Public Hearing Transcript – Comment Number H-8
Brookhaven – Afternoon Session

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A P P E A R A N C E S

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DAVE WILFORT- DEPUTY PROJECT MANAGER and ENVIRONMENTAL IMPACT STATEMENT DOCUMENT MANAGER

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SITE PLAN MEETING

SPALLATION NEUTRON SOURCE

Brookhaven National Laboratory

January 21, 1999

2:00 p.m.

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MR. HAAS: Good afternoon. Welcome to the public review meeting concerning the Draft Environmental Impact Statement for the Spallation Neutron Source. My name is John Haas. I am an associate professor and head of the Department of Speech Communication in the University of Tennessee and I have been asked to moderate the meeting.

The goal is to solicit comments on the Draft Environmental Impact Statement for the Spallation Neutron Source.

Before we begin, I wish to review a couple of items of interest. Translation services are available for those in need of them, and we do have reserved seats for those requiring translation services.

In addition to providing public comments to today's meeting, there are other ways of providing comments. These other mechanisms for those wishing to provide comments are; comments can be mailed -- and there are some information sheets and comment sheets that are available at today's meeting that have the return address on them. Comments can be mailed to David

Wilfert, PO Box 2001, Oak Ridge, Tennessee 37831.

In addition, there are some other mechanisms. There is an 1-800 number. People wishing to provide comment on the EIS phone 1-800-927-9964. Fax services are also available, and that number for faxing, which is on the comment form. That number is area code (423) 576-4542. There is also an E-mail address by which comments can be sent that is also on the comment form that is available here at today's meeting; that address is NSNSEIS@ornl.gov, G-O-V. There is also a web site that is available where people can receive a DOE statement, and that is tis.eh.doe.gov/nepa/.

If anyone also wishes to acquire a draft of the Environmental Impact Statement, those are available at all four sites where the facility is under consideration. Here at Brookhaven the site is located at building 477A, Brookhaven Avenue.

Today, for those wishing to make public comment, each speaker will have approximately five minutes to make comment

concerning the Draft Environmental Impact Statement for the Spallation Neutron Source. We ask that those wishing to make comment sign up, and those wishing to make comment identify themselves prior to making the comment so we might keep that information for the record.

At today's meeting we have two individuals who will provide us with the information concerning the Spallation Neutron Source; Mr. Jeff Hoy, the program manager for the Spallation Neutron Source out of the Office of Basic Energy Science, Department of Energy headquarters, will speak to us for approximately ten minutes concerning the purpose and need of the Spallation Neutron Source; and his presentation will be followed by Mr. David Wilfert who wears two hats. He is the deputy project manager for the Spallation Neutron Source, in addition to being the Environmental Impact Statement document manager, and he will be speaking to us today about the Environmental Impact Statement process.

So, let me go ahead and turn the meeting over then to Mr. Jeff Hoy.

MR. HOY: Thank you, John,

and thank you for coming here.

I wanted to spend just a few minutes giving you some background to help explain the purpose and need for SNS. You may know the Department of Energy, one of its major missions has to do with advancing the frontiers of science on behalf of the United States.

We are one of the five largest government agencies sponsoring basic and applied science in the United States. We are the number one sponsor of RD facilities in the United States. It is no surprise that the purpose of that research is primarily directed in considering that we have affordable and clean energy sources to use now and in the future. It's all aimed at investigating the impacts on the population and the environment generating and using this energy.

We also do a large amount of basic original research and understanding the fundamental nature of matter and energy, and we have a system of national laboratories, Brookhaven being one, that houses a number of facilities and tools for supporting research in the United States, and we are very proud of the track record

that we have accumulated over the past few decades in research.

We sponsored seventy-one Nobel prises and over 450 RND 100 awards. That is twice as many as any other federal agencies and more than any other single entity in the United States.

Within the Office of Science I represent, as John mentioned, the Office of Basic Energy Sciences. We are charged, actually, by federal law to plan, construct and operate major scientific user facilities to be used by the general research community. This is a public service that we provide. These researchers come from all sorts of institutions, universities, private industry, as well as federal laboratories.

As you can see at the bottom here, we sponsor research that covers a wide range of disciplines from material science to bio-engineering, experimental sciences and so forth.

