UNITED STATES OF AMERICA

CENTERS FOR DISEASE CONTROL

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NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH

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ADVISORY BOARD ON RADIATION AND WORKER HEALTH

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105th MEETING

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TUESDAY
JUNE 9, 2015

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The meeting convened at 11:00 a.m., Eastern Time, via teleconference, James M. Melius, Chairman, presiding.

PRESENT:

JAMES M. MELIUS, Chairman
HENRY ANDERSON, Member
JOSIE BEACH, Member
BRADLEY P. CLAWSON, Member
R. WILLIAM FIELD, Member
DAVID KOTELCHUCK, Member
RICHARD LEMEN, Member
JAMES E. LOCKEY, Member
WANDA I. MUNN, Member
JOHN W. POSTON, SR., Member
GENEVIEVE S. ROESSLER, Member
PHILLIP SCHOFIELD, Member
LORETTA R. VALERIO, Member
PAUL L. ZIEMER, Member
TED KATZ, Designated Federal Official

REGISTERED AND/OR PUBLIC COMMENT PARTICIPANTS

ADAMS, NANCY, NIOSH Contractor
AL-NABULSI, ISAF, DOE
BAGRIER, DAVID
BARRIE, TERRIE
BARTON, BOB, SC&A
HINNEFELD, STU, DCAS
FITZGERALD, JOE, SC&A
GIAIMIS, JEAN
KINMAN, JOSH, DCAS
KOTSCH, JEFF, DOL
LIN, JENNY, HHS
MACIEVIC, GREG, DCAS
MAURO, JOHN, SC&A
NETON, JIM, DCAS
OSTROW, STEVE, SC&A
RUTHERFORD, LAVON, DCAS
STIVER, JOHN, SC&A
THURBER, BILL, SC&A

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P-R-O-C-E-E-D-I-N-G-S

11:00 a.m.

MR. KATZ: Welcome everyone. This is the Advisory Board on Radiation and Worker Health. It's our 105th meeting.

The roll call, I'll just note up front there are no matters on the plate that relate to anyone's conflicts. So, we are not going to address individual conflicts of Board Members.

Let me get started with roll call, beginning with Board Members, and I'll just note the ones I know are on the line that are ready.

(Roll call.)

Let me just say for everyone's benefit, the agenda for the meeting is posted on the NIOSH website under the EEOICPA section of the Board page scheduled meetings for today's date. So, the agenda is there, and the presentation being given today is also posted there, so that members of the public can follow along, as well as anyone else Agency related who can't find their copy. Their presentation should be there, as well as the report

that the presentation is based on. We'll come to that soon.

And then, let me just ask everyone, particularly, people new to this meeting, please mute your phones except when it's your opportunity to address the group. And, if you don't have a mute button on your phone, if you'd press *6 that will mute your phone. Press *6 again and it will unmute your phone, so that will improve the audio quality for everyone on the line.

Please, do not at any point put the call on hold, but hang up and dial back in if you need to leave for some piece.

And, with that, it's your meeting. Dr. Melius.

CHAIRMAN MELIUS: Okay, thank you.

I think the first order of business is the Grand Junction Facilities SEC.

MR. KATZ: It is, thanks, Jim.

So, at the March Board meeting we had several SECs acted on. One of them was Grand Junction Facilities, and we had a unanimous vote

of the people attending. We had one Member who couldn't make that vote, Dr. Field, and he had in an absentee vote concurred with the rest of the Board. So, it's still unanimous, that motion passed, and I believe the Secretary has already acted on that motion, consistent with the Board's recommendations.

I think that covers that.

CHAIRMAN MELIUS: Okay, thanks, Ted.

And now, we'll move on to our next order of business, which is the SEC Petition for the Westinghouse Electric Corporation Facility in Bloomfield, New Jersey. And, I believe first we have a presentation from NIOSH.

DR. MACIEVIC: Yes. If I can get the slides up here. Make sure it, actually, is functioning.

CHAIRMAN MELIUS: For people on the phone, our usual order is on a petition, is first we'll hear from NIOSH about their presentation, and their recommendation. We'll then have time for the Board Members to ask any questions they may have

of Greg, and then we'll give an opportunity for the petitioners to make any comments that they wish to. And then, the Board will consider the petition.

I also believe I overheard when we started the meeting that the court reporter transcribing this is new, at least to our group, not new to transcribing. So, I'd just remind everybody to please, when you are making comments don't assume that he'll recognize your voice. So, please, give your name, so it will make it a little easier for him in terms of keeping track.

So, with that, go ahead, Greg.

DR. MACIEVIC: Okay. I'm Greg Macievic with NIOSH. I'm a Health Physicist there for the Westinghouse Electric Corporation in Bloomfield, New Jersey, SEC 217.

This presentation, we are going to use slides, do I need to say slide one, two, three?

MR. KATZ: Greg, that would be good for the public's sake, that would be helpful, because they don't have Live Meeting.

DR. MACIEVIC: Okay, sounds good, thank

you very much.

Slide two, this presentation we are going to discuss the site history some, the sources of information that we used to come up with our consideration. We are going to look at the previous dose reconstructions that have been done, potential exposures at the site, the DR feasibility, dose reconstruction feasibility approaches, health endangerment clause, and the proposed SEC Class addition.

Next slide.

On the SEC petition, it was received on June 12, 2014. The petition Class was all Atomic Weapons Employer/employees who worked at any plant production area of Westinghouse Electric Corporation in Bloomfield, New Jersey, from January 1, 1950 through March 1, 2011. And, it was qualified for evaluation on January 8, 2015, on the lack of monitoring.

Next slide.

The petition Class evaluated was, all employees who worked in any plant production area

in the Westinghouse Electric Corporation site at Bloomfield, New Jersey, during the period January 1, 1950 through March 1, 2011.

And, NIOSH, after looking through our documentation, determined that April 30, 2000 was the last date for the applicable EEOICPA program exposures.

Next slide.

For the site history and background, it produced uranium as an AWE employer during World War II, and the covered time period for that were 1942 through 1949. And then, a period, February to May, 1958, and June of 1959. There are also -- there is also a major residual period of radiation from 1950 through March 1, 2011.

