Public Hearing Transcript – Comment Number H-5
Los Alamos – Evening Session

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U.S. DEPARTMENT OF ENERGY

OFFICE OF SCIENCE

PUBLIC REVIEW MEETING TO RECEIVE
COMMENTS ON THE DRAFT SPALLATION
NEUTRON SOURCE ENVIRONMENTAL
IMPACT STATEMENT

PUBLIC REVIEW MEETING

Tuesday, January 19, 1999

6:30 to 9:00 p.m.

Los Alamos Area Office - Main Conference Room

528 35th Street

Los Alamos, New Mexico 87544

REPORTED BY: EDITH ARNOLD FLORES, NM CCR #208
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ORIGINAL

MODERATOR:

JOHN HAAS, Associate Professor and
Head, Department of Speech Communication
University of Tennessee

SUMMARY COMMENTS:

DAVID WILFERT
EIS Document Manager
Oak Ridge Operations Office
U.S. Department of Energy

JEFF HOY, SNS Program Manager
Office of Basic Energy Research
U.S. Department of Energy

PROCEEDINGS

MR. HAAS: Good evening. Welcome to the public review meeting concerning the Draft Environmental Impact Statement for the Spallation Neutron Source.

My name is John Haas. I'm Associate Professor and head of the Department of Speech Communication at the University of Tennessee, and I have been asked to serve as moderator for the meeting.

The goal of the meeting today is to solicit comment on the Draft Environmental Impact Statement concerning the Spallation Neutron Source.

Translators are available for those needing translation services, so during the course of the meeting, if anyone needs those, they are readily available, and seating has been reserved for those individuals.

In addition to providing comments today at the public meeting, there are other mechanisms by which comment can be provided for the draft report. Those comments can be mailed to the following address and that is available on a form that is at the information table outside of the meeting room. Those information packets can be directed toward Mr. David Wilfert at the U.S. Department of Energy, Post Office Box 2001, Oak

Ridge, Tennessee 37831. And again that information is available out in the lobby area.

In addition, comment can be provided via a toll free number. That number is also available on the form for written comments. The number is 1-800-927-9964.

There is also a fax number available for those wishing to provide comments via fax. That number is also available on the comment form that is on the information table outside of the meeting room. That fax number is (423) 576-4542.

In addition, there is an E-Mail address by which comment can be provided. That is at NSNSEIS@ORNL.gov. That E-mail address is also on the information form that is available outside the meeting room.

There is also a page on the Worldwide Web where information can be obtained from the draft report, and that can be found at the DOE NEPA home page.

This evening any member of the audience wishing to provide comment on the Draft Environmental Impact Statement will be given the opportunity to make such comment. Each individual will be allotted five minutes, and as long as time permits, individuals will

be able to provide additional comments if they so wish.

We ask for those who wish to make comment to register at the table outside the meeting room, and during the course of their comments, if they would please introduce themselves so that we will have something for the record.

To begin the meeting this evening, we have two individuals who wish to make some comments concerning the spallation neutron source, one of which is Mr. Jeff Hoy who is the Program Manager for the spallation neutron source in the Office of Basic Energy Sciences, Department of Energy Headquarters. He will be speaking concerning the purpose and need for the spallation neutron source.

Also with us tonight is David Wilfert who is wearing two hats. He is the Deputy Project Manager for the spallation neutron source as well as the Environmental Impact Statement Document Manager. He will be discussing with us tonight the Environmental Impact Statement process.

Following these two presentations, we will then open up the meeting to any public comment.

So let me introduce then Mr. Jeff Hoy.

SUMMARY COMMENTS BY MR. JEFF HOY

MR. HOY: Thanks, John.

I just want to spend a few brief minutes with you describing the programmatic context of the proposed spallation neutron source project. I am with the Office of Science in Germantown, Maryland.

The advancement of the frontiers of science and basic research is one of the major mission components of the Department of Energy. We're one of the top five federal agencies in the nation for funding basic and applied research across the board, and we're the number one sponsor of research and development facilities in the nation.

The purpose of this research, as you can see, is aimed at determining what are affordable and clean energy sources for the future and understanding the impacts on our populace and the environment generated in using this energy.

We also do a lot of basic research in understanding the building blocks of matter. We have a system of national laboratories that host a number of research facilities that are used by researchers across the country as tools for expanding our knowledge of basic science, and we're very proud of our reputation for sponsoring world class research.

DOE has sponsored some 71 Nobel Prizes and over 450 R&D One Hundred Awards since we began work in

this business, and that's more than any other entity in the country, and it's more than twice as many as any other federal agency.

Within the Office of Science, the Office of Basic Energy Sciences is charged actually by public law with responsibility for planning, constructing and operating major scientific user facilities, and these facilities are used by researchers from a wide range of institutions, universities, national laboratories, and also industrial laboratories.

