energy and Washington State Ecology to destroy the finest research nuclear reactor in the world.

Former First Lady Mrs. Ronald Reagan taught us all a valuable lesson, just say NO! "Just say NO!!" has been a successful, frank answer to potential evil actions in America. In that same vein... I say NO, to dismantling Humanity's Fast Flux Test Facility. And I say "NO" to any attempts to move forward the TPA target dates in order to unlawfully take actions that would further harm the FFTF.

I would like to read from Sam Reed's Washington Secretary of State WWW Election 2002 site from off of my personal voters pamphlet statement so be it my 3<sup>rd</sup> consecutive attempt to garner the United States House of Representatives 4<sup>th</sup> Congressional seat.

**And I quote..."Title: Resurrect Americans Will to Policy**

"I hold the highest office of the land. I am an American citizen; overseas veteran, degreed, gifted, enlightened native born son of Yakima."

My position regarding energy: "Energy

Double the core of your Fast Flux Test Facility, ignite waste at Hanford for fuel and light-up every light bulb in the 4th District into 2027. Turn our Tri-Cities into a Mecca to Cure Cancer with isotopes from your Crown Jewel Reactor."

**Mantra:**

"Statesman Pross, a citizenry servant, offering bedrock truth.

Gordon Allen Pross: Creator/Political Renaissance Ignited Via the Resurrection of Humanity's Will to policy Congress 2002." End of quote.

The message is plain and simple... our Nation needs the FFTF... our citizens will benefit greatly from the products of the FFTF... proper use of the FFTF will enhance our local and regional

economy. Demolishing the FFTF is not only stupid and non-sensical... it is insane!!

My brother Bruce William Pross lost his WAR to cancer... a two year battle that decimated the body of my older brother, by then I was three years old, I watched the Nuclear Medical Community's failed efforts to save Bruce's life. They were unable to save his life because we did not have the right tool for the right job. Our lack of medical technology allowed my brother to die. Today, we can change that devastating feature of cancerous deaths. I believe we have the right tool now in the FFTF. It took my family over a 30-year period to pay off the final score of medical debt in our gallant, priceless battle to save the life of our dearest loved one, Bruce. Along goes our FFTF in the field of priceless endeavors. For thousands of families throughout the world, the FFTF would provide not only a cure for cancer, but would also allow medical treatments at an affordable price, without months and months of suffering.

How can our government officials... from the lowest staff levels up to the highest level decision-makers turn their backs on such a worthy, miracle-working, life-saving facility?? How can our public servants plead such a wide span of ignorance?? How can our Legislators allow their gutless vanity to destroy the hundreds of thousands of cancer sufferers?? There is no acceptable answer from these people who would allow a life-saving facility to be destroyed... NO ACCEPTABLE ANSWER!!

On my website of <[GordonAllenPross.Com](http://GordonAllenPross.Com)> I elaborate further on your FFTF.

Here is another perspective that decries any of your governmental efforts to move forward the TPA target dates. Is it not interesting what we find under discovery? The formulas yet to be unlocked w/i the Fast Flux Test Facility hold the ability to fashion, mold and to bring to term the anointing keys for unfolding the pesky perplexing questions and answers to address our Heavens within a vast Universe from right out of Washington's backyard. Such as: (in-part)

**MISSION: NASA**  
mission of space exploration...

National budgetary concerns reaching into the BILLIONS of dollars... of which at least \$10 billion a year could be eliminated by using the medical isotope products of the  
FFTF...

**Formulas to liberate Humanity with cures for DISEASES through their specifics**  
**MISSION:**

**HEALTH & HUMAN SERVICES**

**World Security, to include but not limited to National Security. FFTF holds the key for PEACE throughout Humanity for the next two decades.**

**MISSION: HUMANITARIAN & WORLD PEACE**

**FAITH & ACTS MISSION: AMERICAN INGENUITY**

**Let's together accomplish a true humanitarian renaissance...**

In my 2000 election cycle I was asked some questions by a little outfit from out of Bellevue Washington that of CGS Common Sense Government. "Have you ever heard of such a thing?" (laughter)...