Workers from August 13, 1942 to December 31, 1949, were added to an SEC under the petition for SEC 00159. They produced 200 pounds of thorium from Manhattan Engineer District in early 1945.

Next slide.

They processed -- there was processing

of uranium prior to 1950, and they used a photochemical technique that was on the Building 7 roof, to produce U salt that was pipe-fed to the building's basement. So, Building 7, as we'll note later, is also the main -- is the only place for the AWE work.

Then the electrolyzed in the basement to yield uranium metal. In 1945, the contract ended, the equipment was removed, and the production facility was deactivated.

There are 11 main buildings, several smaller buildings, and a garage. All the AWE work took place in the basement and on the roof of Building 7, as I've said.

This is the next slide, by the way.

After deactivation, Building 7 was mostly used for research testing, as a research testing laboratory.

Next slide.

The first commercial license was issued in May of 1954, and they received only thorium compounds. And, the commercial rad-work in the

'50s was in Buildings 2, 6, 7, 8, and 9, and they employed 78 workers, 26 people per shift, for three shifts.

The site's commercial work mainly developed and manufactured electric lamps, and they looked at using natural thorium light emissions in the production of thoriated tungsten wire for light bulbs.

Next slide.

Now, based on our research, the Department of Labor has added two more AWE operational periods, that is, from February to May, 1958 and June 1959. Now, the active machining was only for five days in 1958, and for five days in 1959.

The covered work included feasibility test rollings for the Feed Materials Production Center in Fernald. It included the Department of Energy Health and Safety Laboratory oversight. They did in small basis -- lot basis of production of six tubes tested in 1958, and they performed rotary elongation of these U tubes in the

fabrication of fuel elements.

Next slide.

That's just a picture of the rolling mill for the tube elongation, just to get a feel for what that looked like.

Next slide.

In October of 1976, all known or suspected areas involved with the MED work were surveyed under Formerly Utilized Sites Remedial Action Program, FUSRAP.

Surveys that were done at that time indicated traces of residual contamination, uranium contamination, slightly in excess of Nuclear Regulatory Commission guidelines in the basement and on an outside loading dock of Building 7.

Next slide.

The D&D of the Building 7 began in 1976. Westinghouse, and this is without any DOE involvement, performed all the D&D work. In 1985, all the site manufacturing operations stopped, and all D&D was completed by April 30, 2000, hence, the

date we are using to stop the EEOICPA work, and the fact that this was all commercial, this was all done by the site, or through the NRC, not through any DOE work.

Next slide.

Sources of available information, we used TBD-6000 to model the doses for the residual contamination generated from the machining operations.

There were 496 documents found in the NIOSH Site Research Database. We did 8 interviews with former employees and site experts. And, we did other data searches on the internet and some other documentation was not in the Site Research Database.

Next slide.

In the previous DRs, there were 41 claims submitted for dose reconstruction. Thirty-five cases were submitted for Energy employees who worked during the period under evaluation, from January, 1950 to March 1, 2011. Thirty-two dose reconstructions were completed for

Energy employees who worked during the period under the evaluation, and there were zero cases with dosimetry records, and zero claims with any external dosimetry records.

And, there's two routes of potential exposure. One was internal inhalation and ingestion of uranium and thorium, and the other is an external photon/beta exposure from uranium source material, its decay products, and small amounts of U and thorium surface contamination present when the operations ceased.

Next slide.

For the internal sources, we have urinalysis, and we -- well, NIOSH has reviewed commercial license requirements for the WEC to perform urinalysis for commercial licenses, to perform urinalysis beginning in 1954. However, we haven't located any of those records.

And, we also requested, WEC requested a license modification for termination of that urinalysis program in 1964, due to low exposure potential.

Next slide.

This is still on the internal sources. We also have air sampling data. In 1958, during the 2nd operational period, there were 39 general air samples taken, 7 BZ samples, gross alpha, and a maximum of 6595 dpm per cubic meter, and that's from the site visit by J. Quigley, M.D., who was reviewing the rad part of the operations.

In 1959, during the third operational period, there were 20 general air samples, 7 BZ samples, gross alpha, with a maximum of 5551 dpm per cubic meter. And, there were many other samples, GA, BZ, ventilation exhaust and surface contamination, sampled, but they were for the monitoring of commercial work in the non-DOE D&D work.

Now, the potential source for external exposure, there was no data found for AEC work.

Okay. On the external sources from the air monitoring data in 1958 again, Dr. Quigley provided the oversight and direction of the work area decontamination to achieve a .1 millirem per

hour dose rate, and there's other data available for the D&D and commercial work.

Next slide.

Now, on the DR feasibility, dose reconstruction feasibility and approaches, NIOSH finds it is not feasible to estimate commercial exposures with sufficient accuracy for all workers at the WEC during the operational periods from February 1, 1958, through May 31, 1958, and from June 1, 1959, through June 30, 1959.

Now, the radiation doses from commercial operations are also required to be assessed during the AWE Operations Periods. And, since we could not get -- NIOSH found that the available monitoring records, process descriptions, and source-term data are adequate to complete dose reconstructions with sufficient accuracy for the Class of employees during the residual periods, but not in the operational period.

Next slide.

All right. The first residual period,

from January, 1950 through January 31, 1958, we are going to use the maximum average pre-work gross-alpha general air sample taken during 2nd operational period, of 12 dpm per cubic meter. So, this is right before the 2nd operational period, from the beginning, that is the value, 12 dpm per cubic meter that's decayed out.

We'll assume that represents the residual alpha contamination generated during the first period, and has been re-suspended. And then, we will use the OTIB-70 default depletion constant to model the build-up of this air concentration back to 1950. So, we'll build up from that 12 and go back to what it would be at the beginning of 1950, based on that, too. So, we'll know what the levels of air concentration are throughout the period.

Next slide.

The second residual radiation period, June 1, 1958, through May 31, 1959, we are using average air sample of 12 dpm per cubic meter collected after the clean-up and decontamination

work was done at the end of the second operational period. That's not the same dpm per cubic meter that you saw on the other side, it's a coincidental thing, but they are not the same. That's the second after.

And then, we are going to assume it is representative of the air concentration at the start of this residual radiation period and then apply it as a constant.

Next slide.