The range of disciplines you can see along here on the bottom range from materials to geo and biosciences to engineering sciences.

To give you some sense as to the scope of these user facilities, if you include the proposed spallation neutron source, we'll have a total of 18 scientific user facilities in the country that are used by approximately 6,000 researchers a year, doing about 1,400 research projects with participants from roughly 200 institutions.

I would make note of the fact that the Los Alamos Neutron Science Center is located right here at Los Alamos National Laboratory, and it is one of four operating -- with SNS included, five -- high flux neutron sources that are used as probes to explore the

inner structure and dynamics of materials.

The Department has been in the business of sponsoring neutron science since its inception as a scientific discipline at Oak Ridge National Laboratory using facilities there in the 1940s, and this has been an ever-expanding field of scientific research with a number of very impressive scientific accomplishments.

The spinoffs of this work we see in our every-day lives in the form of various lightweight, strong, durable materials for a variety of uses, nondestructive testing, development of super conducting magnets, semiconductors for electronics and so forth.

The Department relies to a large extent on the advice of external advisory groups, and we have received a number of recommendations over the past several years for enhancing our stable of user facilities for neutron science and in particular for neutron sources with higher beam intensity and more instrumentation, so the proposed SNS is intended to address that need.

Now I'll turn the floor over to my colleague Dave Wilfert from the Oak Ridge Operations Office.

SUMMARY REMARKS BY DAVID WILFERT

MR. WILFERT: Thank you. Again, I am David Wilfert. I am wearing the two hats for a specific

reason. The benefit of having responsibilities both on the project and on the document is that I have a close hand on the technology of the machine in terms of how it's going to influence the environment, and, secondarily, I am able to influence the construction or the evolution of this document to be sure it incorporates that information. Also, as the impacts are defined, I can assure that as the design of the facility evolves, it remains within the bounds of the scope of the document that we're preparing.

The document we have been preparing, the Draft Environmental Impact Statement for the Spallation Neutron Source, is a part of the National Environmental Policy Act process. That process for this project began back in February of '95 when Martha Krebbs, the director of the then called Office of Energy Research and now the Office of Science, made the determination that we would in fact prepare an EIS on this document.

We then proceeded to completion of a conceptual design report that came out in May of '97 and immediately followed in June of '97 with a Notice of Intent of preparing this document. We needed that conceptual design report to form the basis, the technology basis for writing the report and evaluating the impacts of the facility.

We held public scoping meetings back in '97 to collect public input on the scope of the document, what should we cover with this document. We have then been in the process for over a year actually preparing the analysis and the results and the conclusions of the impacts of this facility and issued the draft EIS this past December just prior to Christmas.

We are currently in a comment period again, and the reason we're here tonight is to collect your input on the analysis done, whether we covered the right topics, whether we got enough analysis, whether we may have made any errors in the analysis, any comments that you may have that would help the Department create a document that is the best decision-making document with regards to this facility. Now, I'll come back to that decision in just a moment.

We will then take all of the comment that we get during this period. We will create a Final Environmental Impact Statement targeting for April of this year, and following that, the Record of Decision.

For this facility, there is a decision that has to be made. The decision official will be the Secretary of Energy. This document will be the basis for that decision, and it's basically on whether or not we build this facility and where we build this

facility. And I'll get to those alternatives in just a moment. Well, I'll get to them right now.

The proposed action, the jargon within the NEPA process, the proposed action is to construct and operate a state-of-the-art, short-pulsed neutron research facility that will have an initial power of 1 megawatt on target but then it would have the ability to be economically upgraded to 4 megawatts as technology and additional funding are available at a later time.

The alternatives considered for this project first began with facilities. We went through a screening process and defined the four locations. The facility is proposed for location in Oak Ridge, Tennessee, but alternates, Argonne National Laboratory in Illinois, Brookhaven in New York, and Los Alamos in New Mexico, are also being evaluated to compare these locations to see if there are any significant environmental consequence differentials between those locations.

The no-action alternative is also evaluated, that is, don't build the facility, and we were also in the process of evaluating technology alternatives, though it turned out that there is really only one technology that we are proposing for this facility that

meets all of the proposed action requirements.

That facility conceptually at this stage consists of a linear accelerator that accelerates protons to approximately 80 percent of the speed of light, and an accumulator ring where we gather large numbers of these high energy protons and store them until we are prepared for a one microsecond release of all of those protons onto a target, the target being liquid mercury, a high Z material which has a large number of neutrons to proton ratio in the nuclei.

The impact of these high energy particles releases, boils off, spallates, hence the name of the facility, neutrons that have been thermalized to lower energies and then delivered to the research stations.

This is a collaborative project. There are many laboratories involved in this effort. Lawrence Berkeley is involved in the ion source, Los Alamos here is responsible for the Linac, Brookhaven National Laboratory for the ring, Oak Ridge for the target, a combination of Oak Ridge and Argonne for the actual instruments, with Oak Ridge responsible for the overall project coordination.

