

UNITED STATES OF AMERICA  
CENTERS FOR DISEASE CONTROL

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NATIONAL INSTITUTE FOR OCCUPATIONAL  
SAFETY AND HEALTH

+ + + + +

ADVISORY BOARD ON RADIATION AND  
WORKER HEALTH

+ + + + +

79th MEETING

+ + + + +

THURSDAY  
AUGUST 25, 2011

+ + + + +

The meeting convened at 8:30 a.m.,  
Pacific Daylight Time, in the Courtyard  
Marriott, 480 Columbia Point, Richland,  
Washington, James M. Melius, Chairman,  
presiding.

PRESENT:

JAMES M. MELIUS, Chairman  
HENRY ANDERSON, Member  
JOSIE BEACH, Member  
BRADLEY P. CLAWSON, Member  
R. WILLIAM FIELD, Member  
MARK GRIFFON, Member  
RICHARD LEMEN, Member  
WANDA I. MUNN, Member  
JOHN W. POSTON, SR., Member  
ROBERT W. PRESLEY, Member\*

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PRESENT: (continued)

GENEVIEVE S. ROESSLER, Member

PHILLIP SCHOFIELD, Member

PAUL L. ZIEMER, Member

TED KATZ, Designated Federal Official

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## C-O-N-T-E-N-T-S

	<u>Page</u>
Welcome	
James Melius, Chairman .....	5
Update on Pantex Plant SEC bounding uranium intakes	
Mark Rolfes .....	7
Questions and comments .....	24
Vote .....	95
Presentation on Vitro Manufacturing addendum to SEC evaluation petition	
Jim Neton .....	99
Questions and comments .....	110
Vote .....	113
Recommendation of the Board to accord SEC status re: Vitro Manufacturing	
James Melius, Chairman .....	116

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

2 8:30 a.m.

3 MR. KATZ: Good morning, everyone,  
4 and everyone on the line. Let me check first  
5 and see about whether we have any of our  
6 absent Board Members on the line.

7 So, Bob Presley, are you on the  
8 line? Or Mike Gibson?

9 Very good. Next, just let me note  
10 for everyone on the line as well as here, the  
11 presentations for today are on the NIOSH  
12 website under the Board section, so you can  
13 follow along. There's no public comment  
14 session today.

15 And lastly, please, everyone on  
16 the line, I understand there was some music  
17 folks were listening to at some point in the  
18 meeting yesterday, unfortunately, so please  
19 mute your phones on the line.

20 If you don't have a mute button on  
21 your phone, press star six, that will mute  
22 your phone, and then press star six to come

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1 off mute.

2 And -- good. And thank you,  
3 that's it. Dr. Melius?

4 CHAIRMAN MELIUS: Okay, the first  
5 item on our agenda this morning is the Pantex  
6 plant SEC, and I know Brad, or -- I'm not sure  
7 who's up first. Mark?

8 Well, Brad, do you want to then  
9 introduce, and then if you want Mark to go  
10 first, that's fine. The two of you need to  
11 work it out.

12 Okay.

13 MR. KATZ: Okay. And just while  
14 Mark is getting ready, Board Members, I've  
15 sent to you a presentation from the  
16 petitioner.

17 Does everyone have it? Because I  
18 have hard copies for anyone who didn't get it.

19 PARTICIPANT: When did you send  
20 it?

21 MR. KATZ: I sent it -- so you  
22 don't have it, so I'll give it to you. I've

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1 got a hard copy. That's easier.

2 Anyone else?

3 CHAIRMAN MELIUS: Just do the hard  
4 copy. That's fine, so just everybody has it.

5 MR. KATZ: Anyone else need it?  
6 Just let me know as I come around.

7 (Off the record comments.)

8 CHAIRMAN MELIUS: Go ahead, Mark.

9 MR. ROLFES: Okay, thank you.

10 CHAIRMAN MELIUS: Sorry to  
11 surprise you.

12 MR. ROLFES: Thank you, Dr.  
13 Melius.

14 Good morning, ladies and  
15 gentlemen. My name is Mark Rolfes.

16 I'm a health physicist with the  
17 National Institute for Occupational Safety and  
18 Health, Division of Compensation Analysis and  
19 Support.

20 I'm here today to present a brief  
21 update on the Pantex Plant Special Exposure  
22 Cohort bounding uranium intakes.

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1           The Pantex Plant started off  
2   developing and fabricating high explosives,  
3   assembling finished parts into nuclear  
4   weapons, conducting surveillance testing in  
5   evaluation of nuclear weapons and weapon  
6   components.

7           They performed retrofits and  
8   modifications and then also dismantled nuclear  
9   weapons from the stockpile.

10           To give you a little bit of a feel  
11   for the uranium exposure potential at the  
12   Pantex Plant, assembly operations involved the  
13   handling of clean, new, depleted uranium  
14   components.

15           A memorandum from to the Y-12  
16   facility from Pantex dated 1959 explicitly  
17   pronounced Pantex's commitment to allow no  
18   detectable removable contamination into the  
19   assembly area.

20           The potential for internal  
21   exposure from the handling of new uranium  
22   parts is very low, and this is evidenced by a

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1 review of greater than 5,000 Pantex workplace  
2 air monitoring results from the 1960s up to  
3 1990, greater than 200,000 contamination  
4 swipes from the 1980s through 2010, and also a  
5 review of the source-term information over the  
6 operational history for all years at the site.

7           There is a higher exposure  
8 potential -- a higher potential for intake  
9 during the dismantlement of nuclear weapons.  
10 However, early Pantex operations primarily  
11 focused on assembly. And the majority of  
12 dismantlement work at the Pantex Plant  
13 occurred after 1973.

14           W28 dismantlement operations from  
15 the 1984 through 1989 time period had the  
16 highest potential for uranium internal  
17 exposures. And this is supported by observed  
18 contamination levels, documented interviews,  
19 and site expert discussions.

20           The reasons why the W28 campaign  
21 would bound any uranium intakes associated  
22 with assembly and disassembly operations

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1 include the following: the W28 weapons series  
2 were stockpiled up to 30 years, which  
3 maximized the potential for age-related  
4 oxidation.

5 Corrosion of uranium is a function  
6 of composition, age, temperature, and  
7 humidity. The depleted uranium metal in the  
8 W28 was not alloyed or encased, and alloying  
9 of uranium would inhibit corrosion.

10 The W28 had one of the largest  
11 uranium surface areas of all weapons, hence,  
12 more metal was exposed to the corrosive  
13 environments during storage.

14 Disassembly operations to reduce  
15 the nuclear stockpile in the more recent era  
16 far exceeded earlier disassembly operations.

17 Approximately 300 uranium  
18 urinalyses were collected from weapon assembly  
19 and disassembly workers at Pantex shortly  
20 after the 1984 through 1989 campaign ended.

21 These samples can be used to bound  
22 the maximum chronic intakes that could have

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1 occurred over the six year period of  
2 dismantlement activities.

3 The 95th percentile uranium intake  
4 value of this distribution of measured urine  
5 samples bounds potential intakes for all  
6 assembly and disassembly operations at the  
7 Pantex Plant.

8 The uranium intakes proposed by  
9 NIOSH are bounding under plausible conditions.

10 For type S uranium intakes, we would assign a  
11 daily chronic intake of 135 picocuries. This  
12 equates to approximately 30 uranium dpm per  
13 cubic meter of air.

14 The NIOSH airborne levels are  
15 consistent with empirically-derived values  
16 from similar operations involving uranium.  
17 The in vivo data collected following the  
18 urinalyses, these in vivo results were  
19 collected from the same worker population, and  
20 the results of the in vivo counts, the lung  
21 counts, support that the chronic 95th  
22 percentile uranium intakes proposed by NIOSH

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1 are bounding.

2 In summary, NIOSH has developed a  
3 scientific quantitative methodology to bound  
4 potential uranium intakes incurred by Pantex  
5 assembly and disassembly workers for all  
6 years.

7 Thank you.

8 CHAIRMAN MELIUS: Okay. Thank  
9 you, Mark.

10 I think it might be best for our  
11 discussion purposes, Brad, if you present the  
12 Work Group's report, and then we can ask both  
13 of you questions and --

14 MEMBER CLAWSON: Well, first of  
15 all, my name's Brad Clawson. I'm the Work  
16 Group Chair for the Pantex Work Group. Other  
17 Members who were on that Work Group were  
18 Robert Presley, Josie Beach, and Phil  
19 Schofield.

20 I noticed a mistake. I guess I'm  
21 supposed to be about five miles up the road at  
22 Pasco, but I think we can get by with that all

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1 right.

2 Okay, the petition qualified  
3 November 20th, 2007. All employees who worked  
4 in all facilities of the Pantex Plant in  
5 Amarillo, Texas from January 1st, 1951 through  
6 December 1991. August 8th, 2008, NIOSH's ER  
7 report issued, and this is a critical one.  
8 This is NIOSH's report.

9 NIOSH found no part of the Class  
10 under evaluation for which it can estimate  
11 radiation dose with significant accuracy.

12 May 4th, 2010, May 3rd, 2011, Work  
13 Group meeting. October 26th through the 28th,  
14 2010, on-site visit. 2009 through 11,  
15 multiple on-site data captures and worker  
16 interviews.

17 Work Group SEC issues, now, when I  
18 say that these are open, that does not mean  
19 that they're vast, big problems. It's,  
20 there's one or two things that we're trying to  
21 tie up on it.

22 Adequacy for internal dose records

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1 is open. Internal dose modeling for uranium,  
2 open, dose estimates approach for plutonium is  
3 closed.

4 And I need to put a caveat as,  
5 when they say this is closed, this is  
6 recommended by SC&A. Some Members of the Work  
7 Group still may have some questions, but as  
8 far as more research and stuff, it's closed.

9 Dose estimated approach for  
10 thorium, open. Internal dose approach for  
11 metal tritides, closed. Interpretation of  
12 external dose data, closed. 95 percentile  
13 neutron to photon ratio, not bounding, it's  
14 open.

15 Completeness of historical rad  
16 exposure sources, open. Incidents cited  
17 limited, incomplete, open.

18 Inadequate consideration given to  
19 the firing site is open. Validation whether  
20 most highly exposed worker badged, external,  
21 closed.

22 Accuracy of plant exposure data,

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1 petitioner issue, closed. Petitioner's issue,  
2 closed. Too few workers monitored for valid  
3 DR, petitioner issue, open.

4 Records indicate incomplete for  
5 subcontractor, temp worker, short-term  
6 employees, petitioner issue was closed.

7 Exposure from tritium leaks,  
8 petitioner issue, open.

9 Badge placement, petitioner issue,  
10 open. Efficacy of HP and IH program,  
11 petitioner issues, closed. It's merged with  
12 another issue.

13 We heard earlier, the W28 involved  
14 uncased DU components whose corrosion  
15 resulting in contamination upon disassembly.  
16 The first W28 disassembly was in 1958.

17 NIOSH ER stipulates 350 bioassay  
18 results from the 1990s depleted uranium  
19 concentrations indicate that the W28 system be  
20 used to bound all prior DU potential  
21 exposures. SC&A disagrees that 1989 incident  
22 is necessarily the worst, there is no

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1 objective basis in the ER for this.

2 The ER indicates the 1990 results  
3 were used because most comprehensive set of DU  
4 intake data found, and represent large, known,  
5 high-quality intake from exposures, expected  
6 to be above normal operational exposures.

7 SC&A acknowledges that the W28  
8 system appears to have had the highest  
9 exposure potential, but finds that at least  
10 one lab comparison shows mean uranium intakes  
11 for earlier years, 1966 to 1977 to be double  
12 that of the later years.

13 NIOSH indicated the modeling of  
14 airborne contamination levels and analysis of  
15 available air sample data tended to be in  
16 agreement with ER recommended intake values.

17 However, SC&A believes the use of  
18 the pre-1990 to workplace contamination air  
19 sample data to be of suspect reliability,  
20 given the 1989 DOE audit of the Pantex  
21 internal dosimetry program, finding gross  
22 inadequacies.

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1                   Recollections of the magnitude of  
2 the 1989 incident as compared with prior  
3 contamination incidents vary among  
4 interviewees.

5                   SC&A has also questioned  
6 retrospective use of the 1990 bioassay results  
7 over 30 years of Pantex disassembly operations  
8 without some evidence of normalized operation  
9 radial radiological controls and monitoring  
10 multiple units handled in bays during the  
11 early years.