Fostering common-sense in government "O my Lord..." (laughter once again....) My message to the following interrogatory continues to be broadcast as we speak @ GordonAllenPross.Com

**In your estimation, what one program deserves more support than it currently gets?**

Medical Research:

**Why?**

Traditionally, the avenue of approach for finding control and cures for diseases that plague humanity has been through trial and error, and by blind accident. While scientists look for a specific answer for a defined condition, they often end up finding a cure for something completely different from what they originally set out to find. Today, due to the hype of the media, it is much too easy to funnel financial gold dust down a gopher hole as a potential means to an end, when a popular medical issue is faced with scrutiny.

I pray that our medical research capital can be directed across the board for a wider scope of achievement in an all-out effort to win the war on illness. Thus, our great physicians will no longer bear the cross of being "Ferrari mechanics working on only Volkswagens," as it were. In the future, our physicians will treat health not disease.

**The road to this end lies w/i the Fast Flux Test Facility.**

**Save Humanity, Resurrect Americans' Health!**

**FAST FLUX TEST FACILITY is a key to answering this challenge...DO NOT decommission and destroy one of humanity's best hopes for future health and cure of cancer!!**

Respectfully submitted by:

Gordon Allen Pross  
P.O. Box 533  
Ellensburg, WA 98926-0533

9/24/02  
Yakima Public Mtg

344

Gordon Allen Pross  
2004 Candidate  
United States Senate

TO: US Department of Energy  
Washington State Department of Ecology

Mr. O. A. Farabee

The following comments are offered for inclusion in the Public Record. These comments were officially presented during the public meeting on September 24, 2002 at Yakima, Washington regarding the TPA suggested changes for closure of the Fast Flux Test Facility.

(PUBLIC RECORD)

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Former First Lady Mrs. Ronald Reagan taught us all a valuable lesson, just say NO! "Just say NO!!" has been a successful, frank answer to potential evil actions in America. In that same vein... I say NO, to dismantling Humanity's Fast Flux Test Facility. And I say "NO" to any attempts to move forward the TPA target dates in order to unlawfully take actions that would further harm the FFTF.

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How can our government officials... from the lowest staff levels up to the highest level decision-makers turn their backs on such a worthy, miracle-working, life-saving facility?? How can our public servants plead such a wide span of ignorance?? How can our Legislators allow their gutless vanity to destroy the hundreds of thousands of cancer sufferers?? There is no acceptable answer from these people who would allow a life-saving facility to be destroyed... NO ACCEPTABLE ANSWER!!

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**SAVE HUMANITY, RESURRECT OUR AMERICAN CITIZENRIES  
FAST FLUX TEST FACILITY**

Respectfully submitted by:

GORDON ALLEN

  
**PROSS**

PO Box 533, Ellensburg, WA 98926-0533

GORDON ALLEN PROSS  
2004 CANDIDATE  
UNITED STATES SENATE  
POB 533 ELNSBURG  
WASHINGTON STATE  
98926-0533



CARE OF THE//  
UNITED STATES DEPARTMENT OF ENERGY  
RICHLAND OPERATIONS OFFICE

MR. O. A. FARABEE DIRECTOR  
FAST FLUX TEST FACILITY DIVISION  
P.O. BOX 550 MSIN N2-36  
RICHLAND WASHINGTON STATE  
99352

UNDER COLOR OF THE UNITED STATES POSTAL SERVICE  
MAILED & DROP OFF/ CERTIFIED 23:45 OCTOBER 28<sup>TH</sup> 2002

99352#0550



345

***FFTF TPA Draft Change Package***  
Public Comment Period August 28 – October 14, 2002

***Comment Source:*** Seattle Public Meeting (September 26, 2002)

***Commenter:*** Caroline Radacina

***Comment:*** I thank you for your decision to shutdown the FFTF and I would also like to state that the FFTF has never made medical isotopes. And that it is not cost effective. There are other places that are cost effective, that can make medical isotopes. And also, I'm not just some, you know, environmentalist that doesn't know anything about this issue. I have a best friend that has malignant melanoma and he can get medical isotopes in this country. There is no medical emergency and I would just like to state to all the ignorant people that this is not a health issue. Thank you.

346

Piippo, Robert E

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From: LORREN RAMSETT [LORUFFDA@mns.com]  
Sent: Wednesday, September 25, 2002 5:48 AM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

The Community Plan will not detract from clean-up budgets, will save the taxpayers over \$1 billion, AND will save millions of lives in the war on cancer.