To give you a bird's eye view of the major user facilities that we support, there are eighteen of these, if you include the

proposed SNS, around the country. Five of these are, if you include SNS, high-flux neutron sources.

The nature of neutron research is as follows: DOE has been on the ground floor of the development of this field. As you might know it involves the use of subatomic particles, neutrons, as probes to understand the structure of dynamics of matter. We have been pleased that this has been an expanding area of research with a very strong track record of accomplishments.

There have been a large number of applications from this basic research that resulted in development of new light-weight high-strength materials for a variety of applications; super-conducting magnets, semi-conducting materials for electronics industry and so forth. Materials that people see and use in their everyday lives.

Since 1984 the department has sought advice on what it should be doing to build new facilities to support the field of neutron science in the United States, and it's

been from these external advisory committees of scientists that we have developed the proposal to build this Spallation Neutron Source.

So without any further delay, I will turn the floor over to my colleague, Dave Wilfert, who would tell you more about the project and the need of Draft Environmental Impact Statement.

MR. WILFERT: As John mentioned a few moments ago, I am Dave Wilfert. I am with the Department of Energy. I am functioning currently as the department project manager for the Spallation Neutron Source project and also the document manager.

The significance of that dual role and the value of that dual role is that I have been in a position to bring to the NEPA process the preparation of the Environmental Impact Statement, the resources of information about the physical machine that we are proposing to build; and second, the result of this evaluation of the machine's impact on the environment, if there are mitigating actions that have do be taken in the evolution of the design of

the machine, and having a good position to insure that those commitments follow on through until the completion at the facility is designed and constructed.

The NEPA, National Environmental Policy Act, process as a series of activities that it flows through to completion that began back in February of 1995 where the determination was made to produce an Environmental Impact Statement for the proposed SNS. We then completed the conceptual design report in May of'97, and that formed the technical basis for what this machine is for the purpose of evaluating the impacts on the environment.

Following the conceptual design and exclusion, we then issued a notice of intent to begin the actual NEPA process, the environmental process, back in June of '97.

We shortly thereafter went through a public scoping process. We came here to Brookhaven, had a meeting and received comments on the scope of the document that should be created. Since that we have been working on the impact statement and asked that document as a draft

document just prior to Christmas of '98.

We currently are in a comment period with regards to the content that that document, the analysis that we performed, the conclusions that are reached, the solicit input from the public to the research of that document to find our what is missing to make sure that the public understands what information is contained there.

This document will serve as a discussion document for the Department of Energy and we will take the draft document as modified based on the comments that we get and produce a final Environmental Impact Statement trying to have that out by April of this year, and this will be the basis for the discussion by the department with the secretary of energy, being the decision official to decide fundamentally on this project, is; do we build this project or not, or where do we build it, and there is an array of locations that are considered for the facility, which I will get into in just a second.

The proposed action for this facility is to construct and operate

state-of-the-art accelerator based neutron facility producing pulses of short pulses of neutrons that would have an initial operating power of one megawatt of accelerated protons delivered on the target for the potential of upgrade to four megawatts.

The alternatives that were considered in this, and I mentioned there were an array of locations considered, being considered for this facility are Oak Ridge National Laboratory, which is identified as the preferred for the department, but in order to understand why there are variations in environmental impact based upon physical location of the facility, we also are evaluating alternate sites of Argonne National Laboratory, Illinois, Brookhaven National Laboratory here in New York, Los Alamos National Laboratories out in New Mexico.

The no action alternative, what if we don't build this facility, is again that piece of information necessary on whether or not we should build this facility understanding environmental consequences of that action, the building, the facility. We negotiate for

construction of the facility and actually found that there is only one technology valuable that met all of the action criteria.

The facility, as it is conceived at the present time, consists of a linear accelerator, which is about 550 to 600 meters long to accelerate protons to eighty percent the speed of light. We collect those protons in a storage ring so we could release all of the stored protons to a target in one microsecond, because we are trying to get charge. We reduce the protons on the target liquid mercury. It is the interaction of these high protons with the nuclei of the mercury that splatter off neutrons from the nuclei of the mercury which those neutrons are to useable energies and distributed out to research instrumentation for the actual instrument that the structure of the materials.