12                   Worker categories potentially  
13 exposed to DU contamination from W28  
14 disassembly included technicians, supervisors,  
15 engineers, safety personnel, handlers, and  
16 other support personnel. All had access to  
17 the W28 areas.

18                   Contamination spread have involved  
19 adjacent hallways, storage areas and offices.  
20 Contamination control inadequate. Self-  
21 monitoring limited. RAMs used as BZ  
22 monitoring. Beryllium contamination found in

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1 these areas.

2 Interviewees indicate that the  
3 early workers entered and left bays without  
4 any routine egress monitoring.

5 Open question on thorium. Thorium  
6 was a contamination concern in at least four  
7 weapon systems dating back to the 1960s.

8 One bioassay performed in 1983,  
9 the remainder in the `90s results showed no  
10 intakes of significance.

11 NIOSH proposes to base estimate of  
12 chronic intake of thorium on two percent of DU  
13 intake for the time when thorium was present  
14 in the disassemblies based on the observed  
15 mass ratios.

16 Further review by the Work Group  
17 awaits Board action on uranium SEC issue.

18 Data adequacy and completeness.  
19 Work Group received NIOSH's response to SC&A's  
20 White Paper on August 5th. This is a couple  
21 days before our meeting, it is still being  
22 reviewed.

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1           Too few workers monitored for  
2 valid DR exposure from tritium leaks,  
3 petitioner issue. Inadequate consideration  
4 given to the firing sites. Badge placement,  
5 petitioner issue.

6           In summary, the Work Group  
7 recommends full Board review and action  
8 regarding dose reconstruction of worker  
9 exposure to the depleted uranium at Pantex  
10 from 1958 through 1983, where exposure  
11 potentials existed with the disassembly of the  
12 W28.

13           Work Group defers action of 1984  
14 through '91 pending further NIOSH assessment  
15 of whether 1989 bioassay data would be  
16 bounding for this specific campaign period and  
17 subsequent SC&A review of NIOSH's approach.

18           SC&A continues its review of DU  
19 exposure potentials during 1951 to 1958.

20           Work Group defers action for  
21 thorium pending full Board review of the  
22 uranium SEC issue.

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1           Remaining issues of data adequacy  
2 to be dispositioned with NIOSH and SC&A with  
3 receipt of the NIOSH paper.

4           I know this is another boring  
5 slide show that I've gone through, but I want  
6 to sum it up in common words. It's the way  
7 that I can understand it.

8           The way they want to be able to do  
9 it is they want to be able to take 1990 data,  
10 back extrapolate 30 years. Numerous weapons  
11 came on line and went off line that we have no  
12 information for.

13           Mark was correct when he says the  
14 clean -- the assembly site of it was clean.  
15 You know, these parts were coming in and  
16 stuff.

17           It was the disassembly. The W28  
18 had 11 units a year that were disassembled,  
19 numerous ones clear down to the bottom end.  
20 That was part of their QA program.

21           There was no rad controls on these  
22 boundaries. We went down and we toured the

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1 facilities. The only thing between the  
2 hallway and the disassemblies was a chain link  
3 fence.

4 The samplers were even outside in  
5 the hallways. Anybody going through and past  
6 could have come in contact with this.

7 And one of the people down there,  
8 when we asked him about this, he said, well,  
9 the uranium's just like the beryllium. We  
10 thought it was going to be contained to these  
11 cells, but as we started to check, it had  
12 spread everywhere.

13 There was one common change room  
14 where everybody changed. These people would  
15 come in totally black from disassembly. Their  
16 clothes would go in with everybody else.

17 They were changing with the  
18 firefighters. They were changing with the  
19 pipefitters. The pipefitters were coming in  
20 and out of these areas.

21 1990 data is totally different the  
22 way the processes run than the earlier years.

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1 The earlier years, we've interviewed people,  
2 they've had up to five weapons in one spot to  
3 where now it's one.

4 And you know, the best comparison  
5 I can see is from the disassembly bays and  
6 cells and stuff of today to what they were  
7 yesterday, you can pick out all the things  
8 that they've come to find out that were wrong,  
9 the breathing zones, everything else like  
10 that.

11 And this is why the Work Group has  
12 brought it to the Board. And just for your  
13 information, it was unanimous to be able to  
14 bring this for the Board for the SEC.

15 There was one concern that Mr.  
16 Presley raised that -- of all workers and  
17 stuff, and as we've reviewed it, there's no  
18 way to be able to single out other people, so  
19 I'll put that up for questions.

20 CHAIRMAN MELIUS: So just for  
21 clarification, so the Work Group is  
22 recommending that the group -- all workers at

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1 Pantex --

2 MEMBER CLAWSON: I've got a paper  
3 of what we've agreed on.

4 CHAIRMAN MELIUS: Okay.

5 MEMBER CLAWSON: All Work Group  
6 potentially exposed radiation material while  
7 working at the Pantex Plant during the period  
8 of January 1st, 1958, through December 31st,  
9 1983, for a number of work days aggregated at  
10 least 250 days, occurring either solely under  
11 the employment or in combination with work  
12 days within the parameter established for one  
13 or more Class of employees included in the  
14 SEC.

15 Lack of adequate information  
16 necessary to complete individual dose records  
17 with sufficient accuracy for internal  
18 radiological exposure.

19 Now, I want to make something  
20 clear, though, and I said it in my slides, but  
21 as many of these slides -- you're just running  
22 through -- the petition is actually to 1991,

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1 but we have some data, 350 data that we are  
2 going to check on later on.

3 And if anything, that would be a  
4 later issue, but we've got to be able to look  
5 at that in more detail and go from there.

6 CHAIRMAN MELIUS: Okay. Can --  
7 questions for Brad, Joe Fitzgerald's handled  
8 this for SC&A here, and for Mark?

9 Wanda, and then Paul?

10 MEMBER MUNN: Back on slide five,  
11 --

12 MEMBER CLAWSON: How does it  
13 start? All I've got is a blank here. Uranium  
14 continued?

15 MEMBER MUNN: Well, the open  
16 issues, internal dose models for uranium, the  
17 bullet says, NIOSH ER stipulates the 305  
18 incident, bio results.

19 And then it says that SC&A  
20 disagrees that the '89 incident is necessarily  
21 the worst, because there's no objective basis  
22 in the ER.

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1           The lack of evidence doesn't mean  
2 to me that it's not the worst, or I would like  
3 to hear why there is a feeling that there  
4 might have been incidents that were worse than  
5 that. What did you unearth?

6           MEMBER CLAWSON: Yes, we found lab  
7 results, 1966 to 1979, where the -- it was,  
8 well, in comparison of the means uranium  
9 intake from 1966 to 1979 versus 1980 to 1990  
10 was .375 versus 1.188. It was double than  
11 what the `89 was.

12          MEMBER MUNN: Did you find any  
13 problem with the incident reporting system for  
14 the 1960s?

15          MEMBER CLAWSON: Actually, they  
16 weren't reported. The only one --

17          MEMBER MUNN: There was no  
18 incident reporting system?

19          MEMBER CLAWSON: There was no  
20 incident report for this, but this was the lab  
21 means that we were seeing with the depleted  
22 uranium.

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1           As the interviewee that we stated,  
2           and we asked this question, and if he felt  
3           that the 1989 was the worst one, and he said,  
4           well, no, not really, it's the most documented  
5           one.

6           Because you've got to see, you  
7           know, as we've seen at all these sites, 1985  
8           to 1990, the whole process has started to  
9           change.

10           MEMBER MUNN: Yes.

11           MEMBER CLAWSON: Before that, the  
12           reporting of it wasn't. So we went back, and  
13           we found these lab results that it was  
14           actually double the amount of uranium than  
15           what was in the 1989. That's why we question  
16           that.

17           You know, you're establishing a  
18           point 30 years down the road and trying to  
19           back extrapolate, and you don't have any data.

20           There's nothing there.

21           And that's what our problem has  
22           been from the very get-go on this. But we did

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1 find data that kind of questioned that being  
2 the worst one. Actually, we found data that  
3 said it was double in the earlier years.

4 And also, too, as the years have  
5 gone by and Pantex, you know, they got beat up  
6 pretty bad, 1989 time era. The Tiger Team  
7 tore them up.

8 There was a lot of reports.  
9 Albuquerque office tore them all up. They'd  
10 been kind of somewhat in a bubble.

11 The site was clean, they really  
12 weren't worrying too much about disassembly.  
13 They were in a bomb-making mode. And so it  
14 kind of fell under the wire. Then they  
15 started getting under the gun.

16 To be quite honest with you, the  
17 issue of the health physicist, they had one  
18 professional health physicist and two rad safe  
19 people for 500 assembly and disassembly  
20 people, and the amount that they pushed  
21 through that facility was absolutely amazing.

22 The criteria for monitoring,

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1 especially the W28, because we picked that  
2 out, was they would pull 11 of them out and do  
3 checks on them.

4 And when we looked into the QA  
5 program and stuff, several of those were  
6 stripped down to the bare units. Nothing on  
7 them, and reassembled, because they were still  
8 trying to gain information of wiring and  
9 everything else like that.

10 So to your question, yes, we've  
11 got dated information that shows that the '89  
12 was not the most bounding.

13 MEMBER MUNN: I guess the lack of  
14 incident reports is the thing that seems most  
15 concern to me. And I'm wondering if there is  
16 a point in their timeline when you can  
17 identify incident reports as becoming a  
18 standardized part of standard operations.

19 MEMBER CLAWSON: 1992.

20 MEMBER MUNN: Prior to that time  
21 -- in other words, the Tiger Team made it  
22 happen. Prior to that time, really, they had

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1 no real incident reporting system.

2 MEMBER CLAWSON: Right. Well, the  
3 questions that came up when we were talking  
4 with these earlier health physicists and so  
5 forth that had been out there on the field of  
6 incident-driven bioassay, to be honest, and my  
7 question was, what is an incident that you  
8 would do this on? What are your levels for an  
9 incident? What drives you into this?

10 And he says, to be honest with  
11 you, Brad, is, if you can't get it cleaned up  
12 before the end of the shift, then it's an  
13 incident.

14 But see, this was in the earlier  
15 years. And I'll be honest in depleted uranium  
16 and uranium was not a big player.

17 MEMBER MUNN: No.

18 MEMBER CLAWSON: They weren't  
19 worried about that. It was the other parts,  
20 the plutonium.

21 MEMBER MUNN: Yes.

22 MEMBER CLAWSON: And there was a

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1 lot of lessons learned. As we've seen on  
2 every site, you start getting into the '89,  
3 '90 time frame, things start to change.

4 As a matter of fact, 1989, the  
5 RadCon department shut Pantex down because of  
6 insufficient manpower. They had two people  
7 monitoring all of these assembly and  
8 disassembly people.

9 Since that time, into these time  
10 frames, they've got over 160 H.P.s, well, rad  
11 safe personnel. So that's a big time frame.

12 MEMBER MUNN: Right.

13 CHAIRMAN MELIUS: And I believe  
14 Paul has a question.

15 MEMBER ZIEMER: Thanks, and  
16 thanks, Brad, again, for working on a very  
17 complex operation here.

18 I found it personally a little  
19 difficult, going through all of these  
20 materials, to fully understand the full basis  
21 of the Work Group's recommendation, because  
22 all of these things are sort of commingled

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1 here. And plus, we've had a couple of  
2 additional White Papers in the last week or  
3 two, both from SC&A and NIOSH, I think, or  
4 maybe both from NIOSH, plus we just got some  
5 additional information this morning from the  
6 petitioner.

7 And although the Work Group has  
8 made this recommendation, I'm personally a  
9 little reluctant to act on it today.

10 On other complex sites where we've  
11 carved out pieces of Special Exposure Cohorts,  
12 usually we've done that where both SC&A and  
13 the Work Group and NIOSH are in agreement on  
14 the inability to reconstruct dose.

15 Here, we have a case where, I  
16 believe, that NIOSH is still saying they can.

17 SC&A has questioned that. It's pictured in  
18 the description as being an open issue, and  
19 the Work Group has made a specific  
20 recommendation.

21 I guess from a personal point of  
22 view, I'm reluctant to go ahead and take

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1 action without delving into this in more  
2 depth, particularly -- and in one way or the  
3 other, I mean, I would like to even understand  
4 what the petitioner is saying, how that  
5 impacts on this.