In the third residual radiation period, July 1, 1959, through the remediation of that work, as I said, April 30, 2000, we are going to start with the highest air sample collected since 5551 dpm per cubic meter collected during the third operational period, and use the settling and re-suspension method presented in Batelle-TBD-6000 to estimate the airborne concentration at the beginning of this residual radiation period.

And, we use the OTIB-70 depletion methods for subsequent years, depleted out as we

go to 2000, start with that as the maximum and work it down.

Next slide.

For the D&D activities that were non-DOE, we'll look at, there was no remediation period listed for WEC in the DOE Facilities Database, and no D&D was performed at DOE direction or expense.

D&D work, Building 7, began on November 1, 1976, and was completed by April 30, 2000. And, we are going to suggest that we use the third residual radiation period air concentration applicable at the start of each D&D effort, that 500 number back there, and then bind exposures to it, and increase it by an order of magnitude with the scabbling and other work going on, and use that value to address additional re-suspension created during the D&D activity, and as it says here, as discussed in OTIB-70.

Next slide.

The intakes for the residual radiation periods will apply to all the personnel with

primary responsibilities for the rad production areas.

For the administrative or non-production area personnel, NIOSH is going to assume that they were exposed to 10 percent of that concentration as that for the personnel was primary responsibilities for the set-up of the production area personnel.

Next slide.

All the air samples used to create these bounding methods were initially analyzed for gross alpha content; so NIOSH will choose the most claimant-favorable mixture of thorium from potentially the first operational period prior to 1950 or uranium when it is estimating worker dose, so maximized by using it from the first SEC period.

NIOSH will derive the personal ingestion rate methodologies presented in OCAS-TIB-009.

Next slide.

For external doses, NIOSH is going to bound the residual radiation period by using the

air concentrations previously modeled for the applicable periods we talked about, and apply methodology as described in OTIB-70, and the Environmental Protection Agency's Guidance Report No. 12, to model doses for contaminated surfaces and air submersion. That Report 12 is External Exposure to Radionuclides in Air, Water, and Soil, exposure to dose coefficients for general application, based on 1987 federal radiation protection guidance.

Next slide.

And so, we will generally use Battelle-TBD-6000, TIB-9, and OTIB-70 methods, as well as available air data and operational descriptions, for partial dose reconstructions for the following: AWE operations associated with the uranium machining project for Fernald from May 12, 1958 through May 16, 1958, and from June 25, 1959 through June 29, 1959.

Next slide.

For health endangerment, the evidence reviewed in this evaluation indicates that some

workers in the Class may have accumulated chronic radiation exposures through intakes of radionuclides and direct exposure to radioactive materials.

Consequently, NIOSH is specifying the health may have been endangered for those workers who were employed for a number of work days aggregating at least 250 work days within the parameters established for this Class or in combination with work days within the parameters established for one or more other Classes of the employees in the SEC.

Next slide.

So, the conclusions are, we have three residual periods, 1/1/50 to 1/31/58, 6/1/58 to 5/31/59, and 7/1/59 to 4/30/2000. And, the exposure source is internal and external. We are saying they are both feasible, and can do dose reconstruction during those three residual periods.

In the AWE operations periods of 2/1/58 to 5/31/58, and 6/1/59 to 6/30/59, we are saying

that you can't, because of the mixture of commercial work being done also. And, we are saying for the internal and external it's just not feasible, and only partial dose reconstruction is to be done.

So, the final slide, the proposed Class is all Atomic Weapons Employees who worked at the facility owned by Westinghouse Electric Corporation in Bloomfield, New Jersey, during the period from February 1, 1958 through May 31, 1958, or during the period June 1, 1959 through June 30, 1959, for a number of work days aggregating at least 250 work days, occurring either solely under this employment, or in combination with work days within the parameters established for one or more other Classes of employees included in the Special Exposure Cohort.

And, that is it.

CHAIRMAN MELIUS: Okay, thank you, Greg.

Board Members, do you have any questions on the presentation, or the report.

MEMBER KOTELCHUCK: Dave Kotelchuck.

I have a question. The AWE operational periods cover 150 days. On the other hand, as I understand it, compensation has to be -- people have to be aggregated for at least 250 work days. And, the earlier period ends in 1945, I believe.

How is it possible for people to be compensated for work during the AWE operations period? Could you explain it to me?

DR. MACIEVIC: Well, the way the law is stated, you would have those days in those two operational periods, and then any time you can add on from the previous SEC of if they worked at some other site that had an SEC where you can combine time periods that put you into it.

I'm not sure if that's exactly it, but Jim Neton is there, he could maybe explain that for sure.

DR. NETON: That's right -- this is Jim, that's correct. If you remember on one of the earlier estimates there's area for SEC Class at this site from August 13, 1942 through December 31, 1949.

MEMBER KOTELCHUCK: Right.

DR. NETON: So, these days would just be supplemental to those days and got -- they de-aggregated. So, all the Classes would be combined to establish 250 days.

MEMBER KOTELCHUCK: Right.

So, but for anyone hired after World War II, which might be a large component of people. There were many persons who were away at war and came back, they could not be compensated for this period.

DR. NETON: Well, no, this is the --

MEMBER KOTELCHUCK: Unless they worked elsewhere.

DR. NETON: -- December 31, 1949.

MEMBER KOTELCHUCK: Oh, okay, right. Right. Okay, so '49 makes it more readily possible. Okay.

DR. NETON: Yes.

MEMBER KOTELCHUCK: Right. So, it is a very small window of eligibility, but that's what we've determined.

Okay, thank you.

MEMBER BEACH: Jim, this is Josie. I have a question also.

It seems fairly complicated with moving TBD-6000, OTIB-70, and I was going to ask you to identify -- if you could identify the different people and what different jobs they did. But, I think I'll go to my last question and just ask, does NIOSH have any sample dose reconstruction to show how and what they did with all those different --

DR. MACIEVIC: This is Greg Macievic.

Yes, we have done dose reconstructions for several scenarios. And, I believe they are out there for the Board to look at, if I'm not mistaken.

MR. RUTHERFORD: LaVon Rutherford. I'm actually verifying where those were placed. They should have been put on the Board's -- the Advisory Board's folder for Westinghouse, and I'm looking for that now.