The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

347  
Piippo, Robert E

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From: Matt Reid [mattreid@charter.net]  
Sent: Friday, September 20, 2002 12:45 AM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

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Respectfully submitted  
Matt Reid

348  
Piippo, Robert E

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om: Jacob Renn [Jake541@hotmail.com]  
nt: Saturday, September 21, 2002 11:36 AM  
To: Oliver\_A\_Al\_Farabee@ri.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

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Shame on you for ignoring the problem of cancer to thousands of our fellow citizens. I hope and pray that this fact was taken in your adoption to hasten the shutdown of this very important facility.

Sincerely.....Jake Renn

Respectfully submitted:

349  
Piippo, Robert E

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From: Carolyn Reutter [cyreutter@yahoo.com]  
Sent: Tuesday, September 24, 2002 6:18 AM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

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Respectfully submitted:

350  
Piippo, Robert E

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From: K. Rhoads [rhoads@charter.net]  
Sent: Wednesday, September 25, 2002 11:22 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

Thank you for the opportunity to comment on the proposed schedule for deactivation of the FFTF. I am opposed to DOE shutting down and destroying this national resource. No other project proposed by DOE in the infrastructure EIS has the capabilities available at FFTF. As a taxpayer, I oppose the waste of public funds to decommission this facility and build another that has far fewer capabilities. That short-sighted political decision should be reversed.

As a scientist, I would welcome an arrangement that provides for private operation of FFTF to produce isotopes for medical purposes and other types of research. The United States should not continue to depend on a single foreign facility for the materials so vital to the health of its citizens. As a daughter who lost her father to inoperable cancer last year, I would very much like to see DOE use its resources to give other families hope where there previously had been none.

Spending millions of badly needed clean up dollars to destroy a unique facility like FFTF makes no sense. I encourage DOE to preserve this irreplaceable resource for beneficial use, and to focus its clean up efforts on the higher risk problems at Hanford and other DOE facilities that merit immediate attention.

Respectfully submitted:  
Kathy Rhoads

Piippo, Robert E

351

From: Linda Roberts [lindar@owt.com]  
Sent: Thursday, September 26, 2002 11:28 AM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

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The Community Plan will not detract from clean-up budgets, will save the taxpayers over \$1 billion, AND will save millions of lives in the war on cancer.

The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:.. Why eliminate ANY chance of medical research that saves lives?

352

Piippo, Robert E

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From: Lionel.W.Roberts@aqua.siteprotect.com  
Sent: Wednesday, October 02, 2002 12:43 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

DOE promised and Tri-Party signed an agreement that maintains the budget for FFTF in "NE." This was an assurance from DOE that FFTF would "not" detract from "Clean-up" funding.

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Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

353

Piippo, Robert E

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om: Farabee, Oliver A (Al)  
Sent: Thursday, September 19, 2002 9:22 AM  
To: Piippo, Robert E  
Subject: FW: I am opposed to the TPA change package for accelerating destruction of FFTF

-----Original Message-----

From: cheryl robinson [mailto:cheryl@washington-institute.com]  
Sent: Thursday, September 19, 2002 8:39 AM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

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Now, Tri-Party is agreeing to accelerated shut-down schedules for FFTF. DOE will transfer FFTF to the cleanup budget in violation of the Tri-Party Agreement. There is no budget for acceleration. AND, FFTF WILL take money from the vital and "budget constrained" cleanup.

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Respectfully submitted

354

Piippo, Robert E

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From: Farabee, Oliver A (AI)  
nt: Sunday, September 29, 2002 9:09 AM  
Subject: Piippo, Robert E  
FW: Use FFTF

-----Original Message-----

From: Ted Rockwell [mailto:tedrock@cpcug.org]  
Sent: Friday, September 27, 2002 10:49 AM  
To: Oliver\_A\_AI\_Farabee@rl.gov  
Subject: Use FFTF

Mr. Farabee:

I understand you're asking for public comment on shutting down FFTF.

I urge that it NOT be shut down, and that it be used primarily to produce radioisotopes for medical and industrial use. It is a unique facility is is needed.

Thank you.