6 But, so it's more of a comment.  
7 I'm just uncomfortable in taking the action at  
8 this point.

9 MEMBER CLAWSON: Well, Paul, if I  
10 could, I want to make something clear. In  
11 August 2008 -- on August 8th, 2008, NIOSH's  
12 own ER report issued NIOSH found no part of  
13 the Class under evaluation for which it can  
14 establish radiation dose.

15 MR. HINNEFELD: For which we  
16 cannot.

17 MEMBER ZIEMER: So I think their -  
18 - my understanding is they're saying they can.  
19 Could that be clarified?

20 MR. ROLFES: Yes, this is Mark  
21 Rolfes, and our Evaluation Report says that  
22 there is no portion of the Class for which we

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1 cannot establish an upper bound.

2 So we can bound doses,  
3 essentially, is what it is saying.

4 MEMBER ZIEMER: Right. That's  
5 what I'm saying. So it appears to me that  
6 here, we have a conflict between the two, and  
7 the Board is being asked to make a decision  
8 with fairly recent information input for us to  
9 digest.

10 And this is a complex site, and,  
11 you know, I'm not unaware of the issues that  
12 they've had at Pantex, because of involvement  
13 way back with those Tiger Teams.

14 But nonetheless, I think in  
15 fairness, we need to be able to digest this  
16 information individually.

17 CHAIRMAN MELIUS: Phil?

18 MEMBER SCHOFIELD: I find it kind  
19 of odd that you claim you can have this  
20 science where you can have a few data points,  
21 and those few data points you got from one  
22 incident will cover everybody for 30 years.

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1                   We had guards we talked to. We  
2 talked to craftspeople, and stuff got out of  
3 those kivas, got out in the hallways. Some of  
4 the CAM alarms weren't even in the kiva they  
5 were using. They were down the hallway.

6                   And these guards, a lot of these  
7 people, are going through that area on foot.  
8 They weren't monitored. No film badge, no in  
9 vivo, nothing.

10                   And yet you're going to absolutely  
11 guarantee me nobody out there could have  
12 inhaled something that somebody in that room  
13 did?

14                   No. Common sense says, if this  
15 spread to other areas, you can inhale it.

16                   MR. FITZGERALD: I wanted to  
17 respond to Paul's comment, because I think,  
18 reflecting on where we've been on Pantex, now  
19 understand that, you know, we've been working  
20 on Pantex probably somewhere between four and  
21 five years. Four years as a Work Group.  
22 Certainly, the Site Profile was done almost

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1 five years ago.

2 This issue, apart from the recent  
3 White Papers, is by no means a new issue. I  
4 think the issue itself we've been debating for  
5 about three years.

6 We have been exchanging analyses  
7 on the uranium question for at least a couple  
8 years. You know, this last exchange, if you  
9 may, was a confirmation of a concerted effort  
10 on the part of both NIOSH, SC&A and the Work  
11 Group to really try to pin this particular  
12 issue down on uranium and thorium.

13 Yes, those were two of several  
14 open issues, but they were two pretty critical  
15 issues, you know, very critical issues, ones  
16 that -- I think there was agreement, a lot of  
17 the Pantex SEC hinges on.

18 And we went through, since the  
19 beginning of this year, a rather protracted  
20 effort that involved additional on-site data  
21 capture focused on this issue, a classified  
22 session or two at DOE, so that, you know,

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1 everyone could frankly look at everything at  
2 once, and a number of discussions, very  
3 detailed discussions between the Work Group,  
4 NIOSH and DOE on this issue.

5 So I want to make sure it's clear  
6 that the Work Group, NIOSH, and SC&A have been  
7 very focused on this question for almost, you  
8 know, eight, nine, ten months, because it is a  
9 very central issue.

10 So, yes, there's been some  
11 valedictory exchanges of, you know, best and  
12 final offerings, I think you might call it,  
13 but the, you know, the thesis I think that was  
14 presented, certainly on our behalf with the  
15 Work Group earlier this year, I don't think  
16 has persuaded the Work Group that any new  
17 information has changed our concern that use  
18 of this bioassay data, late era bioassay data  
19 to bound the operational period of 30 years is  
20 sufficiently founded.

21 Now, to give everybody credit, I  
22 think Mark, the Work Group, we and NIOSH have

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1 all dug deeply to see if there's any real,  
2 hard-edged data, because, and I think as  
3 you've heard, a lot of what's being relied  
4 upon is interviews, discussions.

5           You know, this sort of reminds me,  
6 I was listening to your comment, Wanda. it  
7 sort of reminds me of Delphi technique as  
8 applied to dose reconstruction, which is, do  
9 you think the `89 "incident," quotation marks,  
10 was the biggest one?

11           And you sort of say, well, yes, I  
12 think that was the biggest one, or you talk to  
13 another person, yes, okay, that's the biggest  
14 one.

15           I, when I went back to Pantex,  
16 sort of said, you know, I'll try that, too.  
17 So we interviewed a site expert and said, you  
18 know, could there have been a bigger one?  
19 This is getting in the science of, if you ask  
20 the right question, you can get a certain  
21 answer.

22           They said, yes, there could have

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1     been bigger ones.

2                     Now if I would have said, "Was it  
3     the biggest one?", I could have heard, "It was  
4     the biggest one."

5                     But you know, this is not, in my  
6     mind, a basis for hanging a bounding  
7     conclusion on, because I think you'll get  
8     different answers depending on the background  
9     of the people. And if they were contemporary  
10    with that incident -- now, we're talking 20  
11    years ago. This isn't -- you know, I say,  
12    contemporary, it's 20 years ago this incident  
13    happened, so you're talking to people that  
14    might have been on the scene.

15                    Well, if that person was the  
16    director of health physics, okay, you're going  
17    to get a different answer than if you talk to  
18    someone that was a rad tech or somebody.

19                    So, you know, again, so much  
20    colors these -- when you actually ask  
21    somebody's opinion about how big something  
22    was. And that's what makes me concerned on

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1 assuming that this set of bioassays in fact  
2 reflected the biggest incident that could have  
3 occurred on this particular assembly, because  
4 I just don't think we know, subjectively.

5 And as we've gone through this  
6 discussion, you know, it's been a search for  
7 something more objective. What's in the ER?  
8 And I think that quotation was up there. Is  
9 the going-in proposition for why the '89-'90  
10 bioassay data was used?

11 And I thought that was pretty much  
12 on the mark. It's the biggest collection of  
13 statistically valid data that's available.  
14 And I think, you know, I can accept that.

15 But is it from the biggest, most  
16 bounding, you know, release? You know, I  
17 can't accept that as being the premise.

18 There's certainly a lot of data  
19 that's statistically valid, and certainly is  
20 usable, but the reason it's being used is we  
21 don't have an usable, statistically usable  
22 data, and that's what the ER says. We just

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1 don't have enough of it before `89 back to `58  
2 to rely upon that information.

3 Now, in digging hard both in the  
4 classified files and the unclassified files,  
5 just trying to find something to illuminate  
6 this thing, just something that would be  
7 objective, not asking somebody's opinion or  
8 that kind of thing, the only thing I've found  
9 was a comparison of median excretion rate for  
10 uranium bioassays collected in the mid-`60s.

11 There was, I think, 34 samples or  
12 something of that sort collected off the line  
13 in the mid-60s, and this was in the NIOSH TBD  
14 for internal dose for Pantex.

15 They compared that, and that's in  
16 the TBD, compared that with the median uranium  
17 excretion rate for the 305 that they collected  
18 in `89 and `90.

19 To me, that's like -- that's the  
20 perfect thing, that's the only thing that, you  
21 know, really is objective, and that's actually  
22 a very relevant comparison.

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1           And the comparison shows that the  
2           early data, the median excretion rate for the  
3           early samples is double that of the 305 that  
4           was collected in `89-`90. Double.

5           MEMBER MUNN: But the sample size  
6           was smaller than that.

7           MR. FITZGERALD: Well, that's  
8           true, but I'm looking -- now, again, I'm  
9           looking for any indices, anything that's  
10          objective that would give credence to the fact  
11          that this latter-day -- because, you know, I  
12          think the standard -- this sort of reminds me  
13          of the surrogate data debate.

14          The standard for using late data,  
15          and this is pretty late in the game, `89-`90,  
16          and using it over 30 years of operational  
17          practice, sort of using it backwards, I think  
18          that standard has to be relatively high.

19          I mean, you have to be able to  
20          show that you have some normalized operations  
21          on one hand, some normalized radiological  
22          controls, and you certainly have to

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1 demonstrate that there isn't conflicting  
2 information or, you know, something that would  
3 give you a sense that it's not someone's  
4 opinion that this was the biggest, but, in  
5 fact, you could show that all the earlier  
6 releases were smaller.

7           Now, I've got to tell you, it's  
8 counterintuitive to think that the earliest  
9 days of dismantlement were going to be more  
10 cleanly handled from a contamination  
11 standpoint than in '89-'90. I mean, you know,  
12 I haven't really seen that in the DOE complex.

13       So right away, it's counterintuitive that you  
14 can expect that.

15           Now, the other things that would  
16 be concerning, and I think the Work Group  
17 heard this, is that, you know, radiological  
18 practices and controls improved over those 30  
19 years.

20           I mean, they used to have as many  
21 as four or five W28s in a bay being, you know,  
22 disassembled or -- either assembled or

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1 disassembled at a time. And over time, they  
2 restricted the numbers for numbers of reasons,  
3 safety included. That's just one example.

4 But there's other examples, in  
5 terms of, you know, controls, both procedures  
6 and everything else.

7 So when you're going to assume  
8 that the -- and, you know, again, make a  
9 subjective argument, weight of evidence  
10 argument that the `89-`90 is the worst, I  
11 think you've got to look at the practices and  
12 the circumstances to feel that, in fact, you  
13 can make that judgment without any objective  
14 evidence.

15 So the -- you know, I guess what  
16 I'm saying is what we have, essentially, is a  
17 subjective call that this `89 incident was, in  
18 fact, bounding, because it was the worst one  
19 of the previous 30 years.

20 And I want to make sure it's  
21 clear, the reason this `89 -- and I keep  
22 saying quotation marks around incident. What

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1 happened in `89 was, you know, given the  
2 growing awareness that was going through the  
3 complex because of Tiger Teams and everything,  
4 and there was certainly much more focus on  
5 everything, and I think Paul will remember  
6 `89-`90 was a crucial time for the complex.

7           The workers who were handling this  
8 disassembly and who were covered with this  
9 uranium dust, literally covered, head to toe,  
10 black, were -- you know, they finally felt  
11 they had a legitimate complaint, that they  
12 felt that -- they got the courage, and it took  
13 courage at Pantex, believe me, the courage to  
14 take it to management en masse. And in this  
15 case, management was receptive.

16           And essentially, you know, this  
17 whole thing with the bioassays, that all arose  
18 not because you had a series of incidents and  
19 each one got a report. This arose because the  
20 workers complained, management investigated,  
21 there was a decision that they better go and  
22 take all of these samples.

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1                   Now, the Albuquerque field office,  
2                   this is DOE, came in right after that, because  
3                   they felt they had to do this investigation  
4                   on, you know, how in the world could we have  
5                   such a mess?

6                   They went in afterwards and did a  
7                   complete scrub of the internal dosimetry  
8                   program at Pantex, and we have the findings.  
9                   We can go through those findings.

10                  But essentially, what they found  
11                  was, you know, a disbelief that this -- you  
12                  know, this incident was reported the way it  
13                  was when, in fact, you had these kinds of  
14                  releases happening on a chronic basis  
15                  throughout this campaign.

16                  In other words, this wasn't an  
17                  incident. This was just the one release that  
18                  was frankly elevated to management's  
19                  attention. You had releases all throughout  
20                  that campaign.

21                  Every time you took one of these  
22                  apart, you had a release. Okay? They just

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1 didn't see that as an incident in the previous  
2 years.

3           Every time you uncased a W28,  
4 particularly in the latter years as corrosion  
5 got worse and worse, you had a potential  
6 exposure pathway. You had uranium corrosion  
7 coming off that unit.

8           You had people -- and, we, you  
9 know, NIOSH interviewed them as well, they  
10 were covered with depleted uranium,  
11 essentially black, blowing their noses with  
12 depleted uranium coming out. It was pretty  
13 extensive.

14           It was just the nature of that  
15 particular unit, when you're using a -- and I  
16 think Mark pointed out very well, a large bare  
17 surface depleted uranium component that was  
18 uncased, directly exposed to the air, the  
19 corrosion almost began immediately, got  
20 progressively worse.