MEMBER BEACH: Yes, I'm sure, because I was just at a disadvantage and unable to pull it up, since I'm gone, but it is there and we can take

a look at it.

DR. MACIEVIC: And, we'll look, and if it's not, it will be put in there immediately.

MEMBER BEACH: Thank you.

MEMBER CLAWSON: Hey, Ted, just to let you know, this is Brad. I've joined you. Sorry, I had an interview I was performing.

MR. KATZ: Thanks, Brad. I was going to check when we got beyond this, but thank you.

And, while we have you, let me just check as well, Dr. Richardson, are you on the line? Okay.

Okay, carry on.

CHAIRMAN MELIUS: Any other Board Members with questions?

MEMBER ZIEMER: This is Paul Ziemer. I have a question.

CHAIRMAN MELIUS: Go ahead.

MEMBER ZIEMER: I'm wondering, Greg, if you can help us understand why if you are able to use the air data from the operational periods in a valid way for the residual, but not use the air

data from the operational period for the operational period. In other words, why not use the most claimant-favorable mix during the operational period, and bound the doses based on that?

I mean, you have air sampling data for both operational periods, correct?

DR. MACIEVIC: Right.

MEMBER ZIEMER: And, we assume that it's useable for the residual periods. Why wouldn't it be useable for the operational period itself?

DR. MACIEVIC: Well, a big part of the operational period, we have the air sampling data, but not -- well, there's not a lot of it in that, and we also have the commercial work going on, which we can't get a good handle on, on what was going with that. So, in the combination of the commercial and the AWE work, we felt that we really couldn't do a good job of doing a dose reconstruction during those periods.

Whereas, if we just assumed the highest value in the residual, we can go with that and have

a better grasp of where we were, rather than during the operational period.

MEMBER ZIEMER: Well, I am sort of asking you why not make the same assumption for the operational. I just want to make sure that -- I'm not advocating that we, necessarily, do that, but I want to make sure that we are comfortable.

It's the thorium issue again, is that not correct, because it's a lot of commercial thorium added on to the uranium work?

DR. MACIEVIC: Yes, that's it, too. Yes, the thorium, because they did a lot of the thorium to work with the tungsten in the light bulbs, and a lot of that activity was going on, which we haven't gotten a big handle on.

We do know decently -- what we can use from the 19 -- the first operational period to get a feel for what the thorium amounts were, but as you get later into the operational work, or the commercial work, it loses its -- yes, we start to lose the feel for doing the solid dose reconstruction during those operational periods.

DR. NETON: Greg, this is Jim.

Could you go back to that slide that shows what we can and cannot reconstruct? Maybe that would be helpful.

DR. MACIEVIC: Let's see.

DR. NETON: It's the next to the last slide, I think is what I was looking for.

The next to the last slide, it's got little green bars on it.

DR. MACIEVIC: Mine is in black and white.

DR. NETON: At the very end, the next to the last slide on your presentation.

Okay. For AWE operational period, we are saying we cannot reconstruct dose in the operational period because of the commercial activities, but we are going to do partial dose reconstructions in those operational periods using uranium air data, if I'm not mistaken.

DR. MACIEVIC: But, and what we do know from the thorium -- well, from the actual AWE work back in the first operational period.

DR. NETON: Right, but we are going to use the uranium air monitoring data we have during the operational period. It's just that we can't reconstruct the thorium exposures that occurred during that period, which were commercial activities.

DR. MACIEVIC: Right. Yes, the commercial activity is the long hole in the tent, that's the thing that was causing the problem.

DR. NETON: Right, but I think what Dr. Ziemer was asking, is why wouldn't we use the uranium, we are going to use the uranium data we have to do partial dose reconstructions.

DR. MACIEVIC: Well, yes, I mean, we are going to do the partial dose, but we won't be able to do full ones, without having all that other.

DR. NETON: Right.

DR. MACIEVIC: The AWE activities will pair data from those periods.

DR. NETON: But not the commercial activities.

DR. MACIEVIC: Right. Right.

MEMBER ZIEMER: You still assume the mix, though, right, you are still taking the thorium into consideration, or not?

DR. MACIEVIC: Right, in using information from what it originally was, not trying to look at what kind of thorium would have been built in, due to commercial work.

MEMBER ZIEMER: I got you. Okay.

CHAIRMAN MELIUS: Any other -- I mean, I was also confused by that part, and still am to some extent.

DR. NETON: Maybe this might be helpful or not, but there's two thorium exposures here. There's one that's a residual from the AWE operations earlier, and then there's this sort of unknown thorium exposure that occurred during these AWE operational periods, or commercial activities, and we have no idea what they were. But, those are not considered during the residual contamination period, because they are not AWE-derived exposures.

I don't know if that helps or not.

CHAIRMAN MELIUS: Yes, it does.

MEMBER ZIEMER: That helps me.

CHAIRMAN MELIUS: Any other Board Members with questions for Greg?

Okay. Hearing none, I'll give the opportunity for the petitioners to make comments. I don't know if they wish to or not, but if they do speak up now.

MR. BAGRIER: This is David Bagrier. I have a couple of points I would like to raise.

CHAIRMAN MELIUS: Go right ahead.

MR. BAGRIER: Okay. Number one, when we talk about -- you were talking about the commercial -- the AWE activity, and there was no mention of dates where the work was done for the U.S. Air Force, where some of that started earlier in the Class one period, and went on -- off and on during the Class two period. And, it was a period where the Air Force work went out with thorium.

MS. GIAMIS: David?

MR. BAGRIER: Yes.

MS. GIAMIS: This is Jean. I have in

front of me a document, "Development of Dispersion-Strengthened Tungsten Base Alloys, Utilization of Thorium," from the Air Force Materials Laboratory, dated 1966. So that, it would seem from this document that there were, in fact, other military contracts going on with thorium.

DR. MACIEVIC: This is Greg Macievic. If I could just interject one little thing.

Yes, and there probably were, but it's not atomic weapons, AWE work with the DOE. That's why it's not considered.

MS. GIAMIS: Okay.

CHAIRMAN MELIUS: Any other comments?