Theodore Rockwell, ScD

355

**FFTF TPA Draft Change Package**  
Public Comment Period August 28 – October 14, 2002

**Comment Source:** Richland Public Meeting (October 10, 2002)  
**Commenter:** Gordon Rogers

**Comment:** Good evening. I'm Gordon Rogers and I'm speaking as a private citizen, resident of Pasco. I'll try to be brief and not belabor many excellent points already been made. Specifically in relation to the issue at hand, I totally oppose these proposed milestones. I request that they be indefinitely deferred. Second, I would recommend that the Department of Energy conscientiously support and give aide and assistance to the community represented by Commissioner Oliver and the cancer patients and CMI to really bring to a conclusion the feasibility of the DOE giving over the operation of the reactor to private parties and to get on with the production of medical isotopes. Beyond that I am just outraged as a taxpayer and citizen on the way in which the Department of Energy has failed to produce one of their original missions, mainly the ample production of medical isotopes and other isotopes for the health and other uses. It seems to me that they just have flaunted that portion of their original mission. It bothers me to see the abandonment of so many facilities built at great expense: Cleach River, FFTF, FMEF, and frankly I'm afraid the same darned thing is going to happen with the waste treatment plant, the Vit plant so called. As it stands now that's destined to be torn down as soon as they finish treating/glassifying high-level waste in the Hanford tanks. Just as something to think about, we might be wondering how DOE can properly use existing facilities. YUCCA Mountain is of limited capacity. It cannot take all the fuel now it's spent fuel at the commercial electric generating plants. One way of solving that might be to reprocess that fuel, recover the plutonium and other fissionable materials, and store the much-reduced vitrified fission product waste at YUCCA Mountain. That's not the subject of the meeting, and I won't belabor it. Thank you very much.

Piippo, Robert E

356

From: John Rollinson [taffygee@thebest.net]  
Sent: Wednesday, September 25, 2002 12:06 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF--

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

My late first wife had 2 bouts with cancer- Kaposi's sarcoma, and melanoma- I know how vital isotopes are. Please reconsider!  
JR

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

357  
Piippo, Robert E

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From: Delwin Romrell [dmromrell@charter.net]  
nt: Tuesday, September 24, 2002 11:49 AM  
...: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

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The Community Plan will not detract from clean-up budgets, will save the taxpayers over \$1 billion, AND will save millions of lives in the war on cancer.

The Department of Energy refuses to see this as a national health issue.

Medical Isotopes Save Lives. It's That Simple.

Respectfully submitted:

3508

Piippo, Robert E

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From: Stephen J. Roth [rothsj@sce.com]  
Sent: Wednesday, October 02, 2002 7:56 AM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: I am opposed to the TPA change package for accelerating destruction of FFTF

Dear Al Farabee, U.S. Department of Energy  
Laura Cusack, Washington Dept of Ecology

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Respectfully submitted:

359

Piippo, Robert E

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rom: Farabee, Oliver A (Al)  
sent: Wednesday, September 18, 2002 2:21 PM  
To: Piippo, Robert E  
Subject: FW: Please don't shut down FFTF

-----Original Message-----

From: Linda Ruhnke [mailto:lruhnke@cu-portland.edu]  
Sent: Tuesday, September 17, 2002 1:28 PM  
To: Oliver\_A\_Al\_Farabee@rl.gov  
Subject: Please don't shut down FFTF

Dear Mr. Al Farabee (U.S. Department of Energy)

May I ask that you please NOT shut down the Fast Flux Test Facility in Eastern Washington state.

I think this is a very bad idea and should not be done.

There is too much good that can be done with this facility that will be lost if it is closed.

I am a cancer survivor and withstood chemotherapy and know we need medical isotopes for cancer treatment and research.

Thank you very much.

9/24/02

Yakima Public Mtg.

360

**FFTF TRI-PARTY AGREEMENT PUBLIC MEETING  
FORMAL WRITTEN COMMENT**

My comments are very brief. I think we should stick to the subject at hand — the proposed changes in the program for shutting down the FFTF. I think the proposed plan is a good one, and I heartily approve of it.

Written comments may be submitted to:

O. A. (Al) Farabee  
U.S. Department of Energy  
Richland Operations Office  
P. O. Box 550 (N2-36)  
Richland, WA 99352  
Fax: 509-376-0177  
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