21           So when it came back to be  
22 disassembled -- let me paint a picture. You

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1 know, yes, you had a lot of disassemblies in  
2 the `80s as the Cold War -- particularly as  
3 the Cold War wound down, for retirement  
4 purposes.

5 But before that, you had this  
6 particular unit going -- cycling back, the  
7 Pantex on a regular basis, you had a complete  
8 cycling, because they had a QA program,  
9 surveillance program. You know, they pulled  
10 11 units, dismantled completely seven of them  
11 every year.

12 Then you had modifications,  
13 beginning in `61. They started modifying this  
14 unit. I mean, they completely broke it down,  
15 put new components, and put it back together,  
16 okay? And they also had retrofits and the  
17 whole works.

18 So that unit was rebuilt. All the  
19 units were rebuilt over time, before they got  
20 to the retirement point where they were  
21 actually taken out of service. So you had  
22 that contiguous, continuous operation.

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1                   We did ask the question, you know,  
2                   what -- could people have been working on a  
3                   W28 on a regular basis?

4                   The answer was, you could have  
5                   spent your entire career, and some Pantex  
6                   workers did, on the W28 line. Okay?

7                   So I just want to make sure that  
8                   that perspective is given, that this isn't a  
9                   novel or a new issue for the Work Group.

10                  This has been something, I think,  
11                  we've been working closely with NIOSH, and  
12                  SC&A's been involved in trying to bring this  
13                  to closure.

14                  And this past six months has been  
15                  a closure exercise of trying to get to that  
16                  point where there is not, frankly, any new  
17                  data or new information that can be brought to  
18                  bear anymore.

19                  We're at that point where, you  
20                  know, we have agreed, in this case, to  
21                  disagree, but this is where we're at.

22                  CHAIRMAN MELIUS: Paul has a quick

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1 follow-up.

2 MEMBER ZIEMER: Thanks, Joe. I  
3 appreciate that explanation. And in fact,  
4 what I was trying to ascertain, and it wasn't  
5 clear to me, is, in fact, that you are at the  
6 point where NIOSH and SC&A have agreed to  
7 disagree on this issue.

8 That wasn't clear to me in the  
9 other documents, you know, whether or not  
10 we're as far as we can go. There's not new  
11 information that can be looked at and so on,  
12 so I appreciate that input.

13 Well, I'll stop at that point.

14 CHAIRMAN MELIUS: Gen, and let me  
15 just indicate, I know the petitioner -- some  
16 of the petitioners are on the line. As soon  
17 as the Board is done with questions, you will  
18 get an opportunity to speak.

19 The Board is not done yet, so,  
20 first, Stu had a comment?

21 MR. HINNEFELD: I wanted to make  
22 just a couple comments to kind of frame the

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1 philosophy of our Evaluation Report, because I  
2 don't think it has come out very well in the  
3 discussion so far.

4           The philosophy and approach of the  
5 Evaluation Report hinges on certain things,  
6 that the W28 was likely -- and the  
7 dismantlement for retirement purposes was  
8 largely -- was the highest exposure situation,  
9 and it was a chronic exposure situation from  
10 1984 through 1989 at least, and 1989 was when  
11 the workers became -- they complained enough  
12 about the conditions that the bioassay were  
13 collected.

14           The bioassay were collected from  
15 everyone who was still at Pantex, as I  
16 understand it, and everybody who was still at  
17 Pantex at the time, who had worked on W28  
18 dismantlement. So that's the population.

19           And the postulated daily intake  
20 rate that's derived in the Evaluation Report  
21 is for the chronic situation from 1984 to '89  
22 as they were dismantling the W28s.

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1           So, while there may have been  
2 incidents where an intake may have occurred  
3 that was higher than what happened in 1989,  
4 it's characterized -- we believe that the `84  
5 to `89 dismantlement is the worst exposure,  
6 and that this is a bounding estimate. By  
7 estimating that intake, we have bounded the  
8 intake.

9           The discussion of earlier samples,  
10 earlier bioassay samples that lead to the  
11 conclusion of a higher daily intake is based  
12 on approximately 30 samples -- that analysis  
13 is in our Evaluation Report -- or, not in our  
14 Evaluation Report, it's in our Site Profile.

15           It's based on about 30 samples  
16 which were either entirely or largely firing-  
17 site samples where there would be a firing  
18 site, a depleted uranium shot on the firing  
19 site, and samples collected afterwards, and so  
20 it would be indicative of, essentially, an  
21 acute exposure.

22           But when you treat that population

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1 of 30 and I can argue, like, why in the world  
2 would we ever even say this in the TBD, but  
3 when you treat that population of 30 as a  
4 population, and you do some sort of chronic  
5 intake, and I don't know what kind of intake  
6 period we'd use, then that number does come  
7 out higher than the daily intake rate that's  
8 generated from the 1989 bioassay data for the  
9 dismantlement.

10           There's a function that's largely  
11 a function of the detection level of the  
12 laboratories, because the bioassay detection  
13 level was higher in 1966 than it was in 1989.

14           And I want to make sure -- and in  
15 terms of dismantlement versus disassembly,  
16 there were certain disassemblies of these  
17 weapons starting very early on, about -- I  
18 think it was about 10 or 11 per year for a  
19 surveillance program.

20           And then the modification numbers,  
21 I don't have. There were about 1,000  
22 dismantlements per year, in the '84 to '89

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1 time period, as they took this weapon out of  
2 service.

3 So those are kind of some bases  
4 that we arrived at that said, well, this was  
5 the highest exposure, this chronic exposure  
6 period was the highest exposure period, and  
7 that bounds all exposures.

8 Now, I'm not here to argue any  
9 more than that. I just wanted to lay out some  
10 aspects that I didn't think had come across in  
11 terms of the logic of the Evaluation Report.

12 CHAIRMAN MELIUS: Thank you, Stu.  
13 Gen, you had a question, or --

14 MEMBER ROESSLER: No, I have a  
15 comment. NIOSH and SC&A disagree on this, so  
16 this puts Board Members in the situation where  
17 we have to make a decision.

18 I don't feel I'm ready, as a Board  
19 Member, to make a decision. Some things have  
20 come up today, for example, the bioassay  
21 results. I'd like to now go back and look in  
22 detail at all the papers and read on that the

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1 thorium results.

2 I can't say at this time that I  
3 disagree or agree with either group, so I  
4 think it's -- what we're trying to do here  
5 today is really what you would normally do in  
6 a Work Group, where you have interaction, and  
7 you ask questions, and as -- and the Members  
8 would have more background.

9 I just feel that this is too soon  
10 to force a vote on the Board.

11 CHAIRMAN MELIUS: Well, can we  
12 first do questions, and then we'll come to how  
13 we'll deal with this? I mean, I appreciate  
14 what you're saying, Gen, but I think we're  
15 trying to get questions out of the way first.

16 We need to hear from the  
17 petitioners. Then, I think, as a Board we  
18 decide whether to go forward and how to do  
19 that.

20 Josie -- and Bob, is that Bob  
21 Presley?

22 MEMBER PRESLEY: Yes.

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1                   CHAIRMAN MELIUS:    Okay, go ahead,  
2    Bob.  I was going to call on you next.

3                   MEMBER PRESLEY:    I've been trying  
4    to get on here ever since you all stated.  You  
5    can't hardly hear me or something.

6                   After poring through the data and  
7    reading the data, I am more in support of  
8    trying to find a plan going with where the  
9    individuals did their work.

10                  CHAIRMAN MELIUS:    You're breaking  
11    up, Bob.  We're having a little trouble  
12    hearing you.

13                  But I think our understanding is  
14    that you were -- it was the -- this was  
15    presented a little bit before that your  
16    concern was whether to include all workers,  
17    and try to be -- you wanted to be more  
18    selective in terms of which workers would be  
19    covered by any potential --

20                  MEMBER PRESLEY:    That's correct.

21                  CHAIRMAN MELIUS:    Okay.  Thanks,  
22    Bob.

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1                   Josie had a --

2                   MEMBER BEACH:   Yes, I just have a  
3 quick comment. I can't do much on the follow-  
4 up.     Joe, you did a good job explaining  
5 things, as well as Brad.

6                   I just wanted to remind the Board  
7 that the Work Group has come today with the  
8 recommendation to approve an SEC from 1958 to  
9 1983 for uranium, based on the fact that the  
10 Work Group has decided that there's no more  
11 work that can be done to -- so that, I just  
12 want to make sure.

13                   We're still working on thorium.  
14 There's other dates that the Work Group still  
15 wants to work out, but we wanted to move ahead  
16 with this SEC.

17                   MEMBER CLAWSON:   One thing that  
18 didn't come out, probably, in the slides very  
19 good is to understand that the only way  
20 they're going to be able to do thorium is if  
21 the depleted uranium -- because that's where  
22 they're getting the thorium information from.

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1           It's something that you all need  
2 to realize, is we're talking -- one weapon  
3 that we've got fairly good information on, but  
4 in that time frame there was numerous weapons  
5 that came on line, went off line, that you  
6 have no information for.

7           CHAIRMAN MELIUS:   Okay.   Do Board  
8 Members have any more questions?

9           Okay.   I'd like to hear from the  
10 petitioners.   I know Lars Fuortes, you're on  
11 the line?

12          MR. FUORTES:   I am on the line.  
13 Can you hear?

14          CHAIRMAN MELIUS:   Oh, yes.   Go  
15 ahead, Lars.

16          MR. FUORTES:   Thank you very much.  
17 I thank all of you for your work on this.

18                 I want to remind some of you of  
19 the process.   You know, this petition was  
20 initially submitted in 2006, and we have  
21 decades of workers who have suffered  
22 consequences of exposures from this work.

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1           Remind you that there was  
2 tremendous disadvantage experienced by the  
3 workers -- for example, the petition was not  
4 allowed -- it was disallowed, initially. It  
5 needed to go through an administrative appeal  
6 to be accepted in 2007.

7           So there has been some  
8 institutional, governmental resistance to this  
9 petition.

10           There is also some institutional  
11 resistance to acceptance of workers' histories  
12 and recognition of the disadvantage that  
13 current workers and their families have in  
14 speaking out.

15           Can you hear me? Is the Board  
16 still on the line?

17           CHAIRMAN MELIUS: Yes, we can hear  
18 you, Lars.

19           MR. FUORTES: Okay. So I want  
20 that to be noted by the Board. And in fact,  
21 workers' histories were discounted from the  
22 first by NIOSH, stating that they had to have

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1 signed affidavits in the case of this plant.  
2 In no other facility was that requested, nor  
3 has that been requested by NIOSH in their  
4 collection of histories from administrators,  
5 safety workers, et cetera.

6 So workers, in order to give  
7 testimony from this facility, they were  
8 obliged to sign affidavits -- and I think that  
9 this is a double standard that again  
10 disadvantaged workers.

11 But we made it clear in our  
12 petition and our discussions with NIOSH that  
13 these workers told us of situations where they  
14 had exposures to tritium, for example, where  
15 they were obliged to go to the medical office,  
16 were sent home with prescriptions for milk or  
17 beer.

18 These were exposure scenarios that  
19 we heard from various workers not around each  
20 other at the time, individual histories that  
21 were given to us, so they seem quite credible  
22 to us.

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1           And they've been validated by  
2 other workers at other sites telling us, yes,  
3 this did happen in the early years, and no  
4 Incident Reports filed.

5           So that brings me to a second  
6 issue, which is Incident Reports versus  
7 routine monitoring. The data that is being --

8           CHAIRMAN MELIUS:     Lars, we just  
9 lost you.

10           Sarah Ray, are you on the line?  
11 Just trying to get -- I think we've lost the  
12 line entirely.

13           Is anybody on the line?     Could  
14 they speak up? We're trying -- we cannot --

15           MR. FUORTES:     Hello?

16           CHAIRMAN MELIUS:     Okay, Lars,  
17 you're back now.

18           MR. FUORTES:     I don't know if you  
19 heard that issue of the Incident Reports  
20 versus routine monitoring?

21           CHAIRMAN MELIUS:     No, we did not.  
22     That's where you cut out.

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1                   MR. FUORTES:        Okay.        Well,  
2    hopefully I'm not being edited out.

3                   CHAIRMAN MELIUS:    No, no, no.    We  
4    had some technical difficulty here.

5                   MR. FUORTES:        I'm talking about  
6    disadvantaged workers in this process.    NIOSH  
7    is proposing to use routine monitoring data  
8    collected after 1984 to evaluate exposures  
9    which we now have documented have occurred  
10   from failures of protective systems, failures  
11   of engineering.