MR. BAGRIER: Yes, there was no clean-up after the 1945 -- the equipment was removed, but there was no evidence of a clean-up, such as clean-ups that occurred later on.

And, the first clean-up occurred in 1978, and then, subsequently, there was a clean-up ordered for the 1980-1981 period, and then finally there was another clean-up ordered for 1993, where

previous pipes were buried below some of the buildings that were not found earlier in the previous clean-ups.

So, the Government was involved with finding those things, so there were evidence that radiation continued on, even up to the 1993 final clean-up.

So, I don't see where some of this was considered in your benchmark dates.

DR. MACIEVIC: I'll comment -- and, you are absolutely right, there was a lot of work done for non-DOE activities. But, we are not in this SEC considering non-DOE work.

And, yes, there is rad material produced through the commercial operation, and like you said through the Air Force and other activities, but they were not DOE work.

So --

MR. BAGRIER: You don't know that, though.

DR. MACIEVIC: Well, by their contracts we do, we've seen what kind of contracts

were done and with whom, and so we know they were not DOE. DOE itself does not have anything associated with them at those periods of time.

CHAIRMAN MELIUS: Any other comments? Okay. If not, I guess would entertain suggestions for how we should handle this, we just received it relatively recently, and have not had a long time to review it.

MR. BAGRIER: By the way, this is Dave Bagrier again. I have one -- when we talk about the 250 hours, you talk about the periods in 1958, and again in 1959. The inclusive time in those periods would be added to time before or after those periods, if that was included?

CHAIRMAN MELIUS: Correct, it would be added to any other time that was part of the Special Exposure Cohort. So, the earlier time period at Westinghouse, if a person had worked in some time period during that, that would be added to it. You know, it might not have qualified during the earlier time period, but this time period would be added to that.

Or, if they worked at another facility that was part of the Special Exposure Cohort.

MR. BAGRIER: Right. But, if they were at Westinghouse in those buildings that are included in this report, if they had worked a total of 250 hours, including the period of 1958 or the period of 1959, either before or after consecutively, that would be covered.

CHAIRMAN MELIUS: It's 250 days, not 250 hours, and it's -- it has to be working during the time periods that are covered. If they are working through a time period that's not covered, that is not added, and that would not qualify for the SEC. Their individual dose would still be reconstructed during the Special Exposure Cohort period for the extent that that's, you know, made available to do that, which NIOSH indicates there is some data that they could do that with.

MR. BAGRIER: Well, Class 2, 250 hours in Class 2, that includes those time periods of 1958 or 1959.

CHAIRMAN MELIUS: Correct.

MR. BAGRIER: Okay.

CHAIRMAN MELIUS: It's 250 days, not 250 hours.

MR. BAGRIER: My mistake.

CHAIRMAN MELIUS: That's okay, it's confusing.

MR. BAGRIER: It is. There's a tremendous amount of numbers involved.

CHAIRMAN MELIUS: Yes.

MEMBER ZIEMER: Jim, Paul Ziemer again. Could I ask one more quick question?

CHAIRMAN MELIUS: Sure thing, Paul. Go ahead.

MEMBER ZIEMER: Has SC&A reviewed any of the facility's operations?

CHAIRMAN MELIUS: I don't believe so.

MR. STIVER: This is John Stiver. We have not reviewed it yet.

CHAIRMAN MELIUS: As I was saying, you know, one option would be to have SC&A review the entire report, the back-up documents. The other would be to have -- concur with NIOSH's

recommendation for the SEC at this point, but continue to review that time period. You know, the petition covers, you know, a lengthy time period, and there's, obviously, a lot of information to be considered there.

Really, it's up to the Board as to how they wish to move forward on that. I mean, either way would be fine, and consistent with how we've done it before.

Anybody on the Board wish to make a motion, or indicate what you would like to do?

MEMBER CLAWSON: Jim, this is Brad. I just wanted to make sure. So, SC&A has not reviewed this to this point?

CHAIRMAN MELIUS: Correct, we just received this report --

MEMBER CLAWSON: Like this week.

CHAIRMAN MELIUS: -- a couple weeks ago, yes.

MEMBER CLAWSON: All right. Well, I move that SC&A reviews this myself, because to tell you the truth, I'm a little bit confused on it

myself.

CHAIRMAN MELIUS: Personally, I would agree with that, except I don't know if it's -- do we want to approve -- do we want to concur with the SEC portion of this while we review the rest of it?

MEMBER BEACH: Jim, this is Josie, and I would say that we -- I see no reason not to approve the SEC time period, with note that this is going to SC&A to review and to a Work Group.

CHAIRMAN MELIUS: Yes, correct.

MEMBER BEACH: So, I would make the move to make the motion to approve for the NIOSH time period.

MEMBER CLAWSON: I second that, Jim.

CHAIRMAN MELIUS: Okay. We have a motion and a second. Any further discussion?

MEMBER MUNN: Yes, Jim, this is Wanda.

It's valid to take the technical position that, sufficient accuracy as we are required to use the term here, as it's being applied here. Isn't truly appropriate. It's an artificial construct that's being required by the

policy and procedure structures, and restrictions. If this Board has developed and imposed on calculations, the manufacturing and level of radiological process that is being described in this, don't really constitute serious exposure to the employees.

So, an SEC in this case, and from that position, isn't technically reasonable. So, I understand the recommendation, because of the procedural mandate we placed on ourselves to make, but ethically I can't support it, because it does not appear to me to be a threat to these employees. If I felt for a moment that the employees were actually threatened by the work that they've done here, then it would be a different thing, but that's not really what we are looking at. What we are looking at boils down to sufficient accuracy, and that, in my personal technical opinion and experience, isn't justified.

So, I can't support this for that reason.

CHAIRMAN MELIUS: Okay, thank you,

Wanda.

Any additional comments?

MS. GIAMIS: I need to ask a question. This is Jean Giamis again.

So, essentially, what we are saying is that unless workers were in some way, shape, or form exposed in terms of the AWE work, I mean, let's be honest here, the Manhattan Project, in the early 1940s that was done with the processing of pure uranium, and then concomitant to that, other thorium alloys that were used, that unless people were exposed directly to that, then the idea of residual impact is null and void.