For the siting of this facility, just for your information, here at Los Alamos, this is a map of the LANL reservation, and the proposed location on the

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reservation is out on one of the mesas just to the southwest of White Rock.

The document itself, as I said earlier or mentioned earlier, is based on the conceptual design report which gave us a consistent basis for evaluation. There has been a continuing evolution of the design, but we used that conceptual design report as a fixed basis so we could get on with the analysis.

There was a siting alternative process that we went through initially where we looked at the 34 DOE reservation locations. Through a set of screening criteria, we were able to define four candidate sites, the four that I mentioned, that met all of those criteria. Then within each of those four candidate locations, we did a specific site selection process to identify the best place on that reservation which would have availability of utilities, power, least potential impacts on environment, those kinds of things.

We then developed a comparable data base for all four sites. It turns out there is an enormous variation in terms of the kinds and quality of environmental data amongst those four laboratory locations, so we had to develop an apples and apples comparative base again for the Secretary and his decision on this project based upon the analysis that

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we did.

We then performed the analysis to try and define what are the environmental consequences of placing this facility at each of the four sites as well as what is the no-action alternative for the site, and in this process we attempted to the absolute extent possible to be conservative, i.e., whatever the conceptual design report identified as emission sources, source terms, whatever, we increased those numbers by some small amount, by some factor to be certain that if there were errors in the conceptual design, that we were within the bounds of that error.

But at the same time we tried to be realistic. We didn't arbitrarily increase emissions or numbers beyond the realm of reasonable variation. So the document again has basically this conservative but realistic approach in its evaluation.

What we found, the principal findings from the document, accelerator facilities generally have shown by their reputation, because this is not the first accelerator facility we built, they are not very obtrusive in terms of environmental impact. What you find is the major impacts being the fact that it occupies space, it sits on a footprint, and whatever is on that footprint gets moved off or destroyed or

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whatever, so there is an impact of placing the facility there.

There's the impact of how it affects surrounding activities. There may be research activites, there may be production activities, there may be commercial activities, whatever, and we have found that that's one of the major impacts that you find for this facility.

The second has to do with the emissions and soil activation, both in air and water, it's creation, it's migration, where the receptors are, both in normal operation and under accident scenarios for the facility, again trying to define the bound of how bad could it be in terms of the impact on the environment.

Thirdly is waste. Almost any industrial facility complex will generate some kind of waste, and we have to be able to define what we're going to do with that waste, how we are going to treat it, how we're going to store it, how we're going to dispose of it. And for each of the locations, there are some variations, and we have evaluated all of those, and they are contained in the document.

So these are the three areas that we have found as the primary impacts on the environment of this facility.

We solicit your input on the evaluations contained in the draft document, and thank you for coming.

MR. HAAS: Thank you.

A copy of the draft report is available on the information table in the area outside the meeting room. In addition, there are copies that are available at each one of the sites. Here at the Los Alamos National Lab, it is available at the Public Outreach and Reading Room.

We move now to the phase of the meeting where public comment is offered. No one has signed up to make any comment, so let me ask members of the audience, is there anyone here wishing to make comment on the Draft Environmental Impact Statement?

If not, we will adjourn in just a moment.

Let me take this opportunity, however, to make you aware that during the course of your adjournment, if you wish to speak to some of the representatives here this evening about the impact statement or the spallation neutron source, they encourage you to do so.

A number of folks including Mr. Jeff Hoy and Mr. David Wilfert can talk to you about the overall project, its outline and the NEPA process.

Dave Bean and Bill Fleming can talk to you about the Environmental Impact Statement document itself. Frank Karnegie --

MR. WILFERT: Dan Hartline will be covering that activity this evening.

MR. HAAS: So those individuals will be happy to answer any technical questions that might arise during the course of the informal discussions. I would encourage you to meet with those folks and ask whatever questions you have.

Again, if no one has any comment, we will adjourn until such time as someone has a comment to make. We stand adjourned.

(The hearing adjourned from 7:25 p.m. to 9:00 p.m.)

MR. HAAS: The meeting will come to order. Let the record show that it is nine p.m.

Is there anyone present wishing to make comments on the Draft Environmental Statement for the Spallation Neutron Source?

There being no one present wishing to make comment, I adjourn the meeting.

(The meeting adjourned at 9:01 p.m.)

STATE OF NEW MEXICO)
) ss.
COUNTY OF SANTA FE)

REPORTER'S CERTIFICATE

I, EDITH ARNOLD FLORES, New Mexico Certified Court Reporter No. 208, and Notary Public within and for the State of New Mexico, DO HEREBY CERTIFY that I stenographically recorded the proceedings in the above-entitled hearing, and that the foregoing is a true and correct transcript of the proceedings had to the best of my ability.

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