12                   Those incidents are not evaluated  
13   sufficiently to assess exposure during those  
14   failures.    You cannot use routine monitoring  
15   data to assess people's maximal exposure.  
16   It's inherently unfair, and it occurs all the  
17   time in occupational health.    So I would argue  
18   for that.

19                   The fact that a couple of Board  
20   Members are reluctant to take action at this  
21   point because NIOSH and SC&A disagree, I would  
22   like to then point out that it's the same

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1 thing that happened at the sister plant of  
2 Pantex, the Iowa Army Ammunition Plant, where  
3 the same thing happened, the same health  
4 physicists argued the same arguments of being  
5 able to use data from latter years, from other  
6 sites, in fact, to assess exposure during  
7 earlier years.

8 So that's really all I have to  
9 say, and I thank you very much for the  
10 opportunity.

11 CHAIRMAN MELIUS: Thank you, Lars.

12 Sarah Ray, are you on the line?

13 MS. RAY: Yes, I am.

14 CHAIRMAN MELIUS: Okay.

15 MS. RAY: Can you hear me?

16 CHAIRMAN MELIUS: Yes, I can hear  
17 you. And before you start, I'll let you know  
18 that you had sent us some information, a  
19 series of slides that had been handed out to  
20 all of the Board Members, so everyone got  
21 those yesterday, so we have those. So, if you  
22 want to summarize your comments.

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1 MS. RAY: I would. And those are  
2 truly not slides. They are notes. So I  
3 apologize for the quality. That's the reason  
4 for saying that.

5 CHAIRMAN MELIUS: Actually, we were  
6 quite impressed, so don't apologize.

7 MS. RAY: I would like to point  
8 out it's, from NIOSH's own 2008 review, one of  
9 the key points that I found there was a  
10 question in the number of personnel that were  
11 monitored.

12 It showed 200 people working on  
13 the B28, and they were monitored by the  
14 Helgeson in vivo counter in '89. And the  
15 results of these counts were later determined  
16 to contain a positive bias and were deemed not  
17 credible.

18 And also, I've talked to workers  
19 since then, and they said that they were just  
20 pulled in. They asked for volunteers to come  
21 over and do the test or do the screening.

22 So this was not even just people

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1 who worked only on the 28, it was anybody they  
2 could get to do it.

3 Another thing that I found quite  
4 interesting, this was also from NIOSH's own  
5 document, and I think it was in August 2008,  
6 but 1989 figures showed that there were zero  
7 people -- or zero workers were monitored for  
8 uranium in 1989.

9 And the next paragraph, and I'm  
10 just really on slide two, and I'm not going to  
11 go through all of them, I promise, but just a  
12 repeat of the numbers being proposed by NIOSH  
13 that typical values for the specific activity  
14 of depleted uranium may be 20 percent or more  
15 higher than the value proposed by NIOSH.

16 And NIOSH is using a .30, and  
17 DOE's accepted is a .33. And also, one of the  
18 things -- and I'm not a health physicist. I  
19 am not a rad safety person. You know, I can't  
20 talk technical stuff.

21 But one of the things that was  
22 mentioned was a significant amount of activity

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1 continues to come from U-234. The Tiger Team  
2 findings, you know, that talked about the PPE,  
3 the standards and procedures that were in use.

4 So many contaminated operations, so many  
5 facilities, and you have to look at the right  
6 facilities.

7 And talking about these  
8 facilities, air handlers dumped back into the  
9 main hallways, you know, I've talked with --  
10 to speak about including everyone, you know, I  
11 know that people have told me that the payroll  
12 clerks brought their checks to them in the  
13 bays and cells.

14 You know, I remember myself in  
15 1974, and I believe the term -- at the time, I  
16 believe I was considered L-cleared, which is  
17 something they don't have anymore.

18 I could go to the vacuum chambers.  
19 I could go in various facilities. But I  
20 could not go to the applied technology area.  
21 That was the only place that I could not go in  
22 the entire plant.

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1           And I was actually asked to get  
2 out of a taxi, you know, when they entered  
3 those areas, but I could go anywhere else.  
4 You know, some of the things -- the  
5 engineering controls, the administrative  
6 controls, you know, understanding what -- the  
7 two-man rule, is it custody of pit?

8           It was literally, people ate their  
9 lunches on top of the pit cans. And I can't  
10 tell you what types of rays are emitted, but  
11 the experts I've talked to they said rays are  
12 continually emitted from those cans.

13           And, you know, lack of PPE, the  
14 lead aprons, you know, people had to beg for  
15 those. My sister was a weapons engineer, and  
16 she's one of the people that worked in 26, and  
17 she's often told me of putting the pits on her  
18 lap and scooting across the floor to get them  
19 in the weight chambers, because there was some  
20 kind of a strange configuration that came down  
21 from Burlington that one of the engineers  
22 insisted be used.

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1           You     know,     radiation     alarm  
2     monitoring system, I was actually a member of  
3     the RAMs Assessment Committee, and we looked  
4     at doing upgrades.

5           We     had     continual     issues     and  
6     problems with settings being incorrect on the  
7     RAMs.     And I happened to be the person who  
8     read all of the standards, and I found where  
9     the incorrect standards -- the incorrect  
10    numbers were in the procedures being followed  
11    in rad safety only by one person that would  
12    periodically come around and change the  
13    settings on the tritium monitors.

14           You know, I proposed a tagging  
15    system, and Harry Griffith with the DOE was  
16    exceedingly happy because the simple little  
17    tag that I came up with is now on all the RAMs  
18    monitors, and they are -- now the settings are  
19    correct.

20           But I've looked at hundreds and  
21    thousands of records of RAMs and did that  
22    before I retired. You know, there were always

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1 problems, particularly with the older cams.  
2 They lacked appropriate air flow. Some of the  
3 areas where they were sniffed in, and they  
4 were sniffed in at eye-level, alpha monitors  
5 in the bays in 1226 and in the pit vaults.

6           You know, particulate matter does  
7 not rise. It is not a gas, as I understand  
8 it. But, you know, all of these are -- the  
9 firing sites that were mentioned, even one of  
10 the firing sites was shut down due to  
11 radiation contamination.

12           You know, the firefighters, and in  
13 2003, I believe it was, you know, they brought  
14 in an issue to the DOE for study because so  
15 many of their kids were being born with  
16 deformities or stillborn, you know, kids  
17 without ears, all types of deformities.

18           And they burned these chemicals in  
19 unlined pits. They wore inappropriate PPE.  
20 You know, their pictures clearly show that  
21 they have -- all they have is a splash shield,  
22 and unknown chemicals in the drums, black

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1 smoke, just, you know, the pictures I have,  
2 and we've shared these with people.

3 You know, it's just black smoke  
4 being distributed into the air. The 1969  
5 tornado, you know, I have spoken with  
6 supervisors who were in general stores and  
7 other areas.

8 They told me of wading through  
9 water to secure the special nuclear material  
10 items that had been distributed across the  
11 plant.

12 You know, the roofs were blown off  
13 these facilities. All of the glass was blown  
14 out of every single window.

15 Shared facilities and services,  
16 Brad brought up the point that there's only  
17 one change house, and that was 12-1. You  
18 know, our workers have never been swiped, as  
19 is common practice. Even now they're not  
20 swiped.

21 You know, whatever they have on  
22 their clothing, wherever they go on the plant

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1 site, during their work day, whether it's they  
2 go over to 36 -- or 36 was the administrative  
3 building in the old days, if they went over  
4 there to get cash because they needed it or  
5 they were going on travel, then they wore  
6 their coveralls over there.

7 I've even had workers tell me that  
8 if too many of them approached the radiation  
9 monitors, when they were exiting the areas,  
10 that if they got to the gates and they set off  
11 the alarms, the guards had them back up and  
12 come one at a time.

13 Even though they did progress  
14 individually, if too many of them approached  
15 the monitor together, then it was too high,  
16 and that's -- but they were all in their  
17 clothing. And this was even in current years.

18 There are no records of worker  
19 movements around the plant. You know, there  
20 was some kind of an activity in the -- I think  
21 it was the late '80s, and they told workers  
22 that, you know, they needed this information

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1 now, you know, go back and tell me what  
2 programs you've worked on in the last ten  
3 years and tell me which buildings you've  
4 worked in.

5 Contaminated clothing. You know,  
6 all of the coveralls for the craftspeople are  
7 washed with -- it's still common practice.  
8 Nothing is swiped before it goes to the  
9 laundry, and all of the clothing goes in bins  
10 up in 12-1, picked up by the laundry service,  
11 carried down to the laundry through hallways,  
12 even now, that everybody goes through to get  
13 to the now-current 12-70 cafeteria. It used  
14 to be the 12-1 cafeteria.

15 The cell one tritium release, you  
16 know, I talked with a person who had to put in  
17 the evaporative air cooler, you know, and  
18 change out those pads. What happened to those  
19 pads?

20 You know, I have walked through  
21 the craft areas and seen the HEPA filters, and  
22 they're lining the hallways.

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1 MR. KATZ: Excuse me, Sarah?

2 MS. RAY: Anybody can walk through  
3 those ramps.

4 MR. KATZ: Sarah? Excuse me,  
5 Sarah. I just want to interrupt you a sec.

6 We're hearing a lot of back-  
7 chatter. There are other people on the phone,  
8 apparently, who are speaking.

9 Everyone else on the phone should  
10 have their phone muted so we can hear Sarah.  
11 If you don't have a mute button, please press  
12 \*6. That will mute your phone.

13 Thanks. Go on, Sarah. I'm sorry.

14 MS. RAY: Okay. But the rad  
15 protection staff, you know, obviously, I think  
16 several people have brought this up, they  
17 lacked compliance with DOE orders. They were  
18 deficient in size and practices.

19 There was no trending. The  
20 surveys were undocumented. There was one  
21 professional health physicist, and one of the  
22 ones that was in the QA job, he was not

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1 cleared and he had no idea, he'd never seen  
2 plant operations, he was not on the plant, but  
3 he was doing the reviews.

4 There was no written approval of  
5 procedures for decontamination on the 28.  
6 Before June 1989, no protective clothing  
7 required for the B28 program disassembly  
8 operations, and this is from the Tiger Team  
9 report. The records were swiped, but no  
10 records of possible contamination of workers.

11 The plant was unable to meet compliance in  
12 1989, as someone else had said.

13 The Tiger Team report said that  
14 rad safety personnel lacked clear  
15 understanding of their responsibilities. They  
16 didn't even know what they were supposed to  
17 do.

18 CHAIRMAN MELIUS: Excuse me,  
19 Sarah, could you please try to sum up? We  
20 have all the slides in front of us.

21 MS. RAY: Okay.

22 CHAIRMAN MELIUS: The Board has

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1 read them, and --

2 MS. RAY: My key points are: the  
3 Tiger Team reports need to be considered. The  
4 rad con manual issues, that are described on  
5 slide 19, and some questions that were raised  
6 on that, in the 1992-94 report by the DOE --  
7 let's see, it was their occupational rad  
8 exposure report for '92-'94, I think that is  
9 important to look at.

10 The documents were never swiped  
11 that were brought from the nuclear line. They  
12 were shredded in an open mail area.

13 I really have nothing else I can  
14 say. I just encourage the Board Members that  
15 if they question it at all, then to me, I hope  
16 that they will listen to the workers.

17 Hopefully, I'm representing them  
18 in a good way. But I hope that they will  
19 approve our petition for workers, because it's  
20 very valid, and many people have waited for a  
21 very long time.

22 Thank you.

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1                   CHAIRMAN MELIUS:   Okay.  Thank you  
2   very much.

3                   Ted, we have one other petitioner  
4   representative who has submitted comments, and  
5   I'll have Ted read those into the record.

6                   MR. KATZ:   Thank you.  So, these  
7   are comments from Sheldon Samuels, who's a  
8   professor of cancer and molecular biological  
9   research, Temple University, and of public  
10  health at Drexel University, and, like you  
11  said, he's a petition representative.

12                  "Because I have a conflicting  
13  obligation, mounting as I write this, I will  
14  not be able to participate.  However, I have  
15  been briefed by Sarah on what she intends to  
16  present.

17                  "As a special representative of  
18  the metal trades department, AFL-CIO, for the  
19  Pantex SEC issue, I fully endorse her  
20  testimony.