Essentially, there was no more harm from radiation after, oh, let's say, 1945, that everything was cleaned up, and that the large numbers of people who died from various forms of cancer within Westinghouse Lamp in Bloomfield just died coincidentally.

Is that what I'm understanding here?

CHAIRMAN MELIUS: That's not correct, and it's not really consistent with what the

program has done. We are, actually, really in the middle of the deliberations on that.

MS. GIAMIS: Right.

CHAIRMAN MELIUS: So, we need to finish up our work here.

MS. GIAMIS: Okay.

CHAIRMAN MELIUS: Any other Board Members that have comments before we vote on the motion? We have a motion to approve the NIOSH recommendation, in terms of the two SEC periods, and then to refer the report to follow-up for SC&A review, and then to come back to one of our Work Groups for further discussion and review, and then, eventually, back to the Board.

So, without any more comments, hearing anymore comments, I'll ask, Ted, do you want to do the roll call?

MEMBER ZIEMER: Just one question. This is Paul Ziemer again.

CHAIRMAN MELIUS: Yes.

MEMBER ZIEMER: So, the motion would be to -- and maybe we should have two motions -- the

motion is to approve the two operational periods the one in '58 and the one in '59 and then the two residual periods --

CHAIRMAN MELIUS: Three residual periods, yes.

MEMBER ZIEMER: Three residual periods.

CHAIRMAN MELIUS: Yes.

MEMBER ZIEMER: And, we would refer the review of the residual periods back to SC&A, is that what the motion is?

CHAIRMAN MELIUS: Correct.

MEMBER BEACH: Yes.

MR. KATZ: Okay. Did that take care of it for you, Paul?

MEMBER ZIEMER: Yes. I wanted to be sure that was what was being proposed.

MR. KATZ: Right, and that's clear to me, and is everyone else straight here?

Okay.

MEMBER ZIEMER: One other question.

As part of the review of those residual periods, it seems to me that SC&A will also have

to look at the data from the two operational periods, because that data is the basis for some of the residual data for dose reconstruction. So, they still will, in a sense, be looking at that. They, obviously, cannot recommend something different if we approve this, but they still have the ability to look at the data in those two periods, correct?

CHAIRMAN MELIUS: Correct.

MEMBER ZIEMER: Okay, thank you.

MR. KATZ: Very good, is everyone set then? All right, we are voting, and I'll do this alphabetically, and I'll include, just in case, Dr. Richardson has joined us, I'll include him.

Dr. Anderson?

MEMBER ANDERSON: Approve the motion.

MR. KATZ: Ms. Beach?

MEMBER BEACH: Yes.

MR. KATZ: Mr. Clawson?

MEMBER CLAWSON: Yes.

MR. KATZ: Dr. Field?

MEMBER FIELD: Yes.

MR. KATZ: Dr. Kotelchuck?

MEMBER KOTELCHUCK: Yes.

MR. KATZ: Dr. Lemen?

MEMBER LEMEN: Yes, and as I told you yesterday, Ted, I have to cut out at noon today.

MR. KATZ: Very good, thanks.

Dr. Lockey?

MEMBER LOCKEY: Yes.

MR. KATZ: Dr. Melius?

CHAIRMAN MELIUS: Yes.

MR. KATZ: Ms. Munn?

MEMBER MUNN: No.

MR. KATZ: Dr. Poston?

MEMBER POSTON: Yes.

MR. KATZ: Dr. Richardson? Okay, he appears to be absent, and I'll collect his vote after this.

Dr. Roessler?

MEMBER ROESSLER: Yes.

MR. KATZ: Mr. Schofield?

MEMBER SCHOFIELD: Yes.

MR. KATZ: Ms. Valerio?

MEMBER VALERIO: Yes.

MR. KATZ: And, Dr. Ziemer?

MEMBER ZIEMER: Yes.

MR. KATZ: So, it is -- the motion passes with a large majority, and I will collect the extra votes.

CHAIRMAN MELIUS: Okay, thank you.

And, I have a drafted a letter which I circulated to NIOSH and to our attorneys. I haven't heard back from everybody yet, so I think we will hold the letter and circulate it later, once I've heard back from everybody.

Yes?

MEMBER KOTELCHUCK: Dave.

CHAIRMAN MELIUS: I'm asking our lawyer. Jenny?

MS. LIN: Sorry. I sent you my response earlier today, I believe.

MR. KATZ: Yes, Jim, everyone was in agreement that reviewed the letter, the draft letter.

CHAIRMAN MELIUS: Oh, okay. Well, I

never heard from Jenny. I didn't get that email. That's okay. Probably sent it to my CDC address.

MS. LIN: Let me research that.

CHAIRMAN MELIUS: Okay. That's fine. Then let me get the letter here.

Okay. It's the Advisory Board on Radiation Worker Health, the Board, has evaluated Special Exposure Cohort (SEC) Petition 00217 concerning workers at the Westinghouse Electric Corporation, (New Jersey facility) in Bloomfield, New Jersey, under statutory requirements established by the Energy Employees Occupational Illness Compensation Program Act of 2000 incorporated in 42 CFR Section 83.13. The Board respectfully recommends that SEC status be accorded to all atomic weapons employees who worked at the facility owned by Westinghouse Electric Corporation of Bloomfield, New Jersey, during the period from February 1, 1958 to May 31, 1958, or during the period from June 1, 1959 through June 30, 1959, for a number of work days aggregating at least 250 work days occurring either solely under

this employment or a combination with work days within the parameters established for one or more other Classes of employees included in the Special Exposure Cohort.

This recommendation is based on the following factors. Individuals are employed at this facility in Bloomfield, New Jersey, during the time periods in question, worked on the production of uranium metal related to their weapon production.

The National Institute for Occupational Safety and Health (NIOSH) review of available monitoring data, as well as its available process and source term information for this facility, found that NIOSH lacks the sufficient information necessary to complete individual dose reconstruction with sufficient accuracy for external exposures to radiation (with the exception of occupational medical x-rays), internal radioactive exposure to uranium and thorium to which these workers may have been subjected during the time periods in question.

The Board concurs with this determination.

NIOSH determined that health may have been endangered for these employees at this facility during the time periods in question. The Board also concurs with this determination.