This is a collaborative method that's a multi-laboratory activity. We have Lawrence Berkeley report responsible for the ion source; Los Alamos is responsible for the design construction of components of the

accelerator; here at Brookhaven the design and fabrication of the components for the storage ring; Oak Ridge is responsible for the target instrument, and a combination are responsible for the actual instrumentation that would be used for the management on the facility.

Here at Brookhaven National Laboratory we did an evaluation of the location of the facility and found the best location, and this was based upon criteria of availability of power, access to cooling water, time sources, avoidance of environmentally sensitive areas. And the location is just to the east and slightly to the south of the rick facility (phonetic spelling), that is just near completion here at Brookhaven.

With regards to the actual Draft Environmental Impact Statement as it is currently out on the street, again, we used the conceptual design report for the basis of that document. We went through alternate analysis identifying the four candidate locations for the facility out of potential thirty-four DOE locations. We then came up with site specific criteria to determine and specifically lead to the

location I just identified on the map. We then went through a process for all four of the specific locations to try and develop comparable data. There is actually an awful lot of variability among the different laboratories. We focused on getting the right kinds apples and apples comparison on the site. We then went into an analysis to evaluate impacts of the facility being placed at these four locations, and in all instances we try to install a philosophy of being conservative yet realistic. We do bound the impacts of the facility making sure that whatever it turns out to be will be that or less than.

In terms of impact, we are trying to be realistic, not to be unrealistic. What we found, in terms of the evaluation, is that there are actually three areas of impact that this accelerator facility has it's most notable -- its greatest level of impact, and those are; first, in terms of land use, the fact that we will identify a footprint and that there may be some disruptions of spaces with rendering environmental research around the facility.

The second area has to do

with emissions and soil activations of both air and water both in normal and accident scenarios, and have evaluated what those impacts are at each of the four sites; and then ultimately, in terms of waist, the facility will generate and how that waist is going to be imagined, treated, disposed of, as the candidates of each of the four sites.

I am not saying that they are major impacts. I am just saying that those were the ones that we found were the most significant with that bit of information.

Again, we have the Draft Environmental Impact Statement on the street and we are soliciting comment on the contact of the evaluation.

I appreciate your attention. Thank you.

MR. HAAS: We move now to the public comment phase of the meeting. So let me ask if there is anyone present who wishes to make comment on the Draft Environmental Impact Statement for the Spallation Neutron Source.

(NO RESPONSE)

MR. HAAS: There being no

one present wishing to make comment, I will adjourn the meeting in a moment.

Let me provide you information prior to the adjournment. If you wish to discuss the project on an informal basis, there are a number of individuals here, resource people, for discussing the project; Mr. Jeff Hoy and Mr. David Wilfert can talk about the project, its blueprints and the NEPA as well. Mr. David Bean and Dr. Bill Flemming can talk to you about the Environmental Impact Statement document, and also Frank Karnegay. Mr. Frank Karnegay can talk to you about any technical questions concerning the Spallation Neutron Source, and those individuals are available to speak to you concerning those topics.

Once again, is anyone present wishing to make comment on the draft Environmental Impact Statement for the Spallation Neutron Source?

(NO RESPONSE)

MR. HAAS: The meeting stands adjourned until such time someone wishes to make comment.

(Whereupon, at 2:19 p.m. the meeting recessed until 4:00 p.m.)

MR. HAAS: I call the meeting to order.

Let the record show that it is 4:00 p.m. Is there anyone present wishing to make comment on the Draft Environmental Impact Statement for the Spallation Neutron Source?

(NO RESPONSE)

MR. HAAS: There being no one present wishing to make comment, the afternoon meeting is adjourned.

(Time noted 4:01 p.m.)

C E R T I F I C A T E

I, JOANN BUNZE, reporter, hereby certify that the foregoing transcript consisting of 19 pages is a complete, true and accurate transcript of the foregoing site plan meeting, held on January 21, 1999 at Brookhaven National Laboratories in the matter of the Spallation Neutron Source.

I further certify that this proceeding was recorded by me, and that the foregoing transcript has been prepared under my direction.

JOANN BUNZE

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