21                  "In addition, it is important for  
22  the Board and Dr. Howard to know that in my

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1 opinion, Mr. Clawson will present," these are  
2 bullets, "Mr. Clawson will present what  
3 appears to be a good summary to date of where  
4 we are with the petition.

5 "NIOSH staff has confronted as  
6 well as could be expected, given the  
7 inadequacies of DOE contractor records and  
8 practices, a huge amount of work reflected not  
9 only in their challenge of our SEC petition,  
10 but in their processing of claims.

11 "More, the Board's contractor,  
12 SC&A, has done a thorough, excellent job of  
13 empirical evaluation in the best tradition of  
14 the professions.

15 "This is not to say that each of  
16 us as individuals and parties in contention  
17 may not differ in our simple perceptions,  
18 since truth does not begin, as Socrates warned  
19 us, with the declaration that a pig or a dog-  
20 faced baboon or some other yet stranger  
21 monster which has sensation is the measure of  
22 all things.

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1                   "What we see and understand is  
2 packaged by our own memories, from which it is  
3 not only difficult to draw a shared reality  
4 but a reality independent of any of us, there  
5 must be, if we can both seek and find it.

6                   "Mine is an Amarillo memory of  
7 1969, when as chief field services air  
8 pollution program, USPHS/EPA, a slip of a gal  
9 asked me if it is all right to carry some of  
10 that stuff on a tray she got from the  
11 cafeteria.

12                   "Of course, now there is a flood  
13 of questions and answers which I and, I  
14 contend, none of us can answer, despite the  
15 commitment of management, as noted by Mr.  
16 Rolfes.

17                   "To then or now declare what was,  
18 is, or will be safe, that, in fact, is why the  
19 wisdom of the legislature is in need, the SEC.

20                   "Enough said.           Have a good  
21 meeting.    I look forward to reading the  
22 transcript."

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1                   And end of comment.

2                   CHAIRMAN MELIUS:     Okay.     Thank  
3     you.

4                   Any Board Members have any further  
5     questions?

6                   Okay.     If not, then I think we  
7     have suggestions from both Paul and Gen that  
8     they would prefer to postpone action to have  
9     more time to review materials.

10                  Other people, Board Members want  
11     to react to that?

12                  Yes, Dick.

13                  MEMBER LEMEN:     This is Richard  
14     Lemen. I don't agree that we should postpone.  
15     I think this has been in the works since  
16     2006. I think that the recommendation that  
17     Brad and his committee have made is a valid  
18     recommendation, and I would like to see the  
19     Board support that.

20                  I would like to say one other  
21     thing, that I think we oftentimes are treating  
22     these things as research projects, when

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1 they're a compensation program. I've said  
2 this before.

3 And I think we should not hold up  
4 action to satisfy our research zest, and that  
5 we should move forward with the information  
6 that we have and vote to approve this  
7 recommendation as the committee has  
8 recommended to the Board.

9 Thank you.

10 CHAIRMAN MELIUS: Anybody else?

11 Henry?

12 MEMBER ANDERSON: Yes, I would  
13 also -- I mean, looking through all the  
14 materials that we've had for some time, this -  
15 - the proposal only deals with up to 1983, and  
16 so a lot of the data and the 1989 issues  
17 really covers the six years from '83 to '89,  
18 and the availability of data, the assessments  
19 prior to that, simply gets less and less.

20 So that's why I think it makes  
21 sense to split this into various phases, that  
22 there still seems to be many issues remaining

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1 in the later period.

2 CHAIRMAN MELIUS: Okay. Anybody  
3 -- Wanda?

4 MEMBER MUNN: I think Henry's  
5 comment is well taken, that it makes sense to  
6 split this into a number of different issues,  
7 because clearly, it does not seem logical that  
8 we would approach all of the issues with many  
9 still open and outstanding.

10 We've gone to a great deal of  
11 effort to make sure that we do hear comments  
12 from all of our workers and petitioners, and I  
13 personally have not had an opportunity to  
14 review adequately the material that we've just  
15 received.

16 I would prefer that we postpone  
17 action on this SEC until the potential for my  
18 personal understanding of what types of  
19 differentiation we're going to make is more  
20 complete.

21 I would prefer to make a  
22 recommendation and a motion that we table this

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1 issue until our next full Board meeting.  
2 During that period of time, I'm assuming that  
3 the Work Group will be meeting again and that  
4 other potential groupings will come from that  
5 Board meeting.

6 If that assumption is incorrect,  
7 then perhaps I could reconsider what I'm  
8 saying here, but I would prefer that we  
9 postpone this.

10 CHAIRMAN MELIUS: Josie, then  
11 Dick.

12 MEMBER BEACH: At this time, the  
13 Work Group has no further plans on this  
14 earlier period to meet. We've decided that  
15 we've done all that we can do.

16 We are going to meet on the later  
17 years, but not the earlier years. And correct  
18 me if I'm wrong on that.

19 CHAIRMAN MELIUS: Yes. We have a  
20 Board call on October 20th.

21 MEMBER LEMEN: I would just like  
22 to say that what Josie said earlier I thought

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1 was somewhat what Henry was talking about,  
2 that we are petitioning off parts of this.

3 We're not closing this all out.  
4 And I'd like to ask if Brad or Josie could  
5 read what they were proposing again, I think  
6 it addresses what Wanda and Henry were talking  
7 about. Could we have that?

8 MEMBER CLAWSON: It states: "all  
9 workers potentially exposed to radioactive  
10 material while working at Pantex plant during  
11 the period from January 1st, 1958 through  
12 December 31st, 1983 for all numbers of work  
13 aggregated at least 250 days occurring either  
14 solely under the employment of or in  
15 combination with work days within the  
16 permitted estimate for one or more of the  
17 Classes of employees included in the SEC, lack  
18 of adequate information necessary to complete  
19 individual dose reconstruction with  
20 significant accuracy for internal radioactive  
21 exposure to uranium."

22 CHAIRMAN MELIUS: Okay.

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1                   MEMBER LEMEN: Is it inappropriate  
2 at this time to make a motion --

3                   CHAIRMAN MELIUS: Well, let's hear  
4 from other people. Bill, how do you --

5                   MEMBER FIELD: It's really  
6 difficult. I'd like to proceed today, but I'm  
7 not sure I have all the information, and maybe  
8 I have all the information, but I don't feel  
9 like I know enough to say that.

10                  So I'd like to second the motion  
11 that was made to take this up at the next  
12 meeting.

13                  It would also be good to really  
14 see a point-by-point discussion or a summary  
15 of what the NIOSH position is versus the SC&A  
16 position on these issues, because I'm not  
17 clear on that.

18                  And Josie, I understand what  
19 you're saying, that this is just for uranium,  
20 but it's difficult sometimes, because during  
21 those same periods, there were other exposures  
22 that may affect, you know, how one would vote.

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1           So for me, if we vote today, I  
2    don't feel like I'd be voting with all the  
3    information I need to make an informed  
4    decision.       That's just my personal  
5    perspective.

6           CHAIRMAN MELIUS:    I would just  
7    note that Mark Griffon, a Board Member who had  
8    to leave but listened to most of the  
9    discussion, indicated to me that he would  
10   support the need for more time for the Board,  
11   and suggested that we take this up at our  
12   October meeting.

13           Really, since there's no -- just  
14   to explore that possibility. Since there's no  
15   need for further meetings of the Work Group or  
16   further clarification issues, all I'm hearing  
17   is that people would like more time to review  
18   the information.

19           And I see no reason why we  
20   couldn't act on this at the October meeting,  
21   and I think also ask the Work Group and NIOSH  
22   to prepare the type of summary and make sure

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1 that everybody understands what the issues  
2 are, specific issues are at this -- for this  
3 decision that we're being asked to make, and  
4 frankly, I think we should be ready to make  
5 shortly, because the Work Group has said  
6 they've taken it as far as they can, and the  
7 petitioners have waited a significant amount  
8 of time, and I think we need to try to move  
9 this forward as best we can.

10 Dr. Lemen?

11 MEMBER LEMEN: I was just going to  
12 say that I would still support the Working  
13 Group recommendation, even after I've heard  
14 the comments of the rest of the Board. I  
15 really think that we owe it to the petitioners  
16 to take some action, and I think we have  
17 enough information to take action on this one  
18 issue, and only the one issue, but we can deal  
19 with the other issues and portion this out.

20 So I still would speak in favor of  
21 the recommendation of the Board Working Group.

22 CHAIRMAN MELIUS: Wanda, did you

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1 -- I may not have been listening. Did you  
2 make a motion to postpone? I wasn't --

3 MEMBER MUNN: Yes, I did. There  
4 was no second.

5 CHAIRMAN MELIUS: Okay. Do I  
6 hear a second to Wanda?

7 MEMBER FIELD: I seconded it.

8 CHAIRMAN MELIUS: Bill seconded  
9 it, okay.

10 Any further discussion on that?

11 Comment, Paul? Go ahead.

12 MEMBER ZIEMER: Yes, it actually  
13 is my understanding that we actually have, I  
14 think, all the information, Bill, I think,  
15 including what you were asking for, as I've  
16 reviewed it.

17 And I am not speaking against the  
18 motion, but the Work Group's been immersed in  
19 this for several years. And in reality, we've  
20 only been immersed in it for the last week or  
21 two.

22 CHAIRMAN MELIUS: Yes.

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1                   MEMBER ZIEMER:   And it's a complex  
2    thing.       So I'm not speaking against the  
3    recommendation at all.

4                   I was only raising the level of  
5    discomfort that I felt, because in a sense,  
6    the Board is being asked to -- what I would  
7    call adjudicate the final evaluation where we  
8    have a conflict between -- not a conflict, but  
9    a disagreement between the Board's technical  
10   contractor and NIOSH on whether or not dose  
11   can be reconstructed.

12                  So we're asked to make that  
13   decision based on a wealth of information  
14   here, which the Work Group indeed has been  
15   digging into and clearly feel quite  
16   comfortable, but nonetheless, we're asked to  
17   do that.

18                  And we all -- I think we all trust  
19   each other and our recommendations, but we  
20   also have the responsibility to say, yes, I  
21   myself have gone through these things in  
22   depth.

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1           And so my vote is not just based  
2   on the recommendation, but based on my  
3   understanding -- clear understanding and  
4   knowledge of the issues and the pros and cons.

5           And so, you know, that's the only  
6   point that I'm making, that I want to make  
7   sure that my decision -- I can support it to  
8   myself, and it may or may not be the same. So  
9   I'm not objecting at all to the Work Group's  
10  recommendation.

11           MEMBER LEMEN:     Could I make a  
12  point of clarification?

13           CHAIRMAN MELIUS:   Yes.

14           MEMBER LEMEN:     Don't we owe the  
15  Working Group an answer before we vote on the  
16  motion that Wanda is making?  Didn't they make  
17  a motion first?

18           MEMBER ZIEMER:    Yes, but a motion  
19  to postpone or table takes precedence --

20           CHAIRMAN MELIUS:   Takes precedence  
21  over that.  And I also -- well, I would just  
22  point out that given the absence of Board

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1 Members, I don't think this would be settled  
2 anyway, so it's -- and I don't know, I'm not  
3 knowing what the outcome would be.

4 So my only question is to clarify  
5 Wanda's motion, which -- was your motion to  
6 postpone until the December meeting, or --

7 MEMBER MUNN: Yes, it was. The  
8 purpose in that, however, was to try to  
9 identify, better identify the areas of  
10 disagreement with respect to what is and is  
11 not possible in all of the aspects that are  
12 still open. And I had assumed it would take  
13 more than a couple of weeks to do that.

14 If the Work Group is not going to  
15 be meeting, then I'm not sure who is going to  
16 put together the kind of comparison that I had  
17 hoped I would see, but I would be more than  
18 happy to withdraw my specificity with regard  
19 to a date if that would be helpful for other  
20 people at the table.

21 CHAIRMAN MELIUS: I believe it  
22 would. And just to clarify, my understanding

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1 is that the Work Group was going to be  
2 meeting, but I see between now and October, is  
3 that --

4 MEMBER BEACH: No date.

5 CHAIRMAN MELIUS: Well, could we  
6 ask the Work Group -- we could certainly ask  
7 the Work Group to meet, at least for the  
8 purposes of developing that summary, working  
9 with NIOSH, I think that could be done by a  
10 conference call of the Work Group and could  
11 easily be scheduled between now and October  
12 and in time for that to be ready for our  
13 October 20th call. Is that --

14 MEMBER CLAWSON: I would have to  
15 refer to NIOSH and SC&A, if they'll be able to  
16 deliver in that time. This would -- you know,  
17 this is the same thing. We got some of this  
18 paperwork a couple of days before the meeting.