These considerations were discussed at the June 9th Board meeting, held by conference call. The Board recommends that this Class be added to the SEC.

Enclosed is the documentation from the Board meetings, where this SEC Class was discussed, the documentation includes copies of the petition, NIOSH review thereof related materials. If any of these items are unavailable at this time, they will follow shortly.

Okay. The next thing on our agenda is an update from LaVon Rutherford.

MR. RUTHERFORD: All right. This is LaVon Rutherford. I will give an SEC update. It's going to be pretty quick. We'll be presenting one new SEC petition evaluation at the July

Advisory Board meeting. That will be for Carborundum. This Evaluation Report was recently approved and sent to the Advisory Board.

Class evaluated by NIOSH, is all employees who worked in any area of the Carborundum Company facility on Buffalo Avenue in Niagara Falls, New York, January 1, 1943 through December 31, 1976.

And again, we'll be discussing that petition at the July meeting.

There will be no other new petitions discussed at the meeting. We do have two petition evaluations that we have noted to the Advisory Board and the petitioners that we will not make the 180 days in completing the petition evaluation. That's for Lawrence Livermore National Lab and Argonne National Lab West.

We will present these evaluations at the November meeting. We will also be presenting -- we are on schedule to present a Blockson Chemical petition evaluation, and that petition evaluation is for the residual period.

That's about it. There are some petition evaluations that are with Work Groups that potentially could be presented or could come to closure at the July meeting. I don't know if you want to wait until the Work Group committee discusses that or not, but other than what I've discussed that's the only new petition.

CHAIRMAN MELIUS: Okay. Thank you, LaVon.

Why don't we hold off on the others until the Work Groups speak. If they don't, then we can cover it at the July Board meeting.

Any questions for LaVon?

Okay. Work Group updates, Subcommittee updates, anybody want to volunteer?

MEMBER BEACH: Jim, this is Josie. I'll just quickly say that Kansas City Work Group will be meeting in Cincinnati on July 16th and 17th. Half a day on the 16th will be for petitioners to present their issues and hopefully come to some closure on those, and then the Work Group will work on the 17th.

We hope to finish up and possibly be real close to finished with our work in July.

CHAIRMAN MELIUS: Okay.

MEMBER BEACH: And, that's all I have.

CHAIRMAN MELIUS: Okay, thank you, Josie.

MEMBER MUNN: This is Wanda. I'd be glad to report what's going on the Procedures Review Subcommittee.

We did meet on April 28th, a teleconference call, and with a fairly full agenda. We were able to resolve well over a half dozen -- actually, I guess, about ten or 12 single findings, closed out OTIB-54, and the two PROCs, procedure findings that we had before us.

We spent a large portion of time going through the open items that we had on the PERs that are currently before us.

We were successful in resolving probably another half dozen issues for that particular group.

We did assign two more PERs for our

contractor to review, PERs 53 and 55.

And, we are scheduling our next meeting for August 11th. So, we are moving forward well.

Reducing the number of open items and items that are in progress, that we are showing on the BRS, and with the exception of a few software glitches there we are handling that portion of our responsibilities as well.

So, Procedures is getting done what we think we need to get done.

CHAIRMAN MELIUS: Very good, thank you, Wanda.

MEMBER CLAWSON: Jim, this is Brad.

On Savannah River, which just put out a paper to us on neptunium. I still haven't seen anything on this co-worker model that we've been working on. I'm hoping it will come fairly soon.

For Pantex, we still have not received, I believe it was a neutron/photon ratio. I believe that NIOSH is still working on that. Is that correct, Jim? Neton?

DR. NETON: Sorry, Brad. Did you ask a

question? I was multitasking here.

MEMBER CLAWSON: That's no problem. It was on the neutron/photon ratio we discussed out there at Pantex. I believe you guys were going to -- were trying to make it one big one, but now you are going to be dividing it by site?

DR. NETON: Well, actually, what we were doing was, we were going to take and go away from the neutron/photon ratio at Pantex and, actually, develop a co-worker model based on just the neutron data by itself.

MEMBER CLAWSON: All right.

DR. NETON: That document was generated and went through internal review, and at the final stage of review process I, actually, made a comment that required it to go back for a little bit of rework.

So, unfortunately, it's my fault, but it's going to take a little bit longer to issue that document. So, all I can say is, it's going to be at least a month or so out from now, and I do apologize for that, but I thought it would be better

to regroup and issue it in its best form, you know, rather than just get it out the door quickly.

MEMBER CLAWSON: Okay, Jim. I appreciate that. I know it's been kind of on the burner for a while.

DR. NETON: Yes, it has been. It's the last real issue at Pantex, if I remember correctly.

MEMBER CLAWSON: That is correct.

Thanks. That's all I've got, Jim.

CHAIRMAN MELIUS: Okay.

MEMBER KOTELCHUCK: Dave Kotelchuck.

Dose Reconstruction Review, we, at our April 14th meeting, we began review of three of the blinds, that were completed. And, those three were -- none of them were resolved, but will be reported back at our next meeting. I've have some of the details of resolving those on Wednesday, the 24th, at 10:30, when we have our next meeting, and we will continue on the blinds for the rest of 17 and the blinds for set 20, as I understand are completed, and I would expect that we would get to them at that next meeting on the 24th.

CHAIRMAN MELIUS: And, this is Jim Melius, maybe I can jump in, the Work Group which we just formed on dose reconstruction methods, I guess, review methods, is meeting on June 22nd, two days before the Dose Reconstruction Review Subcommittee is meeting. And, we will be discussing there, you know, different approaches that might be used, and may even have some recommendations for the Dose Reconstruction Review Committee to try out some different -- slightly different approaches or something, in order to still have a number of sets to resolve that have already been reviewed, so how do we go about resolving those.

So, we'll have the meeting ahead of time, and we'll be talking more on the 24th also.

And then, we've -- our tentative agenda for the July Board meeting has got a longer time period to discuss, with the whole Board, our approach for doing dose reconstruction reviews.

So, that will be -- we will try to resolve relatively quickly.

MEMBER ANDERSON: This is Andy. We have a review that we just got, and we are in the process of scheduling a teleconference to go over it, probably the end of June, first part of July.