19 CHAIRMAN MELIUS: Paul?

20 MEMBER ZIEMER: Mr. Chairman, I  
21 honestly think we have the information, and  
22 you know, I've read through them, and I think

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1 I understand sort of superficially, at least,  
2 the arguments on both sides.

3 I'm not sure that there's any more  
4 information to be developed. Maybe it's the  
5 issue of organizing it in a way that we can  
6 sort of lay it side by side, but I believe the  
7 information is there.

8 Mark Rolfes, I don't know that you  
9 have more that you would offer beyond the  
10 White Papers.

11 And Joe, I think your folks have  
12 delineated your views pretty clearly.

13 MR. ROLFES: This is Mark Rolfes  
14 with NIOSH, and I believe all of the  
15 information that we've received from SC&A,  
16 we've prepared responses.

17 Some of the external dosimetry  
18 issues haven't made it back over to the Work  
19 Group, but by and large, we've proposed  
20 methodologies to bound intakes for workers at  
21 the Pantex Plant for essentially all  
22 radionuclides and essentially all issues that

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1 we've received from SC&A.

2 It's not categorized in a summary.

3 Most of that information is prepared in a  
4 data adequacy and review response that we have  
5 completed in response to SC&A's review.

6 MR. FITZGERALD: Yes, this just  
7 gets into the iterative thing.

8 I don't think we have anything new  
9 to respond to NIOSH's most recent White Paper.

10 I think what would be very helpful, though,  
11 is if there's any way to speed up the  
12 transcripts from the last Work Group meeting  
13 that -- well, I think the one before that, but  
14 certainly the last Work Group meeting, this  
15 issue was center stage. And I think that  
16 meeting was, what, a few weeks ago?

17 So that would be helpful for just  
18 looking at the details that were discussed.  
19 But I would say that would be one more piece  
20 of information that you don't have now that  
21 would be very germane to this thinking.

22 MR. KATZ: Yes, and certainly we

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1 can do -- we'll do as much as we can to speed  
2 it up. But we have time, even when we're  
3 talking about an October time frame, even in  
4 the normal course of transcripts. But we will  
5 ask them to expedite it, so we can get that  
6 done as quickly as possible and out to all the  
7 Board Members.

8 CHAIRMAN MELIUS: Okay. And I am  
9 sure if a Board Member can't find a -- is  
10 looking for a particular piece of information  
11 or understanding on an issue that, you know,  
12 NIOSH, SC&A is available to point -- at least  
13 where something might be, because there are a  
14 lot of documents, but we'll do that.

15 Okay. So I think as I understand  
16 Wanda's motion now would be to postpone,  
17 simply to postpone till our next meeting the  
18 consideration on this petition. And we have a  
19 second to that. So, Ted?

20 MEMBER ANDERSON: And it is just  
21 to be through the --

22 CHAIRMAN MELIUS: To the next

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1 October meeting.

2 MEMBER ANDERSON: Yes, but the  
3 shorter period, not the whole thing?

4 CHAIRMAN MELIUS: Not the whole  
5 thing, yes.

6 MEMBER ANDERSON: So their focus  
7 is going to be through `83?

8 CHAIRMAN MELIUS: Correct. Yes,  
9 just this recommendation, yes, because I don't  
10 think the Work Group will have a  
11 recommendation before then.

12 MR. KATZ: Dr. Anderson?

13 MEMBER ZIEMER: Yes.

14 MR. KATZ: Ms. Beach?

15 MEMBER BEACH: Yes.

16 MR. KATZ: Mr. Clawson?

17 MEMBER CLAWSON: No.

18 MR. KATZ: Dr. Field?

19 MEMBER FIELD: Yes.

20 MR. KATZ: Dr. Lemen?

21 MEMBER LEMEN: No.

22 MR. KATZ: Dr. Melius?

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1 CHAIRMAN MELIUS: Yes.

2 MR. KATZ: Ms. Munn?

3 MEMBER MUNN: Yes.

4 MR. KATZ: Bob Presley, are you  
5 still on the line?

6 MEMBER PRESLEY: Yes.

7 MR. KATZ: Okay. Yes. Thank you.

8 Dr. Roessler?

9 MEMBER ROESSLER: Yes.

10 MR. KATZ: Mr. Schofield?

11 MEMBER SCHOFIELD: No.

12 MR. KATZ: Dr. Ziemer?

13 MEMBER ZIEMER: Yes.

14 MR. KATZ: Okay. The motion  
15 passes with three nays and the remainder  
16 present voting yes.

17 CHAIRMAN MELIUS: Okay. Thank  
18 you. And thank everybody, and certainly thank  
19 the Work Group for all your hard work in  
20 getting this prepared, and the petitioners  
21 also.

22 MS. LIN: I also wanted to state

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1 on the record that Dr. Poston had recused.

2 MR. KATZ: Yes. I meant to say  
3 that. Thank you, Jenny.

4 CHAIRMAN MELIUS: Okay. And we  
5 have another petition scheduled at 10:15, so  
6 why don't we take a break and people come back  
7 here at 10:15?

8 We should be, for the Board  
9 Members and audience, we should be wrapping up  
10 right after that next petition, so.

11 (Whereupon, the above-entitled matter went off  
12 the record at 10:06 a.m. and  
13 resumed at 10:22 a.m.)

14 CHAIRMAN MELIUS: Okay. We will  
15 get started again. There were some  
16 discussions during the break, and we actually  
17 -- I think NIOSH felt, and Ted and I talked  
18 and we also thought that it probably would be  
19 helpful to have a sort of a summary document  
20 for Board Members from both NIOSH and SC&A  
21 that sort of summarized the respective  
22 background or justifications for their

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1 positions, as well as references back to the  
2 many different documents that have been  
3 prepared on this site, and was useful -- and  
4 they thought it would be helpful. So I think  
5 we can have them go ahead and do that.

6 Also, that there will also be a --  
7 and we'll make those available to the  
8 petitioners also. And also, NIOSH was going  
9 to also look at the -- sort of the Class  
10 Definition potential issues, just to give us a  
11 little bit of sort of background for  
12 discussion purposes on what -- how people were  
13 badged, some of the access issues, and so  
14 forth.

15 It will just be a factual piece  
16 that it would be helpful if we have to define  
17 a Class Definition for that.

18 And again, that will be something  
19 available to everybody, including the  
20 petitioners. So, any questions on that?

21 MEMBER MUNN: I'm hoping that the  
22 two summaries will have similar topic

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1 headings, so that --

2 (Laughter.)

3 -- we will not be trying to  
4 identify which topic heading relates to the  
5 other topic heading.

6 CHAIRMAN MELIUS: I think we can  
7 manage that. And I think actually the last  
8 item on our agenda for today is the Vitro.

9 And this is the addendum to the  
10 Special Cohort Evaluation Report on Vitro, so,  
11 Jim?

12 DR. NETON: Thank you, Dr. Melius.  
13 I think this is the first time I've ever  
14 given a last presentation. That's usually  
15 reserved for LaVon, so I'm not sure what that  
16 really means. But, yes.

17 I am talking about the Vitro  
18 Manufacturing facility in Canonsburg,  
19 Pennsylvania, and this is an addendum to the  
20 Special Exposure Cohort evaluation petition.

21 To refresh your memory, we  
22 provided an ER on Petition SEC 00177 on July

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1 14th, 2010. It was an 83.13 petition.  
2 Actually, we received it on that date.  
3 September 9th we qualified it.

4 And at that time, we divided the  
5 Petition Requested Class into two time  
6 periods, the first time period which was  
7 discussed previously was January 1st, '58,  
8 through December 31st, '59, and then we  
9 reserved this residual radiation period from  
10 January 1st, 1960 through April 30th, 1965,  
11 because we just weren't quite sure what  
12 happened in that time period and weren't  
13 comfortable making a determination at that  
14 time.

15 Since then, we've gone back and  
16 obtained some additional information to help  
17 us figure out what we're going to recommend,  
18 and that's what I'm here to talk about today.

19 So again, the addendum here that  
20 you have in your hands is completion of the  
21 Evaluation Report addendum, which evaluates  
22 the time periods of January 1st, 1960, through

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1       September 30th, 1965.

2                   Just to refresh your memory a  
3 little bit about the Vitro facility, it is  
4 located in Canonsburg, Pennsylvania, about 20  
5 miles from Pittsburgh.

6                   It's a fairly small site, as these  
7 sites go. It's about 18 acres.

8                   And they performed a lot of work  
9 for the Manhattan Engineering District and the  
10 AEC. They had a contract to recover uranium  
11 for residues and scraps beginning in '42, but  
12 they also at one point processed some Belgian  
13 Congo ore.

14                   And prior to their involvement  
15 with the AEC, they were involved heavily in  
16 the purification -- extraction and  
17 purification of radium compounds. So there  
18 was a long history of work with radioactive  
19 materials at this site.

20                   They also performed various  
21 process developments to recover uranium from  
22 different waste streams, notably the Tonawanda

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1 wastes that are stored at Lake Ontario  
2 Ordnance Works, so they're sort of a catch-all  
3 place.

4 Anything that was contaminated  
5 that might have valuable uranium that was  
6 there in residue quantities was shipped there,  
7 and tried to extract some valuable material.  
8 That ended up resulting in contaminating a  
9 large number of buildings at the site.

10 But I want to talk a little bit  
11 about the waste that was generated there, and  
12 this is where the story gets a little  
13 complicated.

14 In 1955, there was a campaign to  
15 receive a lot of -- essentially uranium mill  
16 tailings. They had, you know, the uranium had  
17 been taken out, but there was still about a  
18 half a percent uranium by weight in the  
19 materials.

20 And they thought, well, Vitro  
21 could process these waste residues and pull  
22 out the uranium that was left. And that of

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1 course ended up with a lot of byproduct  
2 material.

3 So they received a lot of these  
4 residues, starting in `55, thousands of tons  
5 of residues were shipped there, so-called Port  
6 Hope waste materials.

7 And by January `57, they had  
8 extracted enough uranium to make about, I  
9 think, 800 pounds of uranium, but they  
10 resulted in the generation of about 10,000  
11 tons of residues that were eventually shipped  
12 off-site.

13 But of these Port Hope wastes that  
14 were shipped there, there were 4,000 tons of  
15 original waste that was never processed. The  
16 process was shut down in around 1959, so,  
17 there remained these piles of essentially what  
18 I would call uranium mill tailings, 4,000 tons  
19 of them, sitting above ground at the site.

20 These residues, these 4,000 tons  
21 of uranium, what I would call mill tailings,  
22 laid above ground at the facility through 1965

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1 till eventually it was buried.

2                   So, we have sort of a little  
3 variety of operations during this 1960 to '65  
4 period, and I tried to capture that in the  
5 next couple slides.

6                   In the very beginning of 1960,  
7 there was some decontamination and  
8 decommissioning work. And as far as we can  
9 tell, it pretty much lasted though the middle  
10 of 1960, May to June time frame.

11                   In fact, looking through our  
12 claims, we have no one who had full-time  
13 employment at the site after June of 1960. So  
14 that kind of ends the formal operations at the  
15 site.

16                   During that period, workers  
17 obviously could have been exposed during the  
18 shuttering of the process equipment and the  
19 storage and removing of the residues, that  
20 sort of thing.

21                   After 1960, May time frame, all  
22 that you really have left are these buildings

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1 that are contaminated.

2 No work activity is going on, but  
3 you have these 4,000 tons of these ore  
4 residues sitting above ground protected by a  
5 chain link fence and a guard service.

6 The Vitro Company indicated to the  
7 AEC that the materials were being kept wet, so  
8 there's possibly some workers periodically  
9 entering the area and wetting down the piles,  
10 but that's about the only activity through  
11 1960 till about the end of 1965.

12 And towards the end of 1965, the  
13 residue piles were buried. Around the August  
14 time frame, the burial activities actually  
15 started, planning started a little bit before  
16 that.

17 But the best that we can  
18 determine, beginning on August 2nd of '65, the  
19 burial started and was completed by September  
20 30 of '65.

21 So you have a period here where  
22 you have some D&D activities through June of

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1 1960, not much going on except security  
2 patrols and some workers wetting down these  
3 above-ground ore residue piles, 4,000 tons.