CHAIRMAN MELIUS: Okay. Thank you.

And, the SEC Evaluation Work Group had a conference call a couple weeks ago, I believe now, which that was -- it was actually Site Profile issues at the Dow Madison facility. I believe we resolved those, there were a couple of issues that Jim Neton was following up on, and I'm not sure that he's heard back from all the Work Group Members yet. He did follow up and send us all an email, but we'll be able to report on those at the July meeting. It will be a relatively brief report, but we can fill everybody in at that time.

Others?

MEMBER SCHOFIELD: Yes, this is Phil.

We have a teleconference on the 8th of July for Idaho National Lab, and at that time, hopefully, we can resolve the issue of the definition of the Class for the SEC for the Chem

Plant, and we can have a recommendation for the full Board when we meet a couple weeks later.

CHAIRMAN MELIUS: Actually, Phil, this is Jim, I don't believe we'll be able to settle at the July 8th. It's looking as if a major part of the evaluation of that definition is going to need to wait on some interviews that NIOSH and others will be conducting just before the Board meeting in Idaho. And so, the NIOSH report on that, my understanding now is, we will not receive that until some time after the July Board meeting.

MEMBER BEACH: Jim, this is Josie.

I thought those interviews before the Board meeting are for Argonne West, not for --

CHAIRMAN MELIUS: I've heard both, so I don't know.

MEMBER SCHOFIELD: I'm like Josie, I thought those were Argonne West. I'm confused.

MR. RUTHERFORD: This is LaVon Rutherford.

That is correct, those are for Argonne West. Right now, we anticipate, and we will

hopefully get some closure for that Work Group meeting.

CHAIRMAN MELIUS: Then people are telling us different things.

MR. RUTHERFORD: I will --

CHAIRMAN MELIUS: I won't name names, but --

MR. RUTHERFORD: -- I will double check with our people internally and see if we can get an email out to the Board.

CHAIRMAN MELIUS: Okay. We'll try to figure that one out.

Any other Work Group reports, or Subcommittee reports?

I'll just go back to Savannah River for a second. You know, that's got issues there that have been pending a long time, and I'd like to understand better what NIOSH's intentions are in terms of dealing with the co-worker models.

We have co-worker models that appear to, maybe violate is too strong a word, but they are not consistent with what appear to be our

guidelines for co-worker models, certainly, in terms of the mixing incident, routine monitoring data in a single co-worker model.

And, I'm not sure where that stands, in terms of NIOSH trying to resolve that, going forward on that, in terms of the co-worker models.

So, I know Tim is not on the line, but I don't know if Jim or Stu, if you have any comments.

DR. NETON: This is Jim.

I don't have any comments on that, other than we have started looking at that, and we have identified there's at least one instance where there's a mixture of incident based and routine monitoring. But, I can't exactly give you the status of where we are.

CHAIRMAN MELIUS: Okay. I just urge you to get that moving forward, because it's been a long time on Savannah River.

MEMBER CLAWSON: Jim, this is just Brad. If I could comment on one thing.

We've been working on these co-worker data models for a long time, and then the added

problem with getting information from Savannah River, which is getting harder and harder, I think we really need to look, if it's myself personally, if it's even feasible there.

So, I just -- we've been working on this for so many years, and we've got a lot of them presented to us, but they haven't been able to pass it.

So, I'd just like to keep that in mind, too, Jim, as we go on with this.

CHAIRMAN MELIUS: Okay. So, we've gone through our Work Groups, and, Ted, do you want to speak about the July --

MR. KATZ: Yes, sure, thanks Jim.

So, for July, I mean, we've discussed one item that's been on there in one form or another, which is -- I was thinking it was just the update on INL, because I was under sort of the same understanding as Jim, as to whether we are ready on the Class Definition.

In any event, one way or the other, INL will be on the agenda for July, either for an update

or for an actual potential action.

And, LaVon mentioned one other SEC that will be on the agenda for sure, which is Carborundum SEC. So, we have that scheduled.

The other potential actions are Rocky Flats and Kansas City Plant. So, I have those on there. This all adds up to, and we have, of course, the session on dose reconstruction review, as Dr. Melius mentioned and a brief update on the co-worker dose model, depending on where we get with the Subcommittee's work.

So, this all adds up to about a day and a half, a full day the first day, July 23rd, and a day, at this point, ending, you know, 11:00 a.m., on the second day, Friday, the 24th.

So, for your scheduling purposes, I think that's about where we are. If the INL work ends up being an action versus just an update, we may need a little more time for that. We would push out the time a little bit, but we are looking at a day and a half.

Any questions?

CHAIRMAN MELIUS: Okay.

MEMBER BEACH: Ted, this is Josie. Can I ask one quick question? I'm sorry.

MR. KATZ: Of course.

MEMBER BEACH: Do we have a hotel lined up? I've not seen anything, probably because I'm not on my usual email.

MR. KATZ: You haven't seen anything, because we haven't a signed and sealed a contract.

MEMBER BEACH: Okay.

MR. KATZ: But, we are working on it, and we are hoping for it to be the newer, whatever line of Marriott it is.

MEMBER BEACH: Yes, Residence Inn Marriott?

MR. KATZ: Right, that's what we are looking at. That's what it ought to end up being, but we don't have a contract in hand yet.

MEMBER BEACH: Okay.

CHAIRMAN MELIUS: If not, there's a campgrounds nearby.

MEMBER BEACH: Perfect.

CHAIRMAN MELIUS: Bring your fishing rods, Henry.

MEMBER ANDERSON: Okay.

CHAIRMAN MELIUS: With a license, though, this time. Okay.

If there are no other issues to bring up or discuss, we will see everybody, if not on Work Group meetings or calls, in the end of July in Idaho.

Is the snow going to melt by then?

MEMBER CLAWSON: Maybe not.

CHAIRMAN MELIUS: Bring boots.

MEMBER CLAWSON: That would be a good idea.

CHAIRMAN MELIUS: Okay. Thanks, everybody. Hang onto your generators and stuff, don't lose your equipment again, you know.

MR. KATZ: Okay.

CHAIRMAN MELIUS: Anyway, see you all in July. Thanks, everybody.

(Whereupon, the meeting was concluded at 12:17 p.m.)