4           And then in 1965, you have about a  
5 month or so of activity where the piles were  
6 buried -- buried underground.

7           So, the potential radionuclide  
8 exposure at the site, then, were obviously  
9 from the uranium and the uranium progeny. Of  
10 course, mill tailings have a fair amount of  
11 radium progeny, notably thorium-230, radium-  
12 226, radon-222, so that all was present in  
13 both the buildings and the ore piles. So we  
14 have that exposure source term.

15           And then the external exposures  
16 would be from the residues themselves, which  
17 would contain not super-significant levels of  
18 external exposures, but certainly measurable  
19 quantities in the low millirem per hour  
20 ranges.

21           We have no monitoring data during  
22 this period -- no bioassay data, no air

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1 sampling data, no external data.

2 We do have some limited area  
3 survey data, between `60 and `65, of the soil  
4 areas that were collected to prepare for the  
5 remediation project for the burial of the  
6 wastes.

7 Sources of other available  
8 information, we obviously have our Technical  
9 Information Bulletins. There was an interview  
10 conducted with seven former workers, existing  
11 claimant files, documentation provided by  
12 petitioner, and the sort of normal types of  
13 data that we obtain for sites such of this.

14 We had data capture efforts listed  
15 here. I won't read them all, but they're sort  
16 of our standard sources of information for  
17 Atomic Weapons Employer facilities.

18 And just to talk about the  
19 interviews a little bit, we did, as I  
20 mentioned, had seven interviews with former  
21 workers, but their work was completed between  
22 January `58 and 1960, so there really have

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1 nothing in -- the interviews aren't relevant  
2 to the `60 to `65 period, unfortunately.

3 Previous dose reconstructions --  
4 we have 27 claims for Vitro. Of those claims,  
5 eight claimants have employment during the  
6 evaluation period, that is, from `60 to `65,  
7 although I looked at the claims, and the  
8 latest one, employment is June 1960 is the  
9 last employment period, although there is one  
10 claimant who has, I think, 140 hours of  
11 exposures in 1961.

12 I'm not sure what that's all  
13 about. There's always something. It's only  
14 140 hours. It was some sort of an engineering  
15 design issue, as best I can tell.

16 And none of the claims, as we  
17 suggested earlier, have any kind of monitoring  
18 data whatsoever.

19 So, we believe that the available  
20 information to us, as far as process  
21 description source terms, doesn't allow us to  
22 complete dose reconstructions with sufficient

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1 accuracy for this time period, that is,  
2 January 1st, 1960 through September 30th, '65.

3 We do believe, with the effective  
4 removal of the source term, that is, the  
5 burial of the waste underground and some  
6 subsequent surveys of them that, we have  
7 sufficient information to reconstruct  
8 exposures after that time period, using the  
9 normal methodologies that we would use for  
10 residual contamination periods.

11 So, a brief summary of the  
12 feasibility findings here: we can't  
13 reconstruct any of the internal or external  
14 exposures. Occupational medical is not  
15 applicable to this time period, nor are  
16 neutron exposures.

17 So the final NIOSH recommendation  
18 is: all AWE employees who worked at Vitro from  
19 January 1st, 1960 through September 30th, 1965  
20 for 250 work days.

21 And that concludes my  
22 presentation.

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1 CHAIRMAN MELIUS: Okay. Thank  
2 you.

3 Questions or comments? Paul?

4 MEMBER ZIEMER: Dr. Neton, could  
5 you just clarify the slide before the final  
6 table?

7 You said you could effectively  
8 model external exposures because of the  
9 removal of the source term, but then on the  
10 chart, you're saying you cannot reconstruct  
11 external --

12 DR. NETON: Oh.

13 MEMBER ZIEMER: That's not clear  
14 to me what --

15 DR. NETON: We could model after  
16 the source term is buried, after 1965, there  
17 is a typo there on this slide right here, the  
18 feasibility.

19 It should say September 30th,  
20 1965, but after `65, when they buried the  
21 4,000 tons of material, then we could  
22 reconstruct the exposures, because there are

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1 surface measurements of external.

2 MEMBER ZIEMER: Oh, right. Okay,  
3 I get it.

4 DR. NETON: Sorry.

5 Any other questions? I'll just  
6 comment -- oh, sorry, Josie, go ahead.

7 MEMBER BEACH: Oh, I just had a  
8 quick one for clarification. On page 10 of  
9 the ER, it says the residual period was  
10 designated from 1958 to 1985.

11 Is that a typo, or is that  
12 correct?

13 DR. NETON: No, that's correct.

14 MEMBER BEACH: That is correct? I  
15 just wanted to be clear.

16 DR. NETON: The material is still  
17 there. It's buried, but it's -- yes, it goes  
18 through `85.

19 The material is still there  
20 through `85, is what I meant. It's not there  
21 currently, it was remediated in `85, but it is  
22 there -- it was there through 1985.

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1           And like I said, once they buried  
2     it in '65, that 20-year period, we believe we  
3     could reconstruct exposures.

4           CHAIRMAN MELIUS:     Okay.     I would  
5     just add, I looked at this when -- a few weeks  
6     ago and had some email correspondence with Jim  
7     about the -- Jim's question about this time  
8     period up later in '65, just were there  
9     actually people -- do we actually have  
10    claimants, and do we have a better idea what  
11    was going on there?

12           It wasn't clear to me why we  
13    couldn't, for example, do dose reconstruction  
14    for the security patrol as opposed to people  
15    working on the site.

16           But I think -- Jim looked back  
17    through the claims, and we just don't have  
18    information.     And you can argue either way,  
19    but it's almost a hypothetical worker, and you  
20    really can't tell.

21           And I'm comfortable with this  
22    finding going forward, based on that.     I don't

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1 think we should wait, given the effort that's  
2 been made so far.

3 Any other comments or questions?

4 Okay. Do I hear a motion?

5 Wanda? You didn't even need to  
6 raise that, Wanda. I'm trained.

7 (Laughter.)

8 MEMBER MUNN: I move that we  
9 accept the NIOSH recommendation to grant an  
10 SEC for all qualifying employees of the Vitro  
11 Manufacturing in Canonsburg, Pennsylvania  
12 plant from January 1, 1960 through September  
13 30, 1965.

14 CHAIRMAN MELIUS: Do I hear a  
15 second to that?

16 MEMBER FIELD: Second.

17 CHAIRMAN MELIUS: Second from  
18 Bill. Any further discussion?

19 If not, Ted, can you call the  
20 roll?

21 MR. KATZ: Dr. Anderson?

22 MEMBER ANDERSON: Yes.

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1 MR. KATZ: Ms. Beach?

2 MEMBER BEACH: Yes.

3 MR. KATZ: Mr. Clawson?

4 MEMBER CLAWSON: Yes.

5 MR. KATZ: Dr. Field?

6 MEMBER FIELD: Yes.

7 MR. KATZ: Dr. Lemen?

8 MEMBER LEMEN: Yes.

9 MR. KATZ: Dr. Lockey -- no, wait,  
10 I'm sorry. Dr. Melius?

11 CHAIRMAN MELIUS: Yes.

12 MR. KATZ: Dr. Lockey is absent.  
13 Ms. Munn?

14 MEMBER MUNN: Yes.

15 MR. KATZ: Dr. Poston?

16 MEMBER POSTON: Yes.

17 MR. KATZ: Bob, are you still on  
18 the line? Bob Presley?

19 Okay, absent. I'll collect his  
20 vote afterwards.

21 Dr. Roessler?

22 MEMBER ROESSLER: Yes.

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1 MR. KATZ: Mr. Schofield?

2 MEMBER SCHOFIELD: Yes.

3 MR. KATZ: And Dr. Ziemer?

4 MEMBER ZIEMER: Yes.

5 MR. KATZ: So it's unanimous among  
6 Members present. And the motion passes, and  
7 then I'll collect absent votes after this  
8 meeting. And I'll pass out the letter.

9 CHAIRMAN MELIUS: We have the  
10 letter ready; it'll just take a second.

11 I would point out to Ted, it would  
12 be, you know, I think, polite that, at least  
13 start with Dr. Ziemer at one of the votes at  
14 each meeting, you know?

15 (Laughter.)

16 I mean, Henry gets all the  
17 attention and all the pressure of making the  
18 first decision.

19 I don't think that's fair, but,  
20 you know, the Z's don't get to go first very  
21 often, and I think we should do that.

22 (Laughter.)

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1           Okay, I will read this into the  
2 record, again, the usual stipulation that --  
3 not move forward in 30 days, I will notify the  
4 Board.

5           The Advisory Board on Radiation  
6 and Worker Health, the Board has evaluated a  
7 Special Exposure Cohort, SEC, Petition 00177  
8 Addendum 1 concerning workers at the Vitro  
9 Manufacturing Facility in Canonsburg,  
10 Pennsylvania, under the statutory requirements  
11 established by the Energy Employees  
12 Occupational Illness Compensation Program Act  
13 of 2000, EEOICPA, incorporated into 42 CFR  
14 Section 83.13.

15           The Board respectfully recommends  
16 that SEC status be accorded to all atomic  
17 weapons employees who worked at Vitro  
18 Manufacturing in Canonsburg, Pennsylvania,  
19 from January 1st, 1960 through September 30th,  
20 1965 for a number of work days aggregating at  
21 least 250 work days, occurring either solely  
22 under this employment or in combination with

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1 work days within the parameters established  
2 for one or more other Classes of employees  
3 included in the Special Exposure Cohort.

4 This recommendation is made based  
5 on the following factors: individuals working  
6 at Vitro Manufacturing, Canonsburg,  
7 Pennsylvania during the time period in  
8 question were exposed to materials that  
9 contained uranium and uranium progeny during  
10 storage and disposal of these materials at the  
11 site.

12 The National Institute for  
13 Occupational Safety and Health, NIOSH, review  
14 of available monitoring data, as well as  
15 available process and source term information  
16 for various production activities at Vitro  
17 Manufacturing in Canonsburg, Pennsylvania  
18 found that NIOSH lacked adequate information  
19 necessary to complete individual dose  
20 reconstructions with sufficient accuracy for  
21 both external and internal doses during the  
22 time period in question.

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1           The Board concurs with this  
2 determination.

3           NIOSH determined that health may  
4 have been endangered for these Vitro  
5 Manufacturing employees during the time period  
6 in question. The Board also concurs with this  
7 determination.

8           Based on these considerations and  
9 the discussions at the August 23rd through  
10 25th, 2011 Board meeting held in Richland,  
11 Washington, the Board recommends that this  
12 Class be added to the SEC.

13           And there will be the usual  
14 closing paragraph on transmittal of materials.

15           Any comments or questions on that?

16           Okay. Good.

17           Any other business the Board  
18 Members would like to raise?

19           Josie?

20           MEMBER BEACH: Yes, I was  
21 wondering about work for SC&A with the Site  
22 Profile issues, the outstanding issues?

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1                   CHAIRMAN MELIUS:    Yes, I think we  
2    need to hold off on that.

3                   NIOSH    actually    has    some    effort  
4    underway already, working on that, and I had  
5    some discussions with them, with both SC&A and  
6    NIOSH.    And I think we'll come back with a  
7    proposal at the next -- at our October call.  
8    I want to make sure -- understand what NIOSH  
9    is doing, we don't duplicate their effort, so.

10                  MEMBER BEACH:    Okay.    That sounds  
11    fair enough.

12                  CHAIRMAN MELIUS:    Yes.    We'll do  
13    that, and John Mauro wasn't here, and he was  
14    the one that had made one of the proposals,  
15    and I want to make sure we -- we have a firm  
16    and a very specific proposal for tasking to go  
17    forward.

18                  Thank    you    for    raising    that,  
19    though.

20                  Any other Board business?    If not,  
21    do I hear a motion to adjourn?

22                  MEMBER ZIEMER:    So moved.

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1 MEMBER CLAWSON: Seconded.

2 CHAIRMAN MELIUS: Second? All in  
3 favor?

4 (Chorus of ayes.)

5 CHAIRMAN MELIUS: Opposed?  
6 Abstain?

7 Ted, you don't have to do the roll  
8 call, even though it might be nice for --

9 MEMBER ZIEMER: Anyone opposed can  
10 just stay here.

11 (Laughter.)

12 CHAIRMAN MELIUS: Okay. We're  
13 adjourned. Thank you, everybody. Thank you  
14 to those left.

15 (Whereupon, the above-entitled matter went off  
16 the record at 10:43 a.m